

DisplayWrite 4

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# Reference Guide

**Office Systems Family**



**Personal  
Computer  
Software**

74X9317

The following Licensed Program Specification applies only to the United States and Puerto Rico.

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## **DisplayWrite 4**

Licensed Program Specification

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### **Statement of Limited Warranty**

Displaywrite 4 is warranted to conform to this Licensed Program Specification when properly used in its designated hardware and software environment. Any other documentation with respect to this licensed program, excluding any documentation referenced in this program specification, is provided for information purposes only and does not extend or modify this DisplayWrite 4 Licensed Program Specification. The DisplayWrite 4 Licensed Program Specification may be updated from time to time. Such updates may constitute a change to these specifications.

This limited warranty and the 90-day program media warranty are contained in the IBM Program License Agreement supplied with this product and is available to all licensees of DisplayWrite 4.

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### **Statement of Function Warranted**

IBM warrants that:

- The media of the software disks and the DisplayWrite 4 *Getting Started* pamphlet, *Reference Guide*, and *Technical Reference* manuals are not defective;
- The program is properly recorded on the media;
- The DisplayWrite 4 *Getting Started* pamphlet, *Reference Guide*, and *Technical Reference* manuals are substantially complete and correct and contain the information which IBM deems is necessary for use of the software;
- The program functions substantially as described in the DisplayWrite 4 *Getting Started* pamphlet, *Reference Guide*, and *Technical Reference* manuals.

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## Statement of Operating Environment

DisplayWrite 4 is designed to operate in the following environments:

1. Hardware - IBM Personal Computer, IBM Personal Computer XT, IBM Personal Computer AT®
  - A fixed-disk system requiring a minimum of 310Kb of memory available for DisplayWrite 4 and a diskette-based system requiring a minimum of 341Kb available for DisplayWrite 4.
  - Two diskette drives (360Kb or 1.2Mb) or one diskette drive (360Kb or 1.2Mb) and a fixed-disk drive.
  - One of the following 80-column displays (or equivalent):
    - IBM 5151 Monochrome Display and the IBM Monochrome Display and Printer Adapter or the IBM Enhanced Graphics Adapter
    - IBM 5153 Color Display and the IBM Color/Graphics Monitor Adapter or the IBM Enhanced Graphics Adapter
    - IBM 5154 Enhanced Color Display and the IBM Enhanced Graphics Adapter.
  - One of the following printers:
    - IBM 3812 Model 1 Pageprinter
    - IBM 3852 Model 2 Color Jetprinter
    - IBM 4201 Model 1 Proprinter
    - IBM 4202 Proprinter XL
    - IBM 5152 Model 2 Graphics Printer
    - IBM 5201 Model 1 and Model 2 Quietwriter®
    - IBM 5216 Model 1 Wheelprinter
    - IBM 5223 Model 1 Wheelprinter E
    - Printers not supported by IBM may be implemented with appropriate user-defined printer function tables. (Users, not IBM, assume full responsibility for the creation, use, and results obtained from using user-defined printer function tables.)

## Software

- IBM PC DOS Version 2.1 or IBM PC DOS Version 3.2.
2. Hardware - IBM 3270 Personal Computer, including the 3270-PC (IBM 5271 System Unit), 3270-PC AT (IBM 5273 System Unit), 3270-PC AT/G and 3270-PC AT/GX (IBM 5373 System Unit or IBM 5170 System Unit with the IBM 3270-PC AT/G Option Kit (#7001) or AT/GX Option Kit (#7002) supported only in alphanumeric (character) mode
- A fixed-disk system requiring a minimum of 310Kb of memory available for DisplayWrite 4 and a diskette-based system requiring a minimum of 341Kb available for DisplayWrite 4
  - Two diskette drives (360Kb or 1.2Mb) or one diskette drive (360Kb or 1.2Mb) and a fixed-disk drive
  - One of the following displays (or equivalent) on the IBM 5271 System Unit or IBM 5273 System Unit:
    - IBM 5151 Monochrome Display
    - IBM 5272 Color Display
  - One of the following displays (or equivalent) on the IBM 5170 System Unit with the IBM 3270-PC AT/G Option Kit (#7001) or AT/GX Option Kit (#7002), or IBM 5373 System Unit:
    - IBM 5279 Color Display and the IBM 5278 Display Attachment Unit
    - IBM 5379 Model C01 Color Display and the IBM 5378 Model C01 Color Display Attachment Unit.
    - IBM 5379 Model MO1 Monochrome Display and the IBM 5378 Model MO1 Monochrome Display Attachment Unit.

- One of the following printers:
  - IBM 3812 Model 1 Pageprinter
  - IBM 3852 Model 2 Color Jetprinter
  - IBM 4201 Model 1 Proprinter
  - IBM 4202 Proprinter XL
  - IBM 5152 Model 2 Graphics Printer
  - IBM 5201 Model 1 and Model 2 Quietwriter®
  - IBM 5216 Model 1 Wheelprinter
  - IBM 5223 Model 1 Wheelprinter E
  - Printers not supported by IBM may be implemented with appropriate user-defined printer function tables. (Users, not IBM, assume full responsibility for the creation, use, and results obtained from using user-defined printer function tables.)

#### Software

- IBM PC DOS Version 2.1 or IBM PC DOS Version 3.2.

### 3. Hardware - IBM PC Convertible

- A minimum of 341Kb of available memory for DisplayWrite 4
- Two 720Kb, 3.5-inch diskette drives
- One of the following displays (or equivalent):
  - IBM PC Convertible Liquid Crystal Display (LCD)
  - IBM 5153 Color Display and the CRT Display Adapter
- One of the following printers:
  - IBM 3812 Model 1 Pageprinter
  - IBM 3852 2 Color Jetprinter
  - IBM4201 Model 1 Proprinter
  - IBM 4202 Proprinter XL
  - IBM 5152 Model 2 Graphics Printer
  - IBM 5201 Model 1 and Model 2 Quietwriter®
  - IBM 5216 Model 1 Wheelprinter

- IBM 5223 Model 1 Wheelprinter E
- IBM Convertible Printer
- Printers not supported by IBM may be implemented with appropriate user-defined printer function tables. (Users, not IBM, assume full responsibility for the creation, use, and results obtained from using user-defined printer function tables.)

#### Software

- IBM PC DOS Version 3.2.

#### Optional Hardware Supported

- IBM PC Network
- IBM Token-Ring Network
- IBM 4865 Personal Computer 3.5-inch External Diskette Drive Models 1 and 2 (supported only as a data storage medium)
- 3.5-inch 720Kb Diskette Drive Feature (#3258) on the IBM Personal Computer XT (supported only as a data storage medium)
- IBM Voice Communications Adapter
- PC Mouse™
- Microsoft® Mouse
- Visi On™ Mouse

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## **Statement of Program Service**

Program service is available for the IBM DisplayWrite 4 Program Product during the first 90 days from the date of delivery to you by IBM or IBM's authorized representative. In order to use this program service, you must register by completing the postage paid Owner Registration card enclosed and return it to:

IBM Corporation  
P.O. Box 152560  
Irving, Texas 75015

### **Description of Program Service Available During the First 90 Days From the Date of Delivery**

If you determine you have a problem caused by a defect in an unmodified portion of the IBM DisplayWrite 4 Program Product during the 90 day service period, you may mail to IBM a description of the problem with any related information. Please fill out the entire DisplayWrite 4 Problem Report on the following pages.

IBM will evaluate the documentation of your problem to determine whether a program correction is necessary and:

1. If the problem is an error and has been fixed, you will be sent a notice of availability or an update containing the correction; OR
2. If the problem is an error that has not previously been reported, IBM will make reasonable efforts to develop a correction and send it to you; OR
3. You will be advised that the problem is not caused by a product defect.

A response to a defect will be made only if the defect occurs when the program is used in the operating environments described in the Licensed Program Specification.

IBM does not guarantee service results or that the program will be error free or that all program defects will be corrected.

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## DisplayWrite 4 Problem Report

Please fill out the entire problem report on the following pages as completely as possible and send it to:

IBM Corporation  
P.O. Box 152560  
Irving, Texas 75015

**Note:** If the printer you use is *not* on the list of printers supported (with the PC system you use) in the DisplayWrite 4 Licensed Program Specification. There is no warranty that all DisplayWrite 4 print functions will work correctly. In addition, DisplayWrite 4 may not use *all* functions of a printer.

Company Name:	
Name of Person Reporting Problem:	
Contact (If other than above):	
Department Name/Number:	
<b>Mailing Address</b>	
Street:	
City:	
State:	Zip:
County:	
Telephone:	Extension:
Licensed Program/Version #:	
<b>Operational Environment</b>	
<i>Hardware:</i>	
PC ____	PC AT ____
PC XT ____	3270 PC AT ____
3270 PC ____	PC Convertible ____
Other (Describe):	
Memory ____KB	
Operating System: DOS 2.1 ____ DOS 3.2 ____	
Other (Specify):	
<i>Displays:</i> <sup>1</sup>	
IBM Monochrome with MDPA/EGA ____	
IBM Color with CGA/EGA ____	
IBM Enhanced Color with EGA ____	
Other (Describe):	
Display Mode: Character ____ APA ____	
Amount of EGA Adapter RAM ____	

<sup>1</sup> MDPA — Monochrome Display Printer Adapter; EGA — Enhanced Graphics Adapter; CGA — Color Graphics Adapter; APA — All Points Addressable.

## **Duration of Program Service**

Service will be available during the first 90 days from the date of delivery to you by IBM or IBM's authorized representative, but not later than 3/31/88.



**Peripherals:**

**Mouse Type:**

Visi-On \_\_\_\_

Microsoft Parallel \_\_\_\_

PC Mouse \_\_\_\_

Microsoft Serial \_\_\_\_

Mouse Attached to: Com1 \_\_\_\_ Com2 \_\_\_\_

Expanded Memory Card \_\_\_\_

Voice Communications Adapter \_\_\_\_

**Printers:**

Attached to LPT1 (Type) \_\_\_\_

Attached to LPT2 (Type) \_\_\_\_

Attached to LPT3 (Type) \_\_\_\_

Identify below any Systems or Programs used in conjunction with or which were active during the use of this product when the problem occurred.

System 36

TopView

Other:

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List the steps that lead to the failure:

Task selected from the DisplayWrite 4 Menu:

Next task selected:

(Continue in space below. Add additional sheets if necessary.)

Error Message:

Abnormal Failure/Termination:

(If the system totally stops and has a series of numbers and letters on the bottom line of the screen, record the series of characters above.)

How often does this problem occur?

Always \_\_\_\_

Frequently \_\_\_\_

Intermittently \_\_\_\_

Describe how this problem is affecting or restricting your use of the licensed program:

(Add additional sheets, if necessary.)

## **Duration of Program Service**

Service will be available during the first 90 days from the date of delivery to you by IBM or IBM's authorized representative, but not later than 3/31/88.



**DisplayWrite 4**

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# Reference Guide

**Office Systems Family**



**Personal  
Computer  
Software**

## **First Edition August 1986**

Changes may be made periodically to the information herein.

References in this publication to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM licensed program in this publication is not intended to state or imply that only IBM's licensed program may be used. Any functionally equivalent program may be used instead.

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Quietwriter is a registered trademark of IBM.

SYLK is a trademark of Microsoft Corporation.

Visi On is a trademark of VisiCorp.

WKS and WRK are trademarks of Lotus Development Corporation.

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## About This Book

This book is a guide to the use of the IBM DisplayWrite 4 Licensed Program.

The book contains three sections and an index.

The first section contains illustrations of the keyboards supported by DisplayWrite 4 (DW4).

The second section is a visual road map. The road map contains illustrations of 24 commonly used tasks. Specific cross-references to the information related to these tasks accompanies each illustration.

The third section contains an alphabetic listing and description of the tasks and functions provided by DW4.

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## Related Publications

*IBM Disk Operating System Version 2.10 or 3.2.* This book provides information on how to use DOS.

*DisplayWrite 4 Getting Started.* This booklet contains an overview of the capabilities of DW4, information on installing the DW4 program on your personal computer, an exercise for creating and revising a document, and an explanation of the resources available to you when using DW4. **Every user should read *Getting Started* and perform the exercise.**

*DisplayWrite 4 Technical Reference.* This book serves as a supplement to the *DisplayWrite 4 Reference Guide*. It contains information about support for installation, printers, characters and symbols, data files, other application programs, and a listing of many DW4 messages.

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## About The Help Facility

Context-sensitive Help provides information to help you use DW4.

You can press Help (F1) in DW4 to display information related to the current task.

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## Disk Backup

All magnetic media are subject to physical damage, erasure, and loss for a variety of reasons, including operator error, accidental occurrences, and machine malfunction. In addition, magnetic media are subject to theft. Therefore, an integral part of any informational system should be to establish and implement backup (duplication) procedures. The customer, not **IBM**, is solely responsible for establishing and implementing all such procedures.

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# Keyboard Layouts

You can use five keyboards with DisplayWrite 4: the IBM PC Enhanced Keyboard, the IBM PC or PC XT keyboard, the IBM PC AT keyboard, the IBM 3270 PC keyboard, and the IBM PC Convertible keyboard.

The following pages contain illustrations of each of these keyboards. In these illustrations, the keys are identified by the DisplayWrite 4 functions they perform. Additionally, the rules and sequences for the pressing of keys are given.

**Note:** A separate keyboard template is also included with DisplayWrite 4. This double-sided template contains an illustration of the keys common to the PC keyboards supported by DisplayWrite 4 as well as a listing of the function, control, alternate and cursor movement keys that DisplayWrite 4 uses. When you first open the DisplayWrite 4 books, you can remove the template that is provided and place it near your keyboard to use for quick reference.

## DisplayWrite 4 Keyboard Template for the IBM Personal Computer Enhanced Keyboard

Esc	Help	End/Save	List	Block	Funct-ions	Search	Format	Instr	Table	Spell	Cursor Draw	Line Adjust	Prt Screen	Scroll Lock	Pause
	Key Prgrm	Menu Restore		Note-pad	Edit Options	Get	Comt Options	View/Revise	Math						Break

~	1	2	3	4	5	6	7	8	9	0	=	+	Backspace
	Cursor Draw	Line Adjust				Stop	Appl Change	Erase EOL					Reqd
←	Q	W	E	R	T	Y	U	I	O	P	{	}	
		Word Und	Page End	Read Page	Indent	1/2 ↑	Under-line		Out-line				
Cap Lock	A	S	D	F	G	H	J	K	L	:	"	'	Enter
		Over-strike		Type-face		1/2 ↓							
Shift	Z	X	C	V	B	N	M	<	>	?/			Shift
			Center	Reqd Space	Bold	Next	Mark						
Ctrl	Alt											Alt	Ctrl

Ins	Home	Pg Up
	Top	Screen Left
Del	End	Pg Dn
	Bottom	Screen Right

Num Lock	/	*	-
Home	↑	Pg Up	+
Top		Screen Left	
←		→	
Word Return		Word Advance	
End	↓	Pg Dn	Enter
Bottom		Screen Right	
Ins		Del	

	↑	
←	↓	→
Word Return		Word Advance

- Notes:**
1. Ctrl + Keys with  shading perform functions indicated on lower half of keys.
  2. Alt + Keys with  shading perform functions indicated on lower half of keys.

## DisplayWrite 4 Keyboard Template for the IBM Personal Computer and the IBM Personal Computer XT

Help	End/Save	Esc	1	2	3	4	5	6	7	8	9	0	=	±	Backspace	Num Lock	Scroll Lock	
Key Program	Menu Restore		Cursor Draw	Line Adjust				Stop	Appl Change	Erase EOL					Reqd		Break	
List	Block	← →	Q	W	E	R	T	Y	U	I	O	P	{	}		Home	Pg Up	—
	Notepad			Word Und	Page End	Read Page	Indent	½ ↑	Under-line		Out-line					↓	Top	Screen Left
Func-tions	Search	Ctrl	A	S	D	F	G	H	J	K	L	;	"	~	←		→	
Edit Options	Get			Over-strike	Type-face			½ ↓								Word Return	Word Advance	
Format	Instr	↑	↓	Z	X	C	V	B	N	M	;	>	?/	↑	Prt Sc *	End	Pg Dn	+
Dcmt Options	View/Revise				Center	Reqd Space	Bold	Next	Mark							Bottom	Screen Right	
Table	Spell	Alt											Caps Lock	Ins		Del		
Math																		

- Notes:**
1. Ctrl + Keys with  shading perform functions indicated on the lower half of keys.
  2. Alt + Keys with  shading perform functions indicated on the lower half of keys.

## DisplayWrite 4 Keyboard Template for the IBM Personal Computer AT

Help	End/Save	~	1	2	3	4	5	6	7	8	9	0	=	+	\	Back-space	Esc	Num Lock	Scroll Lock	Sys Req	
Key Program	Menu Restore		Cursor Draw	Line Adjust				Stop	Appl Change	Erase EOL						Read			Break		
List	Block	← →	Q	W	E	R	T	Y	U	I	O	P	{	}			Home	↑	Pg Up	Prt Sc *	
	Note-pad			Word Und	Page End	Reqd Page	Indent	1/2 ↑	Under-line		Out-line						Top		Screen Left		
Functions	Search	Ctrl	A	S	D	F	G	H	J	K	L	:	"		Enter		←		→	-	
Edit Options	Get			Over-strike		Type-face		1/2 ↓									Word Return		Word Advance		
Format	Instr	↑ Shift	Z	X	C	V	B	N	M	<	>	?		↑ Shift		End	↓	Pg Dn	+		
Dcm't Options	View/Revise				Center	Reqd Space	Bold	Next	Mark							Bottom		Screen Right			
Table	Spell	Alt													Caps Lock	Ins	Del				
Math																					

- Notes:**
1. Ctrl + Keys with  shading perform functions indicated on lower half of keys.
  2. Alt + Keys with  shading perform functions indicated on lower half of keys.





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## Road Map

The following pages contain samples of some of the types of things you can do using DisplayWrite 4. Each sample contains both an illustration and one or more references. Look through this section to find an illustration that matches the work you want to do. Then go to the cross-referenced pages to find the necessary information for that specific task.

(

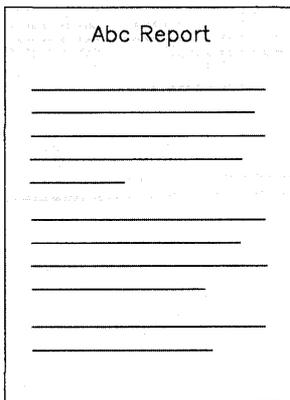
(

(

## Typing a Document

To type a one-page document, see:

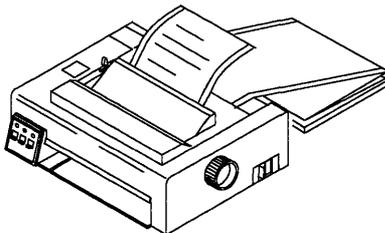
- "Create Document" on page 37.



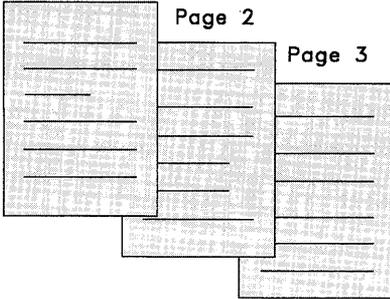
## Printing

To print a document, see:

- "Print" on page 199.



Page 1

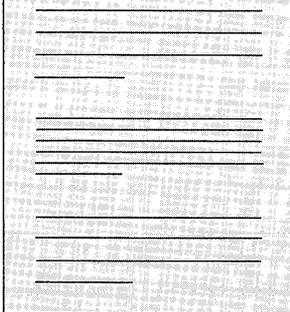


## Multi-page Documents

To create documents of more than one page, see:

- “Auto Page End” on page 22
- “Page Ends” on page 191
- “Paginate” on page 196.

XYZ Report



## Line Spacing

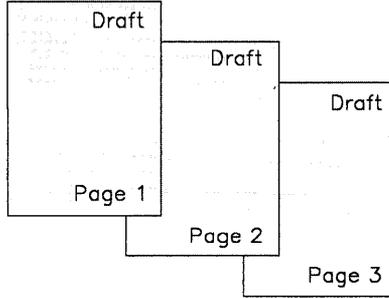
To change to different line spacings, see:

- “Format” on page 90.

## Headers and Footers

To print items at the top and bottom of pages, such as headings or page numbers, see:

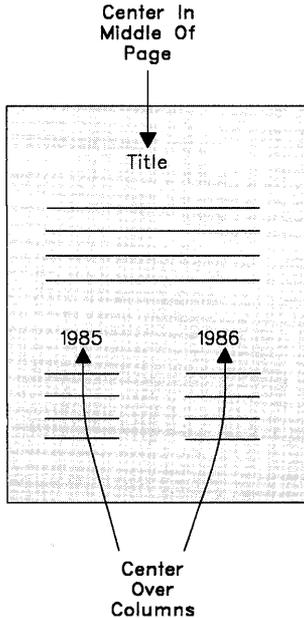
- “Headers and Footers” on page 141
- “Page Numbers” on page 194.



## Centering

To center items, see:

- “Center” on page 31.



Bold text provides **emphasis** for your documents.

## **Bold**

To print items in bold type, see:

- “Block Edit” on page 26
- “Bold” on page 28.

Characters  
Or Words  
Or Entire  
Blocks Can  
Be Underlined.

## **Underline**

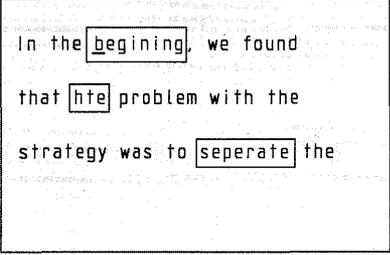
To underline items, see:

- “Block Edit” on page 26
- “Underline” on page 246.

**Spelling**

To check spelling, see:

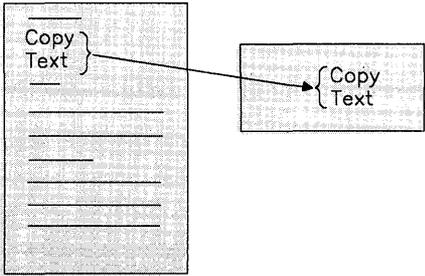
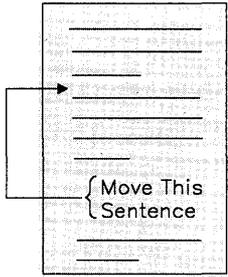
- “Spell” on page 221.

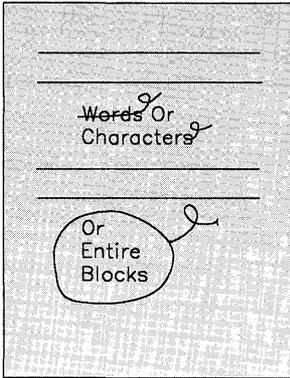


**Moving/Copying**

To move or copy items, see:

- “Block Edit” on page 26
- “Notepad” on page 181.

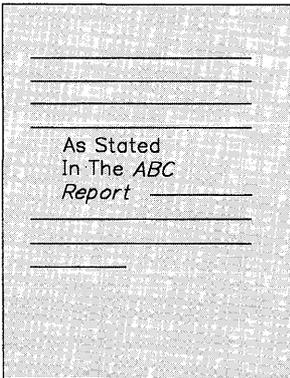




## Deleting

To delete items, see:

- "Block Edit" on page 26
- "Codes" on page 33
- "Corrections and Revisions" on page 36.



## Typestyle

To change the typeface and pitch of text, see:

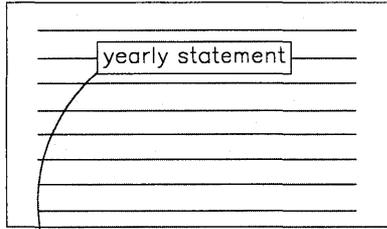
- "Typestyle" on page 243.

## Search

To automatically find and replace words or phrases, see:

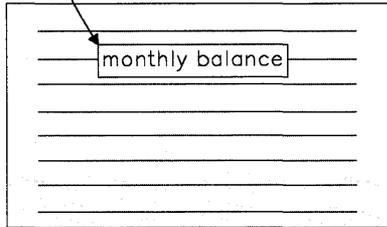
- “Search” on page 218.

## Search For



yearly statement

## Replace With

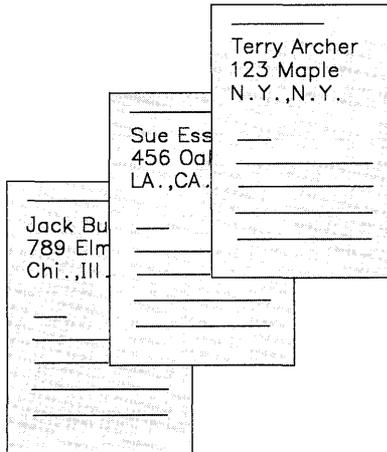


monthly balance

## Form Letters

To create customized form letters, see:

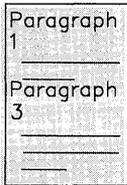
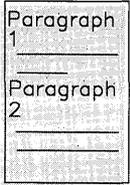
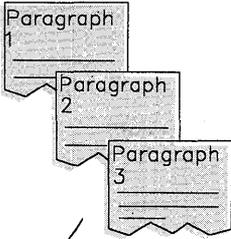
- “Form Letters” on page 97
- “Merge” on page 173.



Jack Bu  
789 Elm  
Chi., Ill.

Sue Ess  
456 Oak  
LA., CA.

Terry Archer  
123 Maple  
N.Y., N.Y.

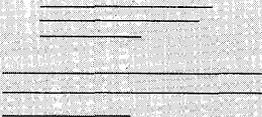


## Document Assembly

To create personalized documents from standard text, see:

- “Document Assembly” on page 48
- “Merge” on page 173.

Both Left And  
Right Margins  
Can Be Changed.



Tab Grids Can  
Also Be  
Changed In  
A Document.

## Margins and Tabs

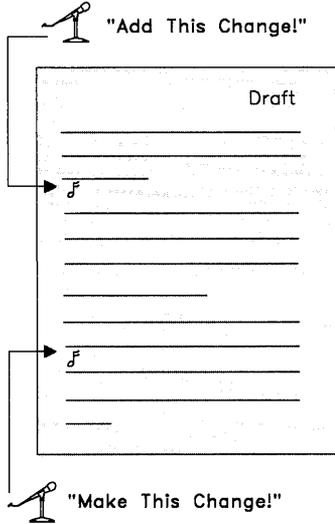
To change the margins and tabs, see:

- “Margins” on page 163
- “Tabs” on page 241.

## Voice

To use voice annotation in a document, see:

- “Voice Note” on page 249.



## Math

To use math in a document, see:

- “Math” on page 165.

$$\begin{array}{r} 8 \\ + 4 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 8 \\ \div 2 \\ \hline 4 \end{array}$$

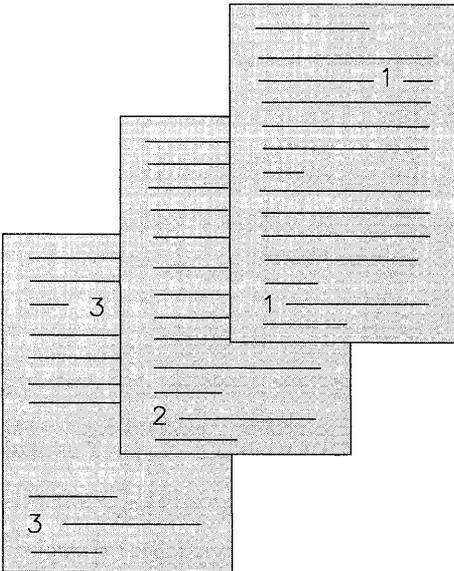
$$\begin{array}{r} 6 \\ - 2 \\ \hline 4 \end{array}$$

Expenses	Cost
Clothes	99.00
Food	86.00
School	52.00

## Tables

To create and revise tables in a document, see:

- “Tables” on page 231.



## Footnotes

To create and revise footnotes in a document, see:

- “Footnotes” on page 83.

## Outlines

To create and revise outlines, see:

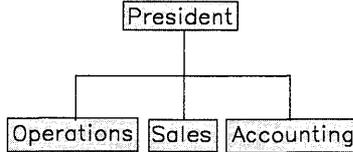
- “Outlines” on page 184.

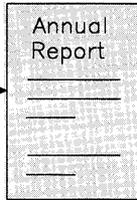
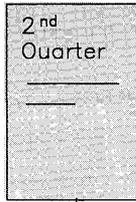
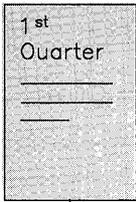
```
I _____  
  A. _____  
  B. _____  
    1. _____  
    2. _____  
  C. _____  
II _____  
  A. _____  
  B. _____  
III _____
```

## Cursor Draw

To create box or line drawings, see:

- “Cursor Draw” on page 40.

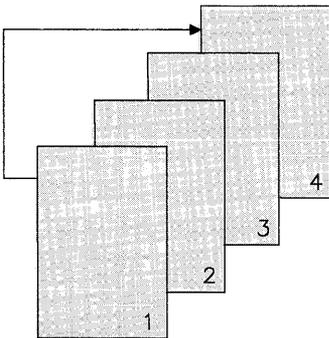




## Get and Notepad

To insert information from a document or file into another document, see:

- “Get” on page 138
- “Notepad” on page 181.



## Go To Page

To move from one page to another in a document, see:

- “Cursor Movement” on page 43
- “Go To Page” on page 140.

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# DisplayWrite 4 - From A To Z

---

## ASCII Copy to File

Use ASCII Copy To File in the Notepad menu to save an entire document or parts of a document as a standard ASCII file for use on other systems or in other application programs. For example, you can use ASCII Copy To File in the Notepad menu to save a DW4 document in order to upload it later to another computer system.

**Note:** A standard ASCII file is a file that contains a linear string of 8-bit coded characters from the standard PC ASCII character set. These files do not contain any internal structures or multiple character control sequences. ASCII is an acronym standing for American National Standard Code for Information Interchange.

### To Save a Document as an ASCII File

1. Create or revise the document you want saved as an ASCII file.
2. In the typing area, position the cursor at the beginning of the text you want saved as an ASCII file and press Notepad (Ctrl + F4).
3. Select ASCII Copy To File in the Notepad menu.
4. Follow the prompt to position the cursor at the end of the text you want saved as an ASCII file, and press Enter.

5. Type the File Name into which the text is to be copied in the ASCII Copy To File menu, and press Enter to return to the typing area.

**Notes:**

- a. If you do not specify an extension, DW4 appends an .ASC extension to the document name.
- b. DW4 saves the ASCII file in the default Notepad path. This path is specified in the System Paths menu in Profiles.

*Related Topics:*

“Charts for Characters and Symbols Sets” in *Technical Reference*

“Document Interchange” in *Technical Reference*

---

## **Auto Page End**

Auto Page End automatically inserts a Page End code immediately after you type past the last typing line on the last page. The system then displays the cursor on the first typing line of a new page.

If you want to make page ending decisions yourself, you can set Auto Page End to No in the Edit Options (Ctrl + F5) menu for individual documents. For future documents, you can change the default for Auto Page End in the Edit Defaults menu in Profiles (Text Defaults). The system warns you with a beep when the cursor moves beyond the last typing line of a page.

## To Change Auto Page End to No

1. Select Profiles in the DisplayWrite 4 menu.
2. Select Revise Profile in the Profiles menu.
3. Type the Profile Name in the Profile menu, and press Enter.

**Note:** The default profile is named PROFILE.PRF.

4. Select Defaults For: Text in the Revise Profile menu.
5. Select Edit Defaults in the Text Defaults menu.
6. Set Auto Page End to No under Edit Options in the Edit Defaults menu, and press Enter.
7. Press Esc enough times to display the End/Save menu.
8. Select End and Save in the End/Save menu to save your profile changes.
9. Press Esc in the Profiles menu to return to the DisplayWrite 4 menu.

**Note:** Activate the profile if necessary.

### *Hint:*

- You can change the first and last typing lines in the Page Layout/Paper Options (1 of 2) menu through Format (F7), Document Options (Ctrl + F7), and for future documents in Profiles (Text Defaults).

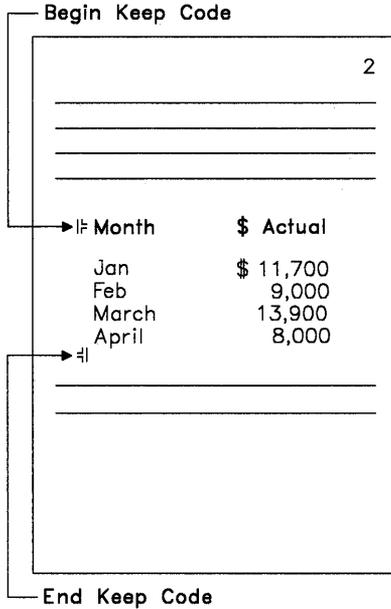
### *Related Topic:*

“Profiles” on page 203

---

## Begin/End Keep

When you paginate a document, new or revised pages are adjusted to conform to the format of the document (for example, First Typing Line, Last Typing Line). Begin/End Keep codes keep sections of text together so they are not split across pages when paginating. Begin/End Keep codes are inserted in the document using Instructions (F8).



### To Insert A Begin or End Keep Code

1. In the typing area, position the cursor where you want to begin keeping text together and press Instructions (F8).
2. Select Begin in the Instructions menu.
3. Select Keep in the Begin menu to insert a Begin Keep code.
4. Position the cursor after the end of the text you want to keep together and press Instructions (F8).

5. Select End in the Instructions menu.
6. Select Keep in the End menu to insert an End Keep code and return to the typing area.

*Hints:*

- If the text between the Begin Keep code and End Keep code is too long to fit on a single page, the text is split regardless of the keep codes.
- To help locate the Keep codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
- When a Required Page End code is in the text between the Begin and End Keep codes, the Required Page End code causes the page to end during pagination.

*Related Topics:*

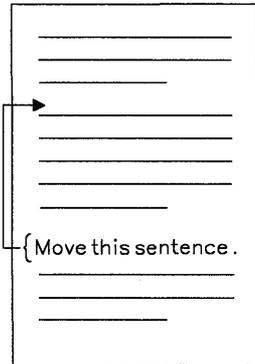
- “Codes” on page 33
- “Page Ends” on page 191
- “Paginate” on page 196

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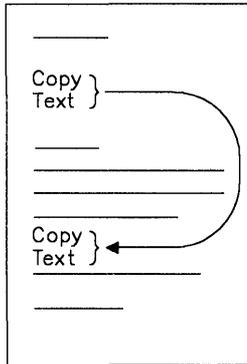
## Block Edit

Use Block (F4) to make editing changes, such as:

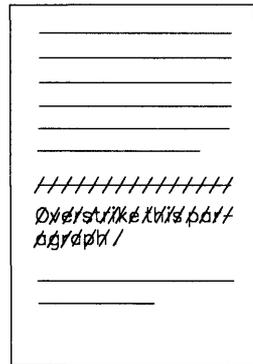
- Moving or copying a block of text to another position in the document
- Defining a block of text to print underlined, in bold, or overstruck



Move



Copy



Overstrike

- Deleting a block of text
- Restoring the *last* deleted block of text
- Marking a block of text to indicate revision
- Removing all style choices (underline, bold, overstrike, mark) from a defined block of text to return it to a *Plain* style.

You can use either the keyboard or a mouse to make these changes. Using the keyboard, you first select a menu item in the Block menu, and then define the block of text. Using the mouse, you define the block of text first, and then select the menu item. For more information about using a mouse to perform block operations, see “Mouse Interaction” on page 178.

**Note:** If you want to copy information from one *document* to another, or to several places within the same document, use Notepad (Ctrl + F4).

## To Move or Copy a Block of Text

1. In the typing area, position the cursor where you want the block to begin, and press Block (F4).
2. Select Move or Copy in the Block menu.
3. Follow the prompt to position the cursor where you want the block to end, and press Enter.
4. Follow the prompt to move the cursor where you want the block to be moved or copied, and press Enter.

**Note:** After you begin the block, you can press an alphanumeric or function key and the cursor automatically goes to the first occurrence of that character or code. For example, if you type a period, the cursor moves to the next period (usually the end of a sentence).

## To Delete or Change the Style of a Block of Text

1. In the typing area, position the cursor where you want the block to begin, and press Block (F4).
2. Select Delete or a style under Set Style in the Block menu.
3. Follow the prompt to position the cursor where you want the block to end, and press Enter.

**Note:** After you begin the block, you can press an alphanumeric or function key and the cursor automatically goes to the first occurrence of that character or code. For example, if you type a period, the cursor moves to the next period (usually the end of a sentence).

## To Restore the Last Deleted Block of Text

1. In the typing area, position the cursor where you want the last deleted block to be restored, and press Block (F4).
2. Select Restore Delete in the Block menu to restore the block at the cursor position.

### *Related Topics:*

“Bold”

“Codes” on page 33

“Mouse Interaction” on page 178

“Notepad” on page 181

“Revision Marking” on page 212

“Underline” on page 246

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## Bold

You can highlight a character, word, phrase, or block of text in bold type. The bold text may be displayed differently (brighter, video-reversed, or a different color), depending on your display configuration.

## To Type Highlighted Text Using the Bold Key

1. In the typing area, position the cursor where you want the bold print to begin and press Bold (Ctrl + B) to insert a Begin Bold code (|**|).**
2. Type the text you want printed in bold type.
3. Press Bold (Ctrl + B) to insert an End Bold code (**|).**

## To Highlight Existing Text in Bold Type

1. In the typing area, position the cursor under the first character you want printed in bold.
2. Press Bold (Ctrl + B) to insert a Begin Bold code.
3. Position the cursor after the last character you want printed in bold.
4. Press Bold (Ctrl + B) to insert an End Bold code.

### *Hints:*

- To remove the bold codes, position the cursor under the Begin Bold code ( **|** ) and press Del and Enter. Then, position the cursor under the End Bold code ( **|** ) and press Del and Enter again.
- To help locate the Begin Bold code and the End Bold code, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
- Pressing Bold (Ctrl + B) turns Bold on and off depending on whether a Begin Bold code or End Bold code exists already.

### *Related Topics:*

“Block Edit” on page 26

“Codes” on page 33

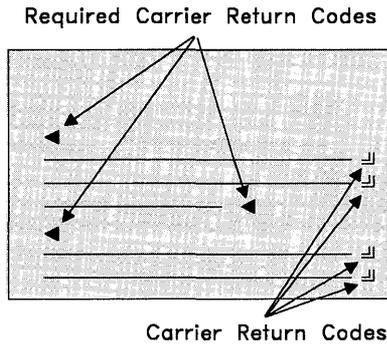
“Display Options” on page 47

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## Carrier Return

DW4 provides two types of carrier return codes: the Carrier Return and the Required Carrier Return.

DW4 automatically inserts Carrier Return codes to adjust line endings within the margin settings as you create or revise text. Carrier Returns may be removed or repositioned by the system when you revise or delete text. You insert Required Carrier Return codes to end short lines or insert blank lines by pressing Enter in the typing area.



The Auto Carrier Return function inserts Carrier Return codes for you as you type, automatically wrapping lines of text at the right margin and moving the cursor to the first position of the next line. When you revise text, DW4 inserts the appropriate Carrier Return codes at the end of lines when you move the cursor off the line.

*Hints:*

- To delete a Carrier Return code or a Required Carrier Return code, position the cursor under the code, press Del, and then press Enter.
- You can redefine the Enter key for future use to insert a Carrier Return code rather than a Required Carrier Return code. Redefine the Enter key in the Keyboard/Mouse Options menu in Profiles (Work Station Defaults).

*Related Topics:*

- “Codes” on page 33
- “Defaults” on page 45
- “Indent” on page 146
- “Profiles” on page 203

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## **Center**

You can center a word or phrase around any point on a line.

### **To Center Text While Typing**

1. In the typing area, position the cursor at the point around which you want the text to center.
2. Press Center (Ctrl + C) to insert a Center code.
3. Type the text; it centers as you type.
4. Press Enter to move to the next line, or Tab to move to the next tab setting to end centering.

## To Center Existing Text

1. In the typing area, position the cursor under the first character of the word or line you want to center.
2. Press the Space bar or Tab until the first character of the text is at the point on the line around which you want the text to center.

**Note:** Be sure you are in Insert mode (press the Ins key).

3. Press Center (Ctrl + C).

### *Hints:*

- To help locate the Center code, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
- To remove the Center code, position the cursor under the Center code. Press Del and Enter to delete the Center code.
- To center text around a Center tab, press Tab to go to the Center tab and type the text you want to center. Press Enter to move to the next line, or Tab to move to the next tab setting and end centering.

### *Related Topics:*

“Codes” on page 33

“Margins” on page 163

“Tabs” on page 241

---

## Codes

A code is a character or symbol that is displayed on the screen and represents an instruction to the system. When the cursor is positioned under a code, the code character is displayed in the typing area and the name of the code is displayed on the first status line. If you want, you can have the codes displayed all the time.

Most codes can be deleted using either the Del key or Delete in the Block (F4) menu.

### To Display All Codes

1. In the typing area, press Edit Options (Ctrl + F5).
2. Set Display All Codes to Yes in the Edit Options menu, and press Enter to return to the typing area.

#### *Hints:*

- When you change Display All Codes, the text on the display may appear offset, but the scale line cursor indicates the correct position.
- When you change Display All Codes, the setting remains in effect until you change it back again or select a task other than Create Document or Revise Document.

### To Delete a Code

1. In the typing area, position the cursor under the code to be deleted, and press Del.
2. If necessary, follow the prompt to press Enter to delete the code.

#### *Hint:*

- If you delete a voice note code, the voice note is also deleted.

#### *Related Topic:*

“Block Edit” on page 26

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## Compress Documents

When documents are heavily revised, the revisions can cause blocks of unused space on the disk. Compress makes this space usable again by reducing the amount of space a document occupies on a diskette or a fixed disk, thus creating more disk space for your work.

You can compress documents through the Utilities menu.

### To Compress a Document

1. Select Utilities in the DisplayWrite 4 menu.
2. Select Compress in the Utilities menu.
3. Type the Document Name in the Compress menu.

**Note:** To compress multiple documents or a directory, use the DOS global characters ? and \* as part of the Document Name.

4. Press Enter to compress the document.

#### *Hints:*

- Compress requires enough free disk space to hold both the original document and a temporary copy of the document.
- To stop the compression of multiple documents, press Ctrl + Break.
- If Compress does not complete properly, you may need to recover the document. Use Recover in the Utilities menu.
- Use Compress after deleting voice notes to free the disk space that was used by the voice note.

#### *Related Topic:*

“Recover Documents” on page 205

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## Copy Documents

Copy enables you to duplicate DW4 documents, DOS files, and IBM DisplayWrite 3 and IBM DisplayWrite Assistant documents on a diskette, within a directory, or from one directory to another. For example, you may want to copy a document from your fixed disk to a diskette to give to co-workers for their work. The original document remains on your fixed disk.

You can copy documents through the Utilities menu, or by using DOS Commands.

### To Copy a Document

1. Select Utilities in the DisplayWrite 4 menu.
2. Select Copy in the Utilities menu.
3. Type the File Name in the Copy menu.

**Note:** To copy multiple documents or a directory, use the DOS global characters ? and \* as part of the File Name.

4. Type the New File Name in the Copy menu.
5. Press Enter to copy the document.

#### *Hints:*

- To stop the copying of multiple documents or files, press Ctrl + Break.
- Copy also compresses a DW4 document as it is copied.

#### *Related Topics:*

“Compress Documents” on page 34

“DOS Commands” on page 77

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## Corrections and Revisions

You can make corrections and revisions in a number of ways. In a document, you can:

- Delete text and codes using the Del key and Delete in the Block (F4) menu.
- Check for and correct spelling by pressing Spell (F10).
- Cancel all your changes and return to the previous version of a document by selecting Quit Without Saving in the End/Save menu.
- Restore deleted text using Restore Delete in the Block (F4) menu.
- Search for specified character strings and replace them with other specified strings by pressing Search (F6).

In menus where you type, you can:

- Cancel the menu by pressing Esc.
- Restore the menu to its initial state by pressing Menu Restore (Ctrl + F2).
- Erase all characters from the cursor to the end of the line by pressing Erase End of Line (Alt + 8).

In either a document or a menu, you can:

- Erase characters using Backspace.
- Insert or replace characters in text and menu entries using the Ins key.
- Move through characters you have already typed using the cursor movement keys.

### *Related Topics:*

“Block Edit” on page 26

“Codes” on page 33

“Save Document” on page 215

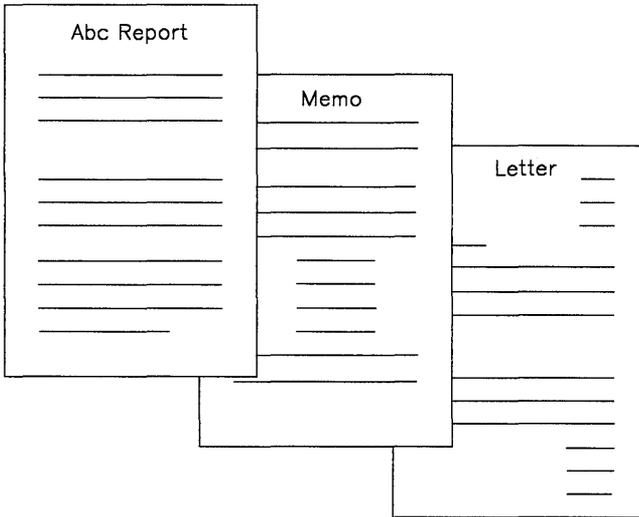
“Search” on page 218

“Spell” on page 221

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## Create Document

Use Create Document in the DisplayWrite 4 menu to create all your DW4 documents.



Text Documents

As you type, DW4 uses the default margins to determine where each line should end and inserts Carrier Return codes for you. This is called Auto Carrier Return, or word wrap. DW4 also uses the default page length to determine where pages should end and to insert Page End codes for you. This is called Auto Page End.

You can set Auto Page End to No in the Edit Options (Ctrl + F5) menu for individual documents. You can change these defaults (Auto Carrier Return and Auto Page End) for future use in the Edit Defaults menu through Profiles (Text Defaults).

## To Create a Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu.  
**Note:** If you need information on typing the document name, see “Name Document” on page 180.
3. If you want to type a Document Comment, do so now.
4. Press Enter to go to the typing area.
5. Type your document.
6. Press End/Save (F2) and choose the appropriate menu item in the End/Save menu.

### *Hints:*

- To end a short line or insert a blank line, press Enter.
- To delete extra blank lines, position the cursor under the Required Carrier Return code and press Del; then press Enter.
- If you are using a diskette-based system, do not remove the diskette containing the document until you have ended and saved the document.

### *Related Topics:*

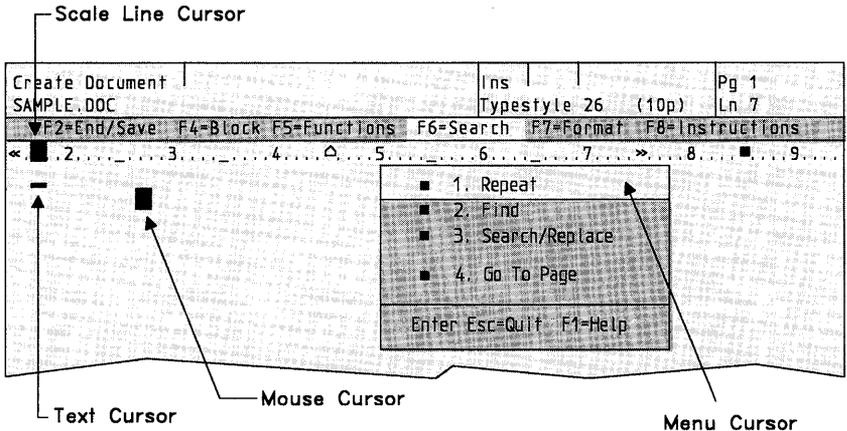
- “Carrier Return” on page 30
- “Codes” on page 33
- “Corrections and Revisions” on page 36
- “Document Comment” on page 76
- “Format” on page 90
- “Name Document” on page 180
- “Page Ends” on page 191
- “Profiles” on page 203
- “Revise Document” on page 210
- “Save Document” on page 215

---

## Cursor

DW4 displays the following cursors:

- Text cursor** Is displayed in the typing area and marks your place as you create or revise a document.
- Scale line cursor** Is displayed on the scale line and indicates the column location of the text cursor.
- Menu cursor** Is usually displayed initially on the first item in a menu. You can move the menu cursor to select subsequent menu items or to type your choice for a menu item. A menu cursor displays as a blinking underscore character or as a light bar across the menu item.
- Mouse cursor** If you have a mouse, a mouse cursor displays as an arrow or box on the screen (depending upon your display mode) and moves freely around the screen.



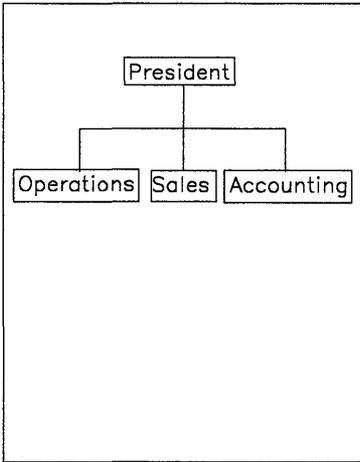
### Related Topics:

- “Displays” in *Technical Reference*
- “Mouse Interaction” on page 178
- “Scale Line” on page 217

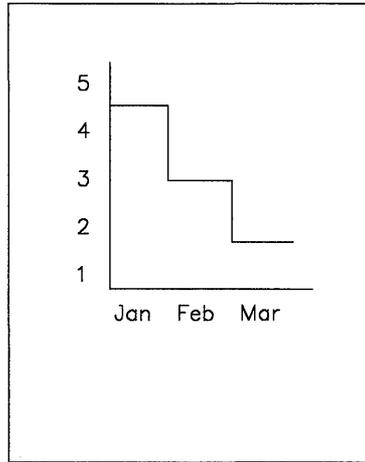
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## Cursor Draw

Use Cursor Draw (Alt + 1 or F11 ) to create a box or line drawing using any valid keyboard character. Valid characters can also include characters from the Keyboard Extensions in the Edit Options (Ctrl + F5) menu. The default character is a connecting line. Cursor Draw always uses Replace mode.



Company Organization



Accidents

You can create a drawing using Cursor Draw in the header or footer typing area and footnote typing areas as well as in the typing area.

You can draw or erase using only the four *arrow* cursor movement keys. All mouse movements are ignored.

If you want to type text inside a box, type the text first, and then draw the box around it or use Replace mode to type the text. You should not use Center or Tab to position the cursor while typing text.

To erase a drawing, use Erase with Cursor.

## To Draw with Cursor

1. In the typing area, position the cursor where you want to begin drawing and press Cursor Draw (Alt + 1 or F11).
2. Select Draw With Cursor in the Cursor Draw menu.
3. Use the cursor movement keys to create your drawing.
4. Press Esc to end Cursor Draw.

## To Change the Draw Character

1. In the typing area, press Cursor Draw (Alt + 1 or F11).
2. Select Change Draw Character in the Cursor Draw menu.
3. Type the New Draw Character you want to use in the Draw Character menu and press Enter. The new character remains in effect until you change it or until DW4 is reloaded.

**Note:** If you want to use a character or symbol from one of the keyboard extensions, be sure that the keyboard extension you want is specified in the Edit Options (Ctrl + F5) menu.

## To Erase with Cursor

1. In the typing area, position the cursor where you want to begin erasing and press Cursor Draw (Alt + 1 or F11).
2. Select Erase With Cursor in the Cursor Draw menu.
3. Move the cursor to erase the character(s).
4. Press Esc to end Cursor Erase.

### *Hints:*

- To revise text inside a box, make sure the system is in Replace mode rather than Insert mode. Press Ins and look at the status line if you are unsure which mode you are typing in.

- Draw or Erase cannot cross page boundaries.
- To draw or erase past the right margin, Adjust Line Endings must be set to No in the Line Spacing/Justification menu. You can reach the Line Spacing/Justification menu through Format (F7), Document Options (Ctrl + F7), or through Profiles (Text Defaults).
- Play back of keystrokes captured outside of Cursor Draw may cause undesirable results if you try to use them later within Cursor Draw.
- You should not draw through a Line Format Change code. Move your line one position to the right.
- Cursor Draw automatically sets Display All Codes to No.
- To delete pairs of Keyboard Change codes that may have been inserted around the line drawing characters, press Block (F4) and select Delete.

*Related Topics:*

“Block Edit” on page 26

“Codes” on page 33

“Keyboard Extensions” on page 148

---

## Cursor Movement

You can move the cursor using a mouse or the cursor movement keys at the right of the keyboard. In addition to these cursor movement keys, there are several keys that allow you to move the text cursor from word to word, to the beginning or end of a line, and to the top or bottom of a page. These keys are:

<b>Key</b>	<b>Function</b>
<b>Word Advance (Ctrl + →)</b>	Moves the cursor to the first character of the next word.
<b>Word Return (Ctrl + ←)</b>	Moves the cursor to the first character of a word or the previous word, depending on the cursor position.
<b>Home</b>	Moves the cursor to the beginning of the line.
<b>End</b>	Moves the cursor to the end of the line.
<b>Top (Ctrl + Home)</b>	Moves the cursor to the beginning of the page.
<b>Bottom (Ctrl + End)</b>	Moves the cursor to the end of the page.
<b>PgUp</b>	Moves the screen window up.
<b>PgDn</b>	Moves the screen window down.
<b>Screen Left (Ctrl + PgUp)</b>	Moves the screen window to the left.
<b>Screen Right (Ctrl + PgDn)</b>	Moves the screen window to the right.

*Hint:*

- To align the text cursor with the mouse cursor, click (press and release) Button 1 on the mouse.

*Related Topics:*

“Cursor” on page 39

“Mouse Interaction” on page 178

---

## Default Drive

The default drive is the drive used by DW4 to find or create a document or file when no other drive is specified. You can change the default drive without returning to DOS.

**Note:** During Install, you indicate what you want the default drive to be.

### To Change the Default Drive

1. Press List (F3).
2. Select Default Drive under Change in the List Services menu.
3. Type the Default Drive letter in the Change Default Drive menu, and press Enter.

#### *Hints:*

- The changed default drive remains the default until you exit DW4.
- If you press List (F3) while you are in Help, the Help index is displayed.

---

## Defaults

DW4 has certain formats and values, called defaults, already defined for you. For example, the default margins are set at 15 and 75, and the default tabs are set every 5 spaces.

There are two ways you can change some of these defaults to tailor them to your special needs:

- You can change certain defaults on a job-by-job basis by going to the appropriate menu when you are creating or revising a document. You then select the menu items that you want for that particular job.
- If there are certain defaults that you use frequently, you can modify/revise the profile (PROFILE.PRF) shipped with the system to change the defaults for future use. You can also name, create, and store a new profile which contains your selected defaults. Then, your new profile can be activated when you start the system, or activated only when you need it.

If you want to change the display mode (Character mode or APA mode) or specify a different directory for storing your documents, you should create a new batch file for loading DW4. For more information, see “Batch Files for Loading DW4” in *Technical Reference*.

### *Related Topics:*

“Batch Files for Loading DW4” in *Technical Reference*

“Display Options” on page 47

“Footnotes” on page 83

“Format” on page 90

“Headers and Footers” on page 141

“Keyboard Extensions” on page 148

“Math” on page 165

“Merge” on page 173

“Outlines” on page 184

“Paginate” on page 196

“Print” on page 199

“Profiles” on page 203

“Spell” on page 221

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## Dictionary

A U.S. English Dictionary is provided with DW4. If you have purchased the IBM DisplayWrite Legal Dictionary or the IBM DisplayWrite Medical Dictionary, it can also be used with DW4. DW4 uses the specified dictionary to verify spelling and to identify hyphenation points during Spell or Paginate.

If you frequently use words that are not in the DW4 dictionary (for example, proper names), you can create a supplement to the dictionary as an additional aid in checking spelling. There are two types of supplements that work with the dictionary: the memory supplement and dictionary supplements on disk. For more information on supplements, see "Supplements" on page 228.

### To Select a Different Dictionary or Supplement

1. Select Spell in the DisplayWrite 4 menu.
2. Select Dictionary Change in the Spell menu.
3. Type the Dictionary Name or Supplement Name in the Dictionary Change menu.
4. Press Enter to return to the Spell menu.

#### *Hint:*

- When you verify spelling from within a document, the system uses the default supplement and dictionary specified in the Spell Defaults menu in Profiles (Text Defaults).

#### *Related Topics:*

- "Hyphenation" on page 145
- "Paginate" on page 196
- "Spell" on page 221
- "Supplements" on page 228

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## Display Options

The Display Options menu in Profiles (Work Station Defaults) allows you to change the foreground and background colors which display on your screen while running DW4. The menu items include the colors you can select, the areas of the screen you can change, and instructions to change the colors.

Displays in DW4 can use APA mode or Character mode. APA (All Points Addressable) mode allows all the text characters and graphic characters supported by DW4 to be displayed. Character mode allows a subset of the PC ASCII (American Standard Code for Information Interchange) Character Set to be displayed.

**Note:** If you are using a monochrome display, any changes you make in the Display Options menu will not affect your display.

If you want to use APA mode, see “Batch Files for Loading DW4” in *Technical Reference*.

### *Related Topics:*

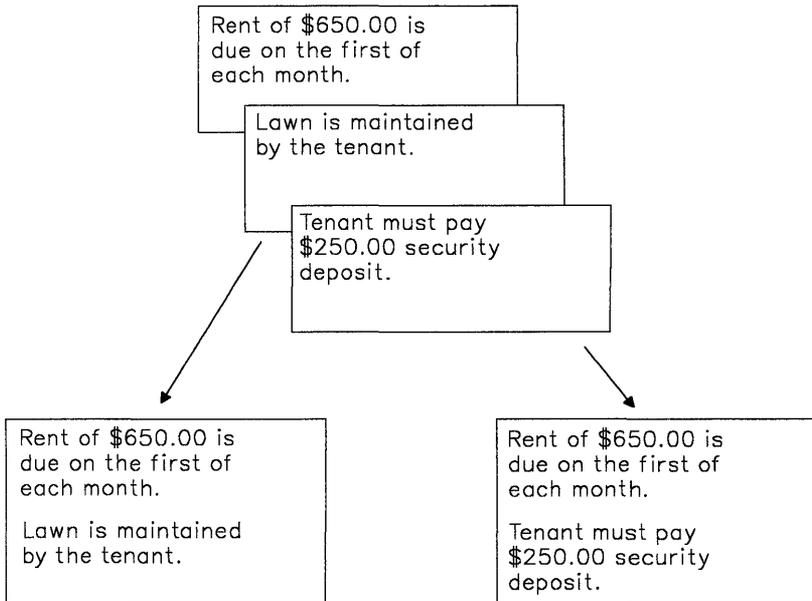
“Displays” in *Technical Reference*

“Profiles” on page 203

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## Document Assembly

Use the *Document Assembly* method of Merge to assemble and produce personalized documents that include selected text or paragraphs from one or more documents. To generate personalized documents with Document Assembly, use either the Merge with Includes Only function or the Merge with Named Variables function, which are accessed through the Merge menu.



Document Assembly

Depending on your business needs, you can use one of two types of Document Assembly. The two types are *Document Assembly without Variables* and *Document Assembly with Variables*.

The following paragraphs describe the differences between the two types of Document Assembly. Examine the characteristics of your personalized documents to determine the most appropriate type to use:

- *Document Assembly without Variables*

This is a method of assembling *one or more* documents or *portions* of documents to produce a *single* personalized document. This method uses the Merge with Includes Only function accessed through the Merge menu.

For example, a lawyer needs to draw up a contract for a housing lease for a client. The standard paragraphs related to leases are saved in one document. To prepare the contract, the lawyer selects from this document those paragraphs that are appropriate for the client's housing lease.

Another document contains the format of the contract (legal size paper) and instructions to include the selected paragraphs from the first document. During the Merge with Includes Only function, the two documents are combined to produce the client's contract for a housing lease.

- *Document Assembly with Variables*

This is a method of assembling selected text from *one or more* documents to produce *several* personalized documents. This method uses the Merge with Named Variables function accessed through the Merge menu.

For example, a lawyer needs to prepare separate wills for a husband and wife. The clauses and standard paragraphs related to wills are already created and saved in one document.

For these particular clients, it is necessary for the lawyer to further personalize the saved paragraphs by inserting each client's name, and the executor's name in their respective wills. To do so, placeholders for this information are inserted within the saved paragraphs.

A second document contains the information for the placeholders (each client's name and the executor's name), as well as instructions to insert selected paragraphs from the first document into this document. A third document contains the format for the final will. During the Merge with Named Variables function the documents are combined to produce the clients' wills.

The difference between the two types of Document Assembly is that in *Document Assembly with Variables*, the paragraphs contain placeholders for variable information (for example, the client's name and the executor's name) that is inserted during the merge process. Also, more than one document at a time is assembled. In *Document Assembly without Variables*, the paragraphs do not contain variable information; the paragraphs contain only constant text, and only a single personalized document is produced.

*Related Topics:*

"Document Assembly without Variables" on page 67

"Document Assembly with Variables" on page 51

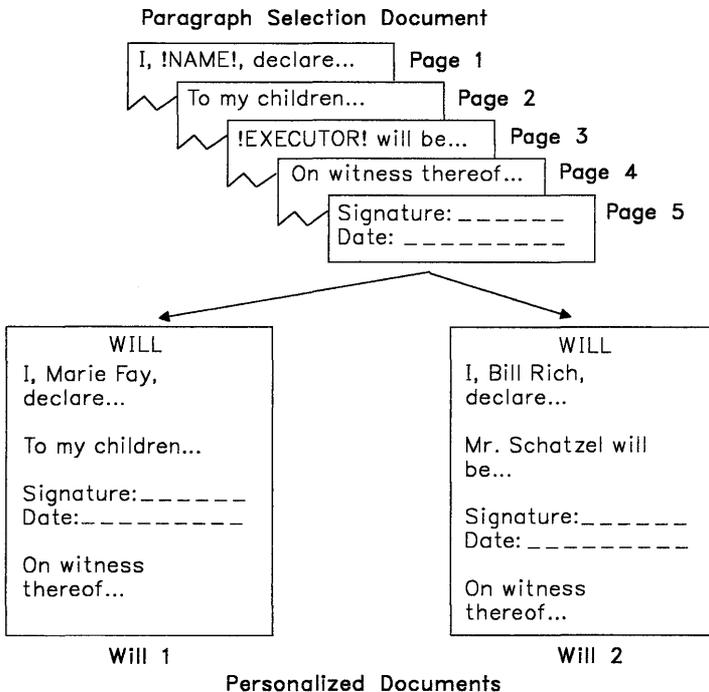
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## Document Assembly with Variables

Use *Document Assembly with Variables* to assemble and produce several personalized documents. The personalized documents are produced by combining selected text from one or more documents.

Each personalized document will contain a unique combination of related paragraphs with variable information that is specific to each document. Document Assembly with Variables uses the Merge with Named Variables function, accessed through the Merge menu.

For example, a lawyer needs to prepare separate wills for a husband and wife. The clauses and standard paragraphs related to wills are already created and saved in a *paragraph selection document*.



For these particular clients, it is necessary for the lawyer to further personalize the saved paragraphs by inserting each client's name and the executor's name. To do so, insert *variable name* placeholders for the client's name and the executor's name within the saved paragraphs.

The *variable information* for each of these variable names is placed within the *variables document*. *Include instructions* are also placed within this document. During the Merge with Named Variables function, the Include instructions determine which paragraphs from the paragraph selection document are to be included in the personalized document, and the variable information provides the personalization to produce each will. The *shell document* determines the format of each will, and contains a variable, called the *link variable*, that links the variables document with the shell document.

To assist you with your work in Document Assembly with Variables, a list of terms and definitions is provided here:

<b>Paragraph Selection Document</b>	A document of related paragraphs, each on a different page, which can be selected repeatedly to produce different personalized documents.
<b>Constant Text</b>	Text that does not change.
<b>Variable Names</b>	A name in the paragraph selection document that identifies a placeholder for variable information in the variables document. The variable name in the paragraph selection document <i>must match</i> the variable name in the variables document. Variable names: <ul style="list-style-type: none"><li>● Cannot contain more than 16 characters</li><li>● Must start with a letter</li></ul>

- May contain letters, numbers, or underscores

**Note:** When you type a space as part of a variable name, the system converts the space to an underscore.

- Cannot contain punctuation marks
- Are uppercase and lowercase sensitive
- Must be unique.

### **Shell Document**

A document that determines the format of the personalized document and contains a link variable name that *must match* the link variable name at the beginning of each page in the variables document.

### **Variable Information**

Information or text in the variables document that is different for each personalized document. Variable information is identified by the variable name in the paragraph selection document, or in the constant text of the variables document.

### **Variables Document**

A document that contains one or more sets of the following:

- a link variable name that links to the same link variable name in the shell document
- constant text
- instructions to insert the paragraphs from the paragraph selection document
- any variable names and variable information.

## Include Instructions

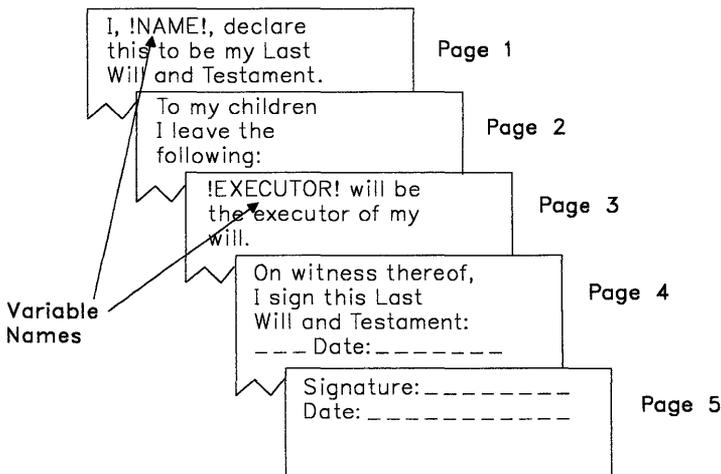
Instructions to insert specific paragraphs from the paragraph selection document into the personalized document.

When using Document Assembly with Variables to produce *several* personalized documents, you should:

- Create and save a *paragraph selection document*.
- Create and save a *shell document*.
- Create and save a *variables document*.
- Assemble the personalized documents using the Merge with Named Variables function.

## Creating a Paragraph Selection Document

You should first create the *paragraph selection document* to use with Document Assembly with Variables. The paragraph selection document is a collection of related paragraphs composed of text and variable names. Each paragraph, or set of related paragraphs, *must* be saved on a *different* page in the paragraph selection document.



Paragraphs in the Paragraph Selection Document Saved On Separate Pages

Paragraphs can contain variable names to identify any variable information. (The variable information is specified, along with its associated variable name, in the variables document.)

Once this paragraph selection document is created, it can be repeatedly used for subsequent personalized documents.

During the Merge with Named Variables function, the paragraphs you select from the paragraph selection document are inserted into the variables document. Any variable information is inserted in the correct places within the paragraphs to produce your personalized documents.

## To Create a Paragraph Selection Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu, and press Enter to go to the typing area.
3. Press Document Options (Ctrl + F7).
4. Select Document Comment under Change in the Document Options menu.
5. Set Preserve Page Numbers to Yes in the Document Comment menu, and press Enter to return to the typing area.

**Note:** You must set Preserve Page Numbers to Yes to keep each paragraph, or set of related paragraphs, on a different page, and prevent pagination of the paragraph selection document.

6. Type the paragraph to the point where you want to place a variable name, if necessary.

**Note:** If you are inserting variable names, follow the procedure, "To Insert Variable Names in a Paragraph Selection Document" on page 57.

7. Type additional text, if necessary.
8. Press Enter as many times as necessary to insert the number of carrier returns you want to follow the paragraph in the personalized documents.
9. Press Page End (Ctrl + E) to go to a new page.

**Note:** Each paragraph, or set of related paragraphs, must be saved on a different page. For example, if the first two paragraphs of your constant text are always the same, the paragraphs can be combined on the same page.

10. Repeat steps 6 through 9 for each paragraph in your paragraph selection document. Do not press Page End (Ctrl + E) after typing the *last* paragraph to prevent creating a blank page.
11. Press End/Save (F2) to save the paragraph selection document.

**Note:** You may want to print your paragraph selection document to use as a reference when inserting Include instructions. To identify the page number on which each paragraph or set of related paragraphs is located, you can create a header or footer that contains a system page number in the document format of your paragraph selection document. Headers and footers in the document format are not retrieved with the paragraphs during the merge process.

*Hint:*

- If your paragraph is longer than a page, set Auto Page End to No in the Edit Options (Ctrl + F5) menu to prevent unwanted page ends.

## To Insert Variable Names in a Paragraph Selection Document

1. In the typing area, press Instructions (F8).
2. Select Merge Instructions in the Instructions menu.
3. Select Variable in the Merge Instructions menu.
4. Type the Variable Name in the Variable menu.

**Note:** Type the variable name exactly as it will appear in the variables document. Remember that variable names are uppercase and lowercase sensitive.

5. Press Enter to go to the typing area to display the variable name, for example:

**!NAME!**

**Note:** To revise a variable name, see “To Revise a Variable Name” on page 64.

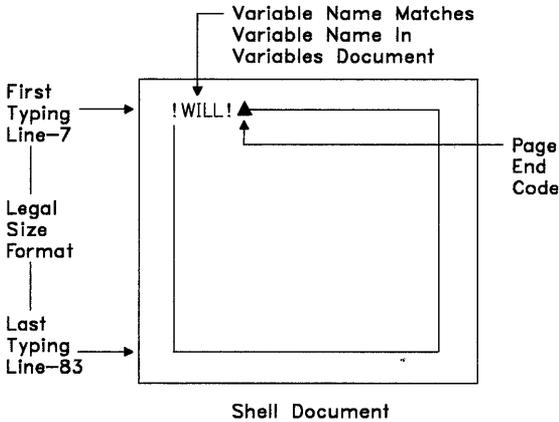
6. Continue with step 7 of “To Create a Paragraph Selection Document” on page 55.

### *Hints:*

- You can create several different paragraph selection documents. For example, one paragraph selection document may contain only accounts receivable paragraphs, and another paragraph selection document may contain only accounts payable paragraphs. You can select paragraphs from different paragraph selection documents in the variables document.
- To display the Variable codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter to return to the typing area.

## Creating a Shell Document

After you create a paragraph selection document, you should create a *shell document* to use with Document Assembly with Variables. The shell document links to the *variables document*, so that during the merge process the personalized documents take on the format defined in the shell document.



The only piece of information typed in the shell document is one *variable name*. This link variable name *must match* the first variable name on each page in the *variables document*. This variable serves as a pointer to the variables document, so that Merge will use the format defined in the shell document.

## To Create a Shell Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu, and press Enter to go to the typing area.

3. If you want to change the format for your personalized documents, press Document Options (Ctrl + F7), select Document Format under Change in the Document Options menu, and set the format.

**Note:** The format you set here determines the format of your personalized documents.

4. To display the Variable codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
5. Press Instructions (F8).
6. Select Merge Instructions in the Instructions menu.
7. Select Variable in the Merge Instructions menu.
8. Type the Variable Name (for the link variable) in the Variable menu.

**Note:** The link variable name *must match* the first variable name on each page in the variables document. Remember that variable names are uppercase and lowercase sensitive.

9. Press Enter to return to the typing area to display the variable name, for example:

**!WILL!**

10. Press End/Save (F2) to save the shell document.

*Hint:*

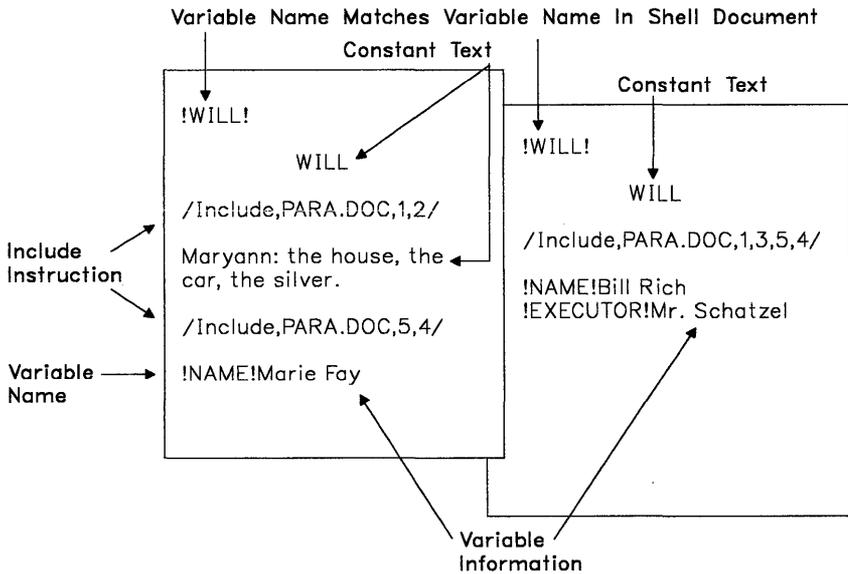
- To revise the variable name, see “To Revise a Variable Name” on page 64.

## Creating a Variables Document

After you create a paragraph selection document and a shell document, you need to create a corresponding *variables document* to use with Document Assembly with Variables.

The variables document contains the link variable name, constant text, include instructions that specify which paragraphs to select from the paragraph selection document, and any *variable names* and their accompanying variable information for each personalized document.

The first piece of information on each page in the variables document is the link variable name. This variable name *must match* the link variable name in the shell document.



Variables Document Saved On Separate Pages

The link variable name is followed by the Include instructions that specify which paragraphs to select from the paragraph selection document, and any constant text. The order of the Include instructions determines the content of your personalized documents. The remainder of page lists the variable names and the accompanying variable information, which is placed last on each page of the variables document, following the Include instructions and the constant text.

Remember to type each piece of variable information on the *same line* as the variable name in the variables document.

## To Create a Variables Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu, and press Enter to go to the typing area.
3. To display the Include codes and the Variable codes, press Edit Options (Ctrl + F5), and set Display All Codes to Yes.
4. To prevent unwanted page ends, set Auto Page End to No, and press Enter to return to the typing area.
5. Press Instructions (F8).
6. Select Merge Instructions in the Instructions menu.
7. Select Variable in the Merge Instructions menu.
8. Type the Variable Name (of the link variable) in the Variable menu.

**Note:** The variable name *must match* the variable name in the shell document. Variable names are uppercase and lowercase sensitive. Remember, the first variable name must be the link variable which matches the variable in the shell document.

9. Press Enter to return to the typing area to display the variable name, for example:

**!WILL!**

10. Type any constant text to the point where you want to place an Include instruction to insert selected paragraphs from the paragraph selection document.
11. Press Instructions (F8).
12. Select Merge Instructions in the Instructions menu.
13. Select Include in the Merge Instructions menu.
14. Type the Document Name and System Page Number(s) in the Include menu.

**Notes:**

- a. The Document Name is the name of the paragraph selection document.
  - b. Type the System Page Number(s) in the order you want the paragraphs from the paragraph selection document to appear in your personalized documents. Separate each page number by a space. No more than 10 pages may be entered *in any single* Include instruction.
15. Press Enter to return to the typing area to display the Include instruction, for example:

**/Include, PARA.DOC,1,2/**

16. Repeat steps 10 through 15, if necessary.

**Note:** Each Include instruction can contain a maximum of 10 paragraphs. To include more than 10 paragraphs, or paragraphs from different paragraph selection documents, you must type additional Include instructions.

17. Press Instructions (F8).
18. Select Merge Instructions in the Instructions menu.
19. Select Variable in the Merge Instructions menu.

20. Type the Variable Name in the Variable menu, and press Enter to return to the typing area to display the variable name, for example:

**!NAME!**

**Note:** Type this variable name exactly as it appears in the paragraph you are using from the paragraph selection document.

21. Type the variable information for that variable name on the *same line* as the variable name and press Enter, for example:

**!NAME!Marie Fay**

**Note:** If the variable information contains more than one line of text, press Enter after each line.

22. Repeat steps 17 through 21 for each variable name.
23. If you are creating more than one personalized document, press Page End (Ctrl + E). Do *not* press Page End (Ctrl + E) after the last page (or if you are creating only one personalized document).

If you are creating *several* personalized documents, repeat steps 5 through 23 for each personalized document.

**Note:** Remember, each page of the variables document produces one personalized document.

24. Press End/Save (F2) to save the variables document.

*Hint:*

- If you type a variable name in the variables document that is not used in the paragraph selection document, the variable name and the accompanying variable information is ignored during the merge process.

## To Revise a Variable Name

1. To display the Variable code in the typing area, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
2. Position the cursor under the Variable code (**!NAME!**) and press View/Revise (Ctrl + F8).
3. Revise the Variable Name in the Variable menu.
4. Press Enter to save the changes and return to the typing area.

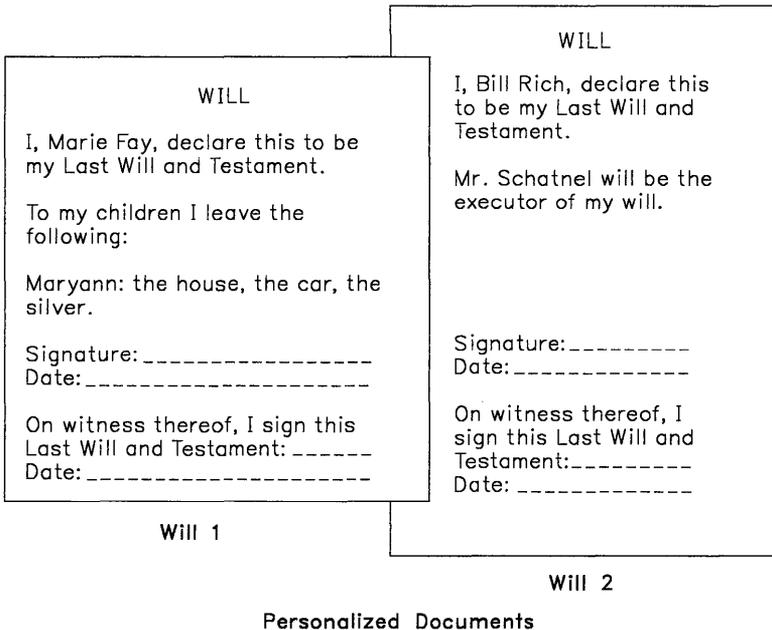
## To Revise an Include Instruction

1. To display the Include code in the typing area, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter to return to the typing area.
2. Position the cursor under the Include code (**//Include, PARA.DOC,1,2/**) and press View/Revise (Ctrl + F8).
3. Revise the Include instruction in the Include menu.
4. Press Enter to save the changes and return to the typing area.

## Assembling Personalized Documents

After you create and save a paragraph selection document, a shell document, and a variables document, you can merge the shell document with the variables document to create your personalized documents. To produce personalized documents, use the Merge with Named Variables function accessed through the Merge menu.

Remember, the shell document links to the variables document, and determines the format of the personalized documents.



## To Assemble and Print Several Personalized Documents

1. Select Merge in the DisplayWrite 4 menu.
2. Select Named Variables under Merge with in the Merge menu.
3. Type the Shell Document Name and Variables Document Name in the Merge with Named Variables (1 of 2) menu.

**Note:** Specify a Merged Document Name if you want the personalized documents to be saved on disk as well as printed. If you are only printing the personalized documents, there is no need to specify a name here.

4. If you want to make any other changes in the Merge with Named Variables (1 of 2) menu or the Merge with Named Variables (2 of 2) menu, do so now.
5. Press Enter to merge your documents.

### *Hint:*

- To stop the Merge with Named Variables function, press Ctrl + Break.

### *Related Topics:*

“Codes” on page 33

“Format” on page 90

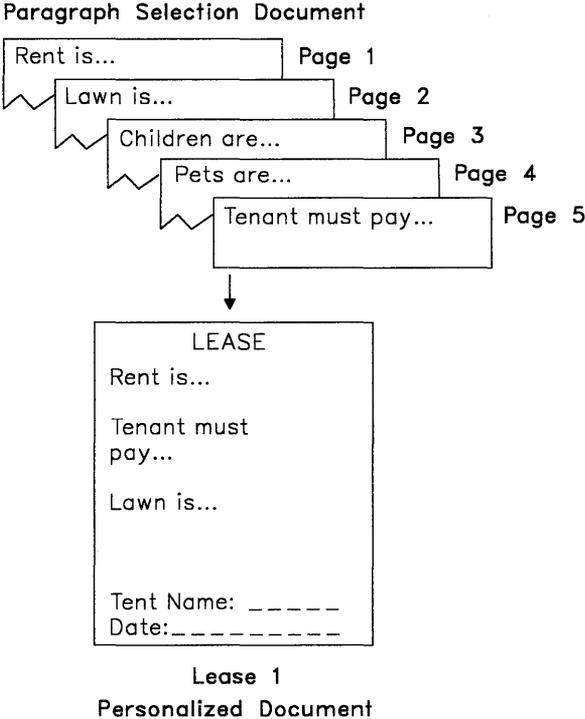
“Page Numbers” on page 194

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# Document Assembly without Variables

Use *Document Assembly without Variables* to assemble and produce a *single* personalized document by combining text from *one or more* documents or *portions* of documents. Document Assembly without Variables uses the Merge with Includes Only function, accessed through the Merge menu.

For example, a lawyer needs to draw up a contract for a housing lease for a client. The standard paragraphs related to housing leases are saved in a *paragraph selection document*.



To prepare the contract, the lawyer refers to the paragraph selection document and selects those paragraphs necessary for this contract. The *shell document* contains the format of the contract, any *constant text*, and the *Include instructions* specifying the selected paragraphs and their page numbers from the paragraph selection document.

During the Merge with Includes Only function, the Include instructions determine which paragraphs from the paragraph selection document to *insert* into the shell document to produce the contract for the housing lease.

To assist you with your work in Document Assembly without Variables, a list of terms and their definitions is provided here:

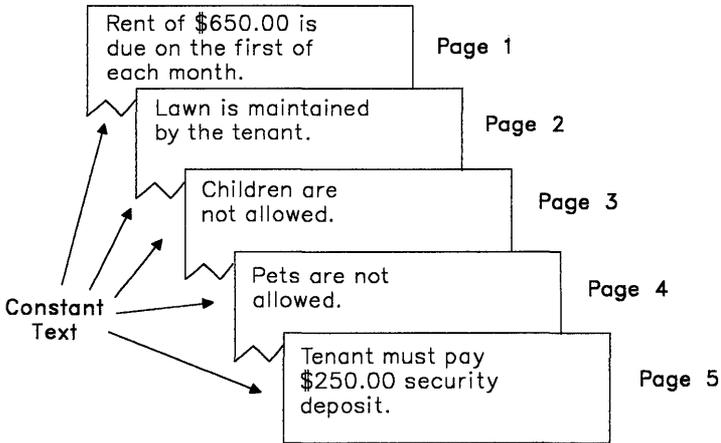
<b>Paragraph Selection Document</b>	A document of related paragraphs, each on a different page, which can be selected repeatedly to produce different personalized documents.
<b>Shell Document</b>	A document that contains any constant text and determines the format of the personalized document.
<b>Constant Text</b>	Text that does not change.
<b>Include Instructions</b>	Instructions to insert specific paragraphs from the paragraph selection document into the shell document.

When using Document Assembly without Variables to produce a *single* personalized document, you should:

- Create and save a *paragraph selection document*.
- Create and save a *shell document*.
- Assemble the single personalized document using the Merge with Includes Only function.

## Creating a Paragraph Selection Document

You should first create the *paragraph selection document* to use with Document Assembly without Variables. The paragraph selection document is a collection of related paragraphs composed of *constant text*. Each paragraph, or set of related paragraphs, *must* be saved on a *different* page in the paragraph selection document.



Paragraphs in the Paragraph Selection Document Saved on Separate Pages

During the Merge with Includes Only function, the paragraphs you select from the paragraph selection document are inserted into the shell document to produce your personalized document.

## To Create a Paragraph Selection Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu, and press Enter to go to the typing area.
3. Press Document Options (Ctrl + F7).
4. Select Document Comment under Change in the Document Options menu.
5. Set Preserve Page Numbers to Yes in the Document Comment menu, and press Enter to return to the typing area.

**Note:** You must set Preserve Page Numbers to Yes to keep each paragraph, or set of related paragraphs, on a different page.

6. To prevent unwanted page ends, press Edit Options (Ctrl + F5), set Auto Page End to No, and press Enter to return to the typing area.
7. Type the paragraph or set of related paragraphs.
8. Press Enter as many times as necessary to insert the number of carrier returns you want to follow each paragraph in the personalized document.
9. Press Page End (Ctrl + E) to go to a new page.

**Note:** Each paragraph, or set of related paragraphs, must be saved on a different page.

10. Repeat steps 7 through 9 for each paragraph in your paragraph selection document. Do *not* press Page End (Ctrl + E) after typing the last paragraph to prevent creating a blank page.
11. Press End/Save (F2) to save the paragraph selection document.

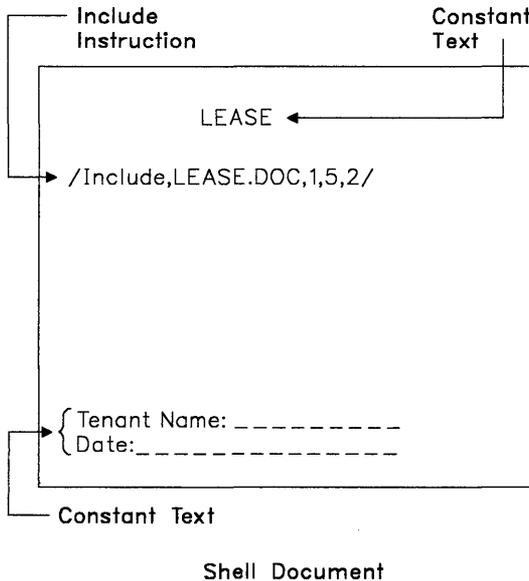
### Hints:

- You may want to print your paragraph selection document to use as a reference when inserting Include instructions. To identify the page number on which each paragraph or set of related paragraphs is located, you can create a header or footer that contains a system page number in the document format of your paragraph selection document. Headers and footers in the document format are not retrieved with the paragraphs during the merge process.

- You can create several different paragraph selection documents. For example, one paragraph selection document may contain only accounts receivable paragraphs, and another paragraph selection document may contain only accounts payable paragraphs. You can select paragraphs from different paragraph selection documents in the shell document.

## Creating a Shell Document

After you create a paragraph selection document, you should create a *shell document* to use with Document Assembly without Variables. The shell document contains the format of the personalized document, the *constant text*, and instructions to insert specific paragraphs from a paragraph selection document, called *include instructions*.



During the Merge with Includes Only function, the order of the Include instructions determines the content of your personalized document. Place the Include instructions within the shell document in the order you want the paragraphs from the paragraph selection document to print in the personalized document.

The format of the personalized document is determined by the shell document, regardless of the format of the paragraph selection document.

## To Create a Shell Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu, and press Enter to go to the typing area.
3. If you want to change the format for your personalized documents, press Document Options (Ctrl + F7), select Document Format under Change in the Document Options menu, and set the format.

**Note:** The format you set here determines the format of your personalized document.

4. To display the Include codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter to return to the typing area.
5. Type the constant text to the point where you want to place the included paragraphs.
6. Press Instructions (F8).
7. Select Merge Instructions in the Instructions menu.
8. Select Include in the Merge Instructions menu.
9. Type the Document Name and System Page Number(s) in the Include menu.

### Notes:

- a. The Document Name is the name of the paragraph selection document you want to include.
- b. Type the System Page Number(s), each separated by a space, of the pages in the paragraph selection document that contain the paragraphs you want to use. The page numbers should be in the order you want the paragraphs to appear in your personalized document.

10. Press Enter to return to the typing area to display the Include instruction, for example:

```
/Include,LEASE.DOC,1,5,2/
```

11. Repeat steps 5 through 10, if necessary.

**Note:** This is especially important if you want constant text between paragraphs, or if the paragraphs are from more than one paragraph selection document.

12. Press End/Save (F2) to save the shell document.

*Hint:*

- You may want to print the shell document to use as a reference. If you do print the shell document, notice that some lines may wrap unevenly due to the Include instructions being printed. The uneven lines will adjust within the margins once the shell document is merged with the paragraph selection document.

## **To Revise an Include Instruction**

1. To display the Include code in the typing area, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter to return to the typing area.
2. Position the cursor under the Include code (**/Include,LEASE.DOC,1,5,2/** ) and press View/Revise (Ctrl + F8).
3. Revise the Include instruction in the Include menu.
4. Press Enter to save the changes and return to the typing area.

## Assembling the Personalized Document

After you create a paragraph selection document and a shell document, you merge these documents to produce the *personalized document*. To assemble the personalized document, use the Merge with Includes Only function accessed through the Merge menu.

LEASE
Rent of \$650.00 is due on the first of each month.
Tenant must pay \$250.00 security deposit.
Lawn is maintained by the tenant.
Tenant Name: _____
Date: _____

Personalized Document

## To Assemble and Print a Single Personalized Document

1. Select Merge in the DisplayWrite 4 menu.
2. Select Includes Only under Merge With in the Merge menu.
3. Type the Shell Document Name and Merged Document Name (if necessary) in the Merge with Includes Only (1 of 2) menu.

**Note:** Specify a Merged Document Name if you want your personalized document to be saved on disk as well as printed. If you are only printing the personalized document, there is no need to specify a name here.

4. If you want to make any other changes in the Merge with Includes Only (1 of 2) menu or the Merge with Includes Only (2 of 2) menu, do so now.
5. Press Enter to begin merging the shell document with the paragraph selection document.

*Hints:*

- To stop the Merge with Includes Only function, press Ctrl + Break.
- If the personalized document includes footnotes and you want a copy of the footnotes stored with the document, type the Merged Document Name in the Merge with Includes Only (1 of 2) menu and set Collect Footnotes in Merged Document to Yes in the Merge with Includes Only (2 of 2) menu.

*Related Topics:*

- “Codes” on page 33
- “Format” on page 90
- “Get” on page 138
- “Page Numbers” on page 194

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## Document Comment

You can add or revise a short description of a document called a document comment. The document comment can help you identify specific documents. A document comment can be up to 44 characters.

To view the comments for all your documents, select Comments with Directory in the List Services (F3) menu.

### To Create a Document Comment

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Comment in the Create Document menu, and press Enter.

### To Revise or Add a Document Comment

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Comment under Change in the Document Options menu.
3. Type or revise the Document Comment in the Document Comment menu, and press Enter to return to the typing area.

---

## DOS Commands

DOS Commands, in the DisplayWrite 4 menu, enables you to exit DW4, issue DOS commands, and return to DW4 without reloading the program. For example, you can use DOS Commands to exit DW4 to format a new diskette to use for your documents.

Once you select DOS Commands, DW4 is no longer active, although it remains resident in memory.

Keep in mind the following when you are issuing DOS Commands:

- Although you can issue any DOS command at the DOS prompt, you should not load other programs that remain resident in memory once you exit them. Doing so requires that you end DW4 because there may not be enough memory to contain both programs. You may need to reload the entire system before reloading DW4.
- The DOS Commands task is not available if you are running DW4 under the IBM TopView program.
- DW4 background print is suspended in DOS Commands, but resumes upon return to DW4.
- The mouse is not active in DOS Commands.
- If you change the DOS default drive or the DOS current directory while in DOS Commands, the new default drive or current directory remain in effect upon return to DW4.

---

## Erase Documents

Erase enables you to delete documents and DOS files, individually or within a directory. You can erase documents through the Utilities menu.

### To Erase a Document

1. Select Utilities in the DisplayWrite 4 menu.
2. Select Erase in the Utilities menu.
3. Type the File Name in the Erase menu.

**Note:** To erase multiple documents, use the DOS global characters ? and \* as part of the File Name.

4. Press Enter to erase the document.

#### *Hint:*

- To stop erasing multiple documents, press Ctrl + Break.

---

## Extensions

You can add a three-character, alphanumeric extension to document or file names. If you do not type an extension or a period after a document or file name, DW4 supplies one of the following default extensions, depending on the task you are performing:

<b>Extension</b>	<b>Definition</b>
<b>.ASC</b>	ASCII-Saved Documents
<b>.BAT</b>	Batch Files
<b>.DES</b>	File Descriptions
<b>.DIC</b>	Dictionaries
<b>.DOC</b>	Text Documents and Notepad Documents
<b>.FFT</b>	Final-Form Text Documents
<b>.KEY</b>	Keystroke Programs
<b>.PFT</b>	Printer Function Tables
<b>.PRF</b>	User Profiles
<b>.PRN</b>	Print-Ready Documents
<b>.RFT</b>	Revisable-Form Text Documents
<b>.SUP</b>	Supplemental Dictionaries

For example, if you are creating a document, DW4 appends **.DOC** to the name you type.

The following extensions are reserved for system use:

<b>Extension</b>	<b>Definition</b>
<b>.\$\$C</b>	Temporary Backup Copy
<b>.\$\$P</b>	Temporary Program File
<b>.\$\$R</b>	Reserved Disk Space Document
<b>.\$\$T</b>	Temporary Merged Document

*Hint:*

- If you do not want an extension, type a period after the document or file name.

*Related Topics:*

- “ASCII Copy to File” on page 21
- “Batch Files for Loading DW4” in *Technical Reference*
- “Create Document” on page 37
- “Data Files Support” in *Technical Reference*
- “Dictionary” on page 46
- “Final-Form Text Conversion” on page 81
- “Form Letters with Data Files” on page 100
- “Keystroke Programming” on page 154
- “Notepad” on page 181
- “Print” on page 199
- “Printer Function Table Tasks” in *Technical Reference*
- “Profiles” on page 203
- “Revisable-Form Text Conversion” on page 208
- “Supplements” on page 228
- “Working Copy” on page 251

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## Final-Form Text Conversion

You can convert DisplayWrite 4 (.DOC) documents to final-form text (.FFT) documents. You can also convert final-form text documents generated by another system or application program to DisplayWrite 4 documents. A final-form text document contains special print formatting codes that enable you to print the document with systems or application programs, other than DW4, that support final-form text documents.

You can convert documents to and from final-form text using Document Conversion in the Utilities menu. You can also specify final-form text documents in the Print Document menu for printing without converting them.

Once the DisplayWrite 4 document is converted to a final-form text document, it can be viewed or printed with systems or application programs that support the final-form text format (for example, IBM DisplayWrite/36). Once the final-form text document is converted to a DisplayWrite 4 document, you can revise or print it using DW4.

After conversion, both the original document and the converted document remain on your disk. If you no longer need the original document, delete it using Erase in the Utilities menu.

### To Convert a DW4 Document to a Final-Form Text Document

1. Select Utilities in the DisplayWrite 4 menu.
2. Select Document Conversion in the Utilities menu.
3. Type the Document Name and the Converted Document Name in the Document Conversion menu.

**Note:** If you do not specify an extension for the Converted Document Name, the system automatically appends the default extension (.FFT).

4. Set the Type of Conversion to **3** in the Document Conversion menu.
5. Press Enter to begin converting a DisplayWrite 4 document to a final-form text document.

## **To Convert Final-Form Text to a DW4 Document**

1. Select Utilities in the DisplayWrite 4 menu.
2. Select Document Conversion in the Utilities menu.
3. Type the Document Name and the Converted Document Name in the Document Conversion menu.
4. Set the Type of Conversion to **4** in the Document Conversion menu.
5. Press Enter to begin converting a final-form text document to a DisplayWrite 4 document.

### *Related Topics:*

- “Applications Support” in *Technical Reference*
- “Erase Documents” on page 78
- “Extensions” on page 79
- “Print” on page 199
- “Revisable-Form Text Conversion” on page 208

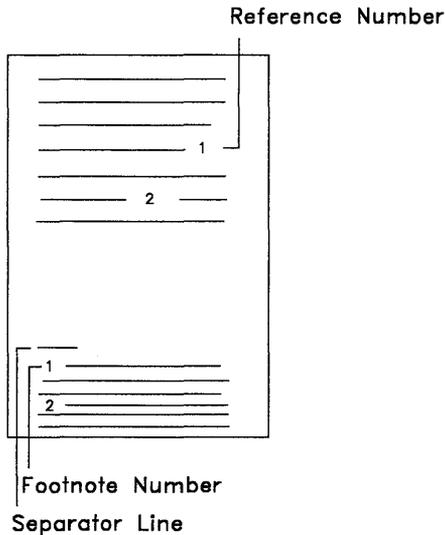
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## Footnotes

You can create, add, revise, or delete footnotes in a special Footnote typing area. Use Instructions (F8) to insert footnotes in your document.

During pagination, the system automatically numbers each footnote, calculates the amount of space needed for the footnote text, inserts a separator line between the body of the document and the footnote text, and positions the footnotes on the bottom of the page. If your footnote is too long for the available space at the bottom of the page, the footnote text is split and carried over to the bottom of the next page.

When you revise a footnoted document, the system automatically renumbers and repositions the footnotes when the document is paginated. *Always paginate a footnoted document after creation or revision of footnotes or text.*



Footnote Placement in  
Printed Document

## To Create or Add a Footnote

1. In the typing area, position the cursor where you want the footnote reference and press Instructions (F8).
2. Select Footnote in the Instructions menu.
3. If you want to make any changes in the Footnote (1 of 2) menu and the Footnote (2 of 2) menu, do so now, and press Enter to save the changes.
4. Type the footnote text in the footnote typing area.
5. Press Return/Save (F2) and select Return and Save to save the footnote and return to the typing area.

### *Hint:*

- Set Adjust Line Endings and Adjust Page Endings to Yes in the Paginate Document menu when you paginate a document that includes footnotes.

## To Revise a Footnote

1. In the typing area, position the cursor under the Footnote Reference code ( $\updownarrow$ ) in the body of the document for the footnote you want to revise and press View/Revise (Ctrl + F8).
2. If you want to make any changes in the Footnote (1 of 2) menu and Footnote (2 of 2) menu, do so now, and press Enter.
3. Revise the footnote text in the footnote typing area.
4. Press Return/Save (F2) to save the revised footnote and return to the typing area.

### *Hints:*

- To help locate the Footnote Reference code, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
- When you revise a footnote, make your footnote text changes in the Footnote typing area, *not* in the footnote text at the bottom of the page.

- Each footnote is stored on a separate page starting with System Page Number 9000. You can go directly to these pages to revise footnotes.
- Remember to paginate your document after revising footnotes.

## **To Delete a Footnote**

1. In the typing area, position the cursor under the Footnote Reference code (≡) for the footnote you want to delete and press Del.
2. Follow the prompt to press Enter to delete the Footnote Reference code.

### *Hint:*

- You do not have to enter the Footnote typing area to delete a footnote.

### *Related Topics:*

- “Codes” on page 33
- “Footnote Appearance” on page 86
- “Footnote Library” on page 88
- “Paginate” on page 196

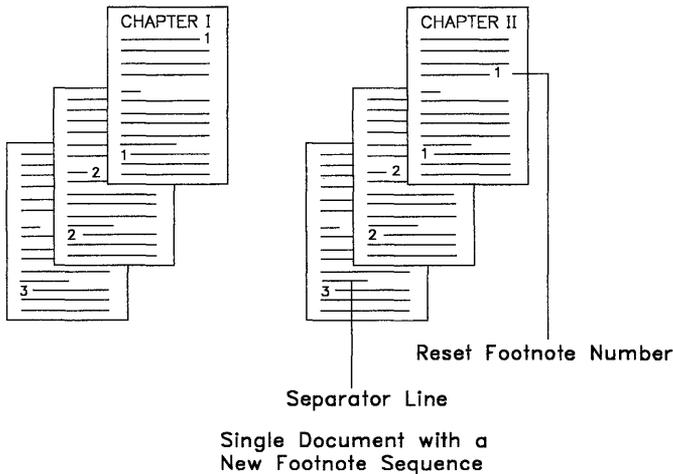
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## Footnote Appearance

You can change many of the characteristics of footnote appearance, such as typestyle, separator character, separator line length, or number of footnote lines per page, to modify the appearance of footnotes in an individual document through Document Options (Ctrl + F7). The DW4 footnote defaults are set to print footnotes in the same typestyle as the document, to use an underscore as the separator character, to make the separator line length 20 characters long, and to limit the number of footnote lines per page to 48 lines.

Change the footnote format for future use through the Profiles menu (Text Defaults).

You can also reset footnote numbers while creating or revising a document. For example, you may have several chapters in the same document, and you may want the footnotes for each chapter to begin with Footnote Number 1. When you reset the footnote number, the new value sets the order for the following footnotes.



## To Change Footnote Appearance in the Document Format

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format under Change in the Document Options menu.
3. Select Footnote in the Change Document Format menu.
4. Make any changes in the Footnote Format (1 of 2) menu and the Footnote Format (2 of 2) menu, and press Enter.
5. Press Esc enough times to return to the typing area.

## To Reset a Footnote Reference Number While Creating

1. In the typing area, position the cursor where you want the footnote reference and press Instructions (F8).
2. Select Footnote in the Instructions menu.
3. Type the Reset Footnote Reference Number in the Footnote (1 of 2) menu and press Enter.
4. Type the footnote text in the Footnote typing area.
5. Press Return/Save (F2) in the Footnote typing area to return to the typing area (Create Document or Revise Document).

### *Hints:*

- Paginate the completed document to number and position the footnotes correctly.
- When you reset the footnote reference number with a character (an asterisk, for example), only the current footnote uses that character. The following footnote numbers stay in sequence.
- To reset the Footnote Reference Number of an existing footnote, position the cursor under the Footnote Reference Code (¶) and press View/Revise (Ctrl + F8).

### *Related Topics:*

- “Footnote Library” on page 88
- “Format” on page 90
- “Paginate” on page 196
- “Profiles” on page 203

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## Footnote Library

Footnotes are saved with your document. Each footnote is stored on a separate page, starting with System Page Number 9000.

If you would like to use the same footnotes in different documents, you can save these frequently used footnotes in a separate document called a footnote library. When you store footnotes in a footnote library, you only have to type, proof, and edit the footnote text one time. The system automatically stores each footnote on a separate page of the footnote library, beginning with System Page Number 1 or the next available page.

### To Save a Footnote in a Footnote Library

1. In the typing area, position the cursor where you want the footnote reference and press Instructions (F8).
2. Select Footnote in the Instructions menu.
3. Type the Document Name of the footnote library document where the footnote is to be stored in the Footnote (2 of 2) menu, and press Enter.

**Note:** This should be a different name than the current document. The footnote is added to the end of this document. If the document does not exist, DW4 creates the document for you.

4. Type the footnote text in the footnote typing area.
5. Press Return/Save (F2) and select Return and Save to save the footnote and return to the typing area (Create Document or Revise Document).
6. Repeat steps 1 through 5 for each footnote you want to place in the footnote library document.

## To Use a Footnote Saved in a Footnote Library

1. In the typing area, position the cursor where you want the footnote reference and press Instructions (F8).
2. Select Footnote in the Instructions menu.
3. Set Type Footnote Text to No in the Footnote (2 of 2) menu.
4. Type the Document Name of the footnote library document where the footnote is stored in the Footnote (2 of 2) menu.
5. Type the System Page Number in the Footnote (2 of 2) menu of the footnote library document in which the footnote is saved.
6. Press Enter to insert the Footnote Reference code in the current document.

### *Hint:*

- To create a more compact reference copy of the footnote library with several footnotes per page, make a copy of the footnote library document and paginate the copy. *Do not paginate* the original since each footnote in a footnote library must remain on a separate page in order to be used in other documents. The system does not print the page numbers in the compact reference copy. Revise the reference copy after pagination, insert the appropriate system page number by each footnote, and print the copy.

### *Related Topics:*

“Copy Documents” on page 35

“Footnotes” on page 83

“Footnote Appearance” on page 86

“Paginate” on page 196

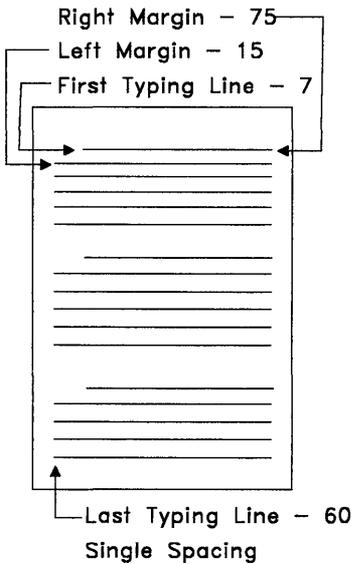
“Profiles” on page 203

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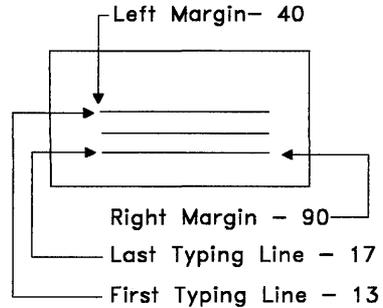
## Format

The format of a document is the way text is laid out, or arranged, on a page. DW4 format determines specific line and page characteristics, as well as defining the overall global characteristics of the entire document. These formats define how the printed output of a document will look. Pagination adjusts the text to the defined format after format changes are made. Unless you change the format, all documents will be created using the default document format. The default format is:

- 10 pitch (Typestyle 26)
- 1½ inch left margin
- 1 inch right margin
- A Flush Left tab set every 5 spaces
- Left justification
- Single line spacing
- 6 lines per inch
- Automatically adjusts line endings while typing (word wrap)
- 8½-inch by 11-inch paper size
- 1 inch top and bottom margin
  - First typing line at 7
  - Last typing line at 60.



Document Format  
(8-1/2 x 11 Paper)



Alternate Format  
(Business Envelopes)

### Default Format Settings

If this format is not appropriate for the documents you create, you can change the format for all or part of a document. There are two ways to change the format within a document:

**Document Format** Use the Document Format to define the default format for the entire document. When creating a document, use the Document Format to set up the general format of your document. For your convenience, an Alternate Document Format is available. The default alternate format is set up for typing and printing a business envelope; however, it can be changed like the Document Format to meet your specific needs.

**Note:** Both the Document Format and the Alternate Format defaults can be changed for future use through Profiles (Text Defaults).

## **Format**

Use Format to define the format for a portion of the document. The changes you can make depend on the cursor position when you press Format (F7). When changes are made using Format (F7), a format change code is inserted into the document at the point where the new format begins. The code can help you locate where your format changes begin and end. When the cursor is positioned on the format change code, the name of the format change code is displayed on the status line. The new format is in effect from that point forward until you change the format again or you reset the format to return the formatting choices to the original document format.

When making format changes to a portion of a document, the current cursor position determines the formatting options that are available. If the cursor is at the top of a page in a document and you press Format (F7), all options are available. The Format menu is redisplayed after you make changes so that you can make other changes at the same time. The format change code is not inserted into the document until you press Esc to exit the Format menu.

The options you change determine the type of format change code that is inserted in the document. If you only change the Margins and Tabs, Line Spacing/Justification, or Typestyle (Typeface and Pitch), then the format change code inserted is a Line Format Change code. A Line Format Change code can be at the beginning of a line. When you press Format (F7) at any point other than the beginning of the line, the system automatically moves the cursor to the beginning of the line to insert the format change code. *The only format change you can make within a line is a Typestyle change.* You can press Typeface (Ctrl + F) to change to a different typestyle with the same pitch as the rest of the line.

If you change Page Layout/Paper Options, Headers or Footers, and/or any of the line formatting options, the code inserted is a Page Format Change code. The Page Format Change code is always at the top of a page. When you want to reset the formats, press Format (F7) and select Reset Format in the Format menu. In the Reset Format menu, you can return All Formats (all formatting options) to the starting choice, or return the Margins and Tabs, Line Spacing/Justification, and Typestyle to the starting choice.

You can also begin using the Document Format or the Alternate Document Format from the Reset Format menu. These options are only available if the cursor is at the top of a page. The Begin Using Document Format or Begin Using Alternate Format selections insert a Begin Document Format code or Begin Alternate Format code at the top of the page. All formats return to the defaults set in the Document Format or Alternate Format.

## **To Change the Document or Alternate Format**

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format or Alternate Format in the Document Options menu.
3. Select the format menu item you want to change in the Change Document Format or Change Alternate Format menu.
4. Make the necessary changes in the selected format menu.
5. Press Enter to save the changes and return to the Change Document Format menu or Change Alternate Format menu.
6. Repeat steps 3 through 5 for each format menu item you want to change.
7. Press Esc enough times to save your format changes and return to the typing area.

**Note:** Changing the Document Format or Alternate Format does not insert a format change code.

### *Hints:*

- If you make changes to the Document Format or Alternate Format after you have created all or part of a document, you should paginate the document in order to reformat the document according to the new format.
- If you have made other Format changes using Format (F7), you may need to revise these format change codes in order to obtain the desired format.
- The Document Format is in effect *for the entire document* until you change the format using Format (F7) or Reset the Format to begin using the Alternate Format.

## **To Begin Using the Document Format or Alternate Format**

1. In the typing area, position the cursor at the top of the page where you want to begin using the Document Format or Alternate Format by pressing Top (Ctrl + Home).
2. Press Format (F7).
3. Select Reset Format in the Format menu.
4. Select either Document Format or Alternate Format under Begin Using in the Reset Format menu. A Begin Document Format code or Begin Alternate Format code is inserted at the top of the page.

### *Hints:*

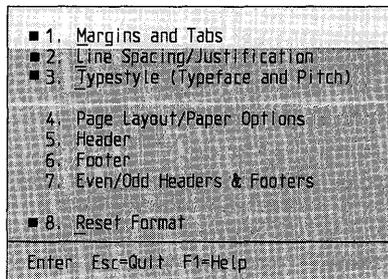
- Use Begin Alternate Format to change from the Document Format to the Alternate Format. Use Begin Document Format to change back to the Document Format after using the Alternate Format for a portion of your document.
- Previously typed text that follows a Begin Alternate Format code or a Begin Document Format code may not be in the correct format. You should paginate in order to reformat the document.
- A Begin Document Format code or Begin Alternate Format code is always located at the top of a page.

## To Change the Format for a Portion of a Document

1. In the typing area, position the cursor at the point where you want the format change to begin.

**Note:** The selectable formatting options depend on the cursor position when you make the Format change. If you want to change Page Formatting options (Page Layout/Paper Options, Header or Footer) beginning on a given page, then position the cursor at the top of the page. If you want to change only Line Formatting options (Margins and Tabs, Line Spacing/Justification, or Typestyle), position the cursor on the line where you want the new format to begin.

2. Press Format (F7).
3. Select the format menu item you want to change in the Format menu.



Format Menu

4. Make the necessary changes in the selected format menu.
5. Press Enter to save the changes and return to the Format menu.
6. Press Esc in the Format menu to save your format changes and return to the typing area.

**Note:** A Format Change code is inserted in the document at the point where the format change begins.

### *Hints:*

- Some formatting options, such as double line spacing and justified text, are not displayed on the screen, but are printed. The line numbers on the status line reflect changes in line spacing.
- To return the format back to the Document Format (or Alternate Format, if it is in use), position the cursor at the point where you want to return to the starting format. Press Format (F7), and select either All Formats or Margins and Tabs, Line Spacing/Justification, Typestyle in the Reset Format menu.
- Previously typed text that is displayed after a format change code may not be displayed in correct format. Paginate the document to reformat the text.
- Format changes made with Format (F7) affect all text from a format change code to the end of the document, or to the next format change.
- To help locate format change codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.

### **To Revise a Format Change Code**

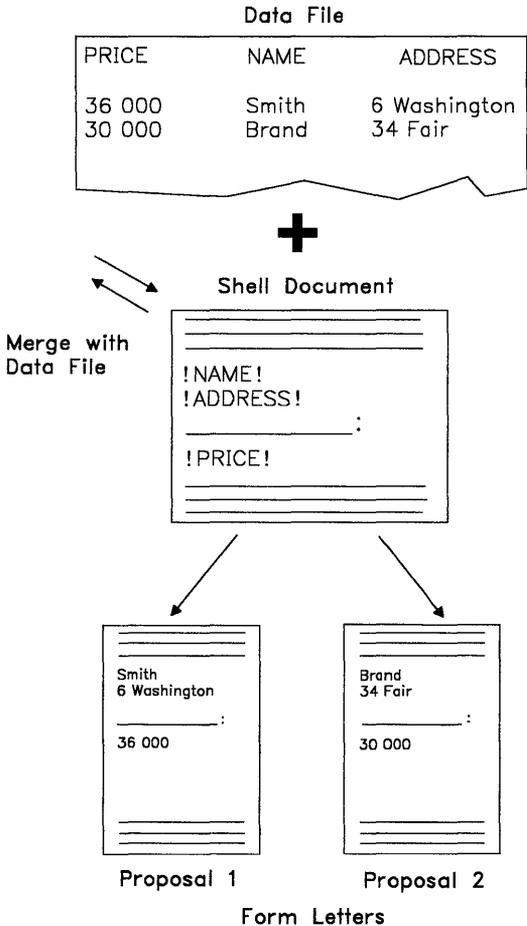
1. In the typing area, position the cursor under the format change code and press View/Revise (Ctrl + F8).
2. Make the necessary changes in the selected format menu.
3. Press Enter to save the changes to each format item.
4. Press Esc enough times to return to the typing area and save your format changes.

### *Related Topics:*

- “Codes” on page 33
- “Footnotes” on page 83
- “Headers and Footers” on page 141
- “Margins” on page 163
- “Outlines” on page 184
- “Profiles” on page 203
- “Tabs” on page 241
- “Typestyle” on page 243

# Form Letters

Use the *Form Letters* method of Merge to produce form letters by combining a single document with a file such as a file of names and addresses. The file can be created by DW4 or another application program, such as the IBM Personal Decision Series (PDS), Lotus 1-2-3, Symphony, VisiCalc, Multiplan, or dBASE II.



In addition, you can use a User-supplied program. The User-supplied program enables you to use personalized programs to generate and convert files to use with DW4. For more information about the versions of application programs DW4 supports and the User-supplied program, see “Data Files Support” in *Technical Reference*.

To generate form letters, use either the Merge with Data File function or the Merge with Named Variables function, accessed through the Merge menu.

Depending on your business needs, you can use one of the two types of Form Letters. The two types are *Form Letters with Data Files* and *Form Letters with Named Variables*.

The following paragraphs describe the differences between the two types of Form Letters. Examine the characteristics of your form letters to determine the most appropriate type to use.

- *Form Letters with Data Files*

This is a method of combining a DW4 document with a *data file* from another application program, or a spreadsheet program, to produce form letters. This method uses the Merge with Data File function accessed through the Merge menu.

For example, you may want to send a proposal with various pricing figures to a variety of contracting companies. The proposal is contained within one document, a “shell,” with instructions to insert the various pricing figures, names, and addresses. The data for the pricing figures, names, and street addresses are contained within the data file.

During the Merge with Data File function, the shell document is combined with the data file to produce proposals for each contracting company.

In Form Letters with Data Files, you can also use special instructions to perform math calculations; to print information on a specific line in the form letter; or to print different information based on whether a field is empty or not empty.

- *Form Letters with Named Variables*

This is a method of combining a DisplayWrite 4 document with another DW4 document to produce form letters. This method uses the Merge with Named Variables function accessed through the Merge menu.

For example, you may want to send a memo to three employees with different names, titles, and department numbers. The constant text, the format of the memo, and the placeholders for the varying information are contained in one DW4 document.

The varying information (the employees' names, titles, and department numbers) is contained in another DW4 document. During the Merge with Named Variables function, the documents are combined to produce memos for each employee.

*Related Topics:*

“Data Files Support” in *Technical Reference*

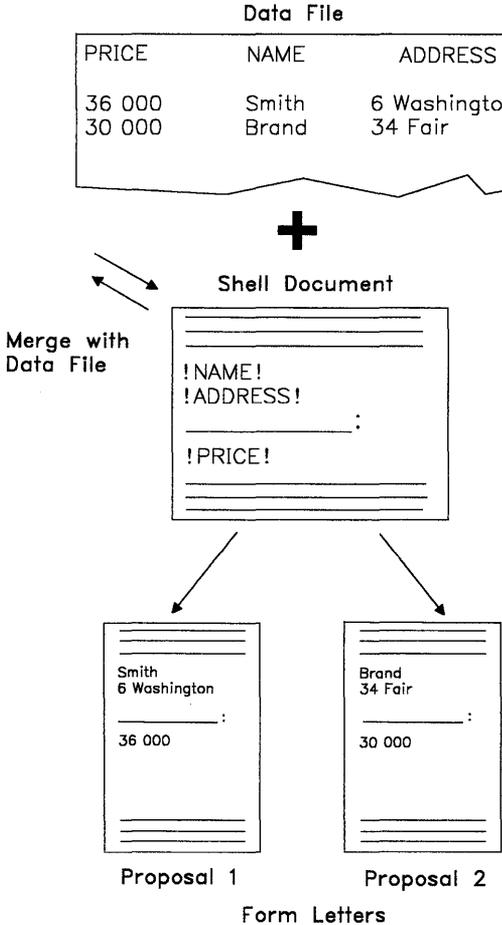
“Form Letters with Data Files” on page 100

“Form Letters with Instructions” on page 117

“Form Letters with Named Variables” on page 127

# Form Letters with Data Files

Use *Form Letters with Data Files* to produce form letters by combining a single document with a file such as a file of names and addresses. The file can be created by DW4 or another application program, such as the IBM Personal Decision Series (PDS), Lotus 1-2-3, Symphony, VisiCalc, Multiplan, or dBASE II.



In addition, you can use a User-supplied program. The User-supplied program enables you to use personalized programs to generate and convert files to use with DW4. For more information about the versions of application programs DisplayWrite 4 supports and the User-supplied program, see “Data Files Support” in *Technical Reference*.

For example, you may want to send a proposal with various pricing figures to a variety of contracting companies with different names and addresses. The *variable information* for the price, name, and street address of each contractor is saved in the data file.

The format of the proposal, any *constant text*, and any *variable names* identifying the variable information within the data file, are contained within the *shell document*. During the Merge with Data File function, the data file is combined with the shell document to produce proposals for each contracting company.

To assist you with your work in Form Letters with Data Files, a list of terms and their definitions is provided here:

<b>Constant Text</b>	Text that is the same in all form letters to be produced.
<b>Variable Names</b>	<p>A name in the shell document that identifies a placeholder for variable information (fields) in the data file. Variable names:</p> <ul style="list-style-type: none"><li>● Cannot contain more than 16 characters</li><li>● Must start with a letter</li><li>● May contain letters, numbers, or underscores</li></ul> <p><b>Note:</b> When you type a space as part of a variable name, the system converts the space to an underscore.</p> <ul style="list-style-type: none"><li>● Cannot contain punctuation marks</li><li>● Are uppercase and lowercase sensitive</li><li>● Must be unique.</li></ul>

**Shell Document**

A document that determines the format for the form letters. The shell document can contain constant text and variable names.

**Variable Information**

Information or text saved in fields in records in the data file or spreadsheet program. This information is different for each form letter, and is identified by a variable name within the shell document.

**Record**

One set of related fields in a data file. For example, one row in a spreadsheet file is a record. One record produces one form letter.

**Field**

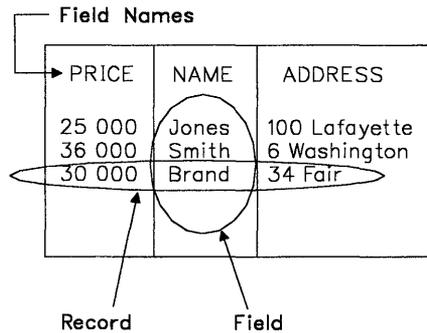
An area of a file that contains a specific category of variable information. For example, one column in a spreadsheet file is a field.

**Field Description**

Describes one field of a file. Field description information includes the field name, the field type (numbers or characters), and the field length.

**File Description**

Contains the field descriptions for each field in the data file.



**Data File** A collection of records where related information is saved in fields. This file is created by an application program other than DW4 in a data file format compatible with DW4.

**Data File Format** The format of the data file you are using. This format can be IBM Personal Decision Series (PDS), Lotus 1-2-3 (WKS), Symphony (WRK), BASIC Sequential, DIF, SYLK, dBASE II, or User-supplied.

**Note:** Before you begin Form Letters with Data Files, you must know the name of the data file you are using, its data file format, and whether or not a file description is already created or needs to be created. If a file description is already created, you need to know the name of it.

For more information on data files, see “Data Files Support” in *Technical Reference*.

When using Form Letters with Data Files to produce form letters, you should:

- Create and save a *data file from an application program other than DisplayWrite 4*, or use an existing file.
- Create and save a *file description*.

**Note:** Only create a file description if you are using a data file with a *Fixed Length, BASIC Sequential, or User-supplied* (only if required) data file format. If you are using a data file with a *PDS, WKS, WRK, DIF, SYLK, or dBASE II* data file format, you do *not* need to create a file description.

- Create and save a *shell document*.
- Generate your form letters using the Merge with Data File function.

## Creating a Data File

You should first create a *data file* to use with Form Letters with Data Files, or you can use an existing data file. The data file is a collection of related *records* where *variable information* is saved as *fields* in each record. The variable information in each record is used to produce a form letter. In the Merge with Data File function, this information is created with an application program other than DW4, for example, a data base program or a spreadsheet program.

Field Names Must Match Variable Names In Shell Document

PRICE	NAME	ADDRESS
25 000	Jones	100 Lafayette
36 000	Smith	6 Washington
30 000	Brand	34 Fair

Variable Information

Data File

For more information on data files, see "Data Files Support" in *Technical Reference*.

## Creating a File Description

### Notes:

1. If you are using a data file with a *PDS*, *WKS*, *WRK*, *DIF*, *SYLK*, or *dBASE II* data file format, you do *not* need to read this section or create a file description. Continue your work with “Creating a Shell Document” on page 109.
2. If you are using a User-supplied data file format, you may need to create a file description. If the User-supplied program generates its own file description, you do not need to create one.

After you create a data file, you should create a *file description* to use with Form Letters with Data Files. A file description is a set of field descriptions for each field in the data file. The file description must define all fields, including fields that contain line ending codes, if applicable.

A field description is a subset of the file description that describes the field names, the field types, and the field lengths.

For example, in a proposal each contractor may have a price *field*, a name *field*, and a street address *field*, which you define. All the fields for one contractor are saved in one *record*. DW4 uses the file description to access the field values in the data file and combines them with the shell document to produce form letters.

For more information on the Fixed Length, BASIC Sequential, and User-supplied data file formats, see “Data Files Support” in *Technical Reference*.

## Rules for Creating Field Descriptions

All field descriptions must adhere to these rules:

- **Field Names:**

- Cannot contain more than 16 characters
- Must start with a letter
- May contain letters, numbers, or underscores

**Note:** When you type a space as part of a field name, the system converts the space to an underscore.

- Cannot contain punctuation marks
- Are uppercase and lowercase sensitive
- Must be unique.

- **Field Types are either:**

- Numeric
- Character.

**Note:** A numeric field can only contain numbers, an optional decimal point, and an optional leading plus (+) or minus sign (-).

- **Field Lengths can be:**

Numeric    1 – 17 characters (17 is the maximum length for 15 digits, plus or minus sign and a decimal point)

Character    1 – 500 characters (500 is the maximum length).

## To Create or Add Field Descriptions

1. Select Merge in the DisplayWrite 4 menu.
2. Select Create under Data File Description in the Merge menu.
3. Type the File Description Name in the Data File Description menu, and press Enter.

**Notes:**

- a. The File Description Name is the name for the file description (not the data file).
  - b. If you do not type an extension with the file description name, DW4 appends the extension .DES.
4. Select Create Field Descriptions in the Create/Revise Data File Description menu.
  5. Type the Field Name, Field Type, and Length in the Field Description menu for the field you are creating or adding to the file description.

**Notes:**

- a. When adding field descriptions, the order in which you specify the field description *must match* the order of the fields in the data file. New field descriptions are added to the end of the current list of field descriptions.
  - b. In Fixed Length data files, the field length *must match* exactly the field length in the data file. In BASIC Sequential data files, the field length specified must be greater than or equal to the longest occurrence of the given field in the file.
6. Press Enter to save the field description.
  7. Repeat steps 5 and 6 for every field in the file description.
  8. Press Esc enough times to return to the DisplayWrite 4 menu.

**Hint:**

- If the data file is saved on a diskette, the file description *must* be saved on this same diskette.

**To Revise or Display Field Descriptions**

1. Select Merge in the DisplayWrite 4 menu.
2. Select Revise under Data File Description in the Merge menu.
3. Type the File Description Name in the Data File Description menu, and press Enter.

4. Select Revise or Display Field Descriptions in the Create/Revise Data File Description menu.
5. Select the field you want to revise in the Revise Field Description menu.

**Note:** The field names in the Revise Field Description menu are listed in the order in which their corresponding field descriptions were created. This is also the order in which the fields describe the data in the corresponding data file.

6. Make any changes in the Field Description menu, and press Enter.
7. Repeat steps 5 and 6 for each field you want to revise.
8. Press Esc enough times to return to the DisplayWrite 4 menu.

## To Delete Field Descriptions

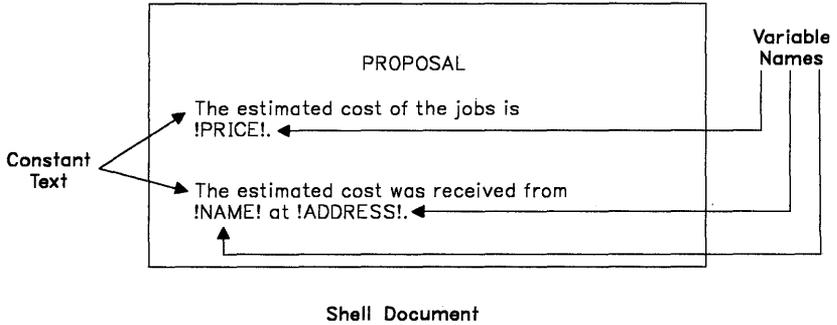
1. Select Merge in the DisplayWrite 4 menu.
2. Select Revise under Data File Description in the Merge menu.
3. Type the File Description Name in the Data File Description menu, and press Enter.
4. Select Delete Field Descriptions in the Create/Revise Data File Description menu.
5. Type **d** beside all the field descriptions you want to delete in the Delete Field Description menu, and then press Enter to return to the Create/Revise Data File Description menu.

### Notes:

- a. The field names in the Delete Field Description menu are listed in the order in which their corresponding field descriptions were created. This is also the order in which the fields describe the data in the corresponding data file.
  - b. If you mistakenly mark a field for deletion, type **k** beside the field description to keep it.
6. Press Esc enough times to return to the DisplayWrite 4 menu.

## Creating a Shell Document

After you create the data file and field description (if necessary), you should create a *shell document* to use with Form Letters with Data Files. The shell document contains the format for the form letters, any *constant text*, any *variable names*, and any other special instructions. During the Merge with Data File function, variable names in the shell document reference the variable information from a field in the data file.



Special instructions may also be inserted in the shell document. These special instructions include Skip to Line instructions, Math instructions, and If instructions. For more information on these special instructions, see "Form Letters with Instructions" on page 117.

## To Create a Shell Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu, and press Enter to go to the typing area.
3. If you want to change the format for your form letters, press Document Options (Ctrl + F7), select Document Format under Change in the Document Options menu, and set the format.

**Note:** The format you set here determines the format of your form letters.

4. To display the Variable codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.

**Note:** To revise a variable name, see "To Revise a Variable Name" on page 111.

5. Type the constant text to the point where you want a variable name placed, and press Instructions (F8).

**Note:** This variable name is a placeholder that identifies data from a field in the data file.

6. Select Merge Instructions in the Instructions menu.
7. Select Variable in the Merge Instructions menu.
8. Type the Variable Name in the Variable menu.

**Note:** The variable name *must match* the corresponding field name within the field description of the data file. Remember that variable names are uppercase and lowercase sensitive.

9. Press Enter to return to the typing area and display the variable name, for example:

**!PRICE!**

10. Continue typing the constant text to the point where you want to place the next variable name, and press Instructions (F8).
11. Repeat steps 6 through 10 for each variable name.
12. Press End/Save (F2) to save the shell document.

*Hints:*

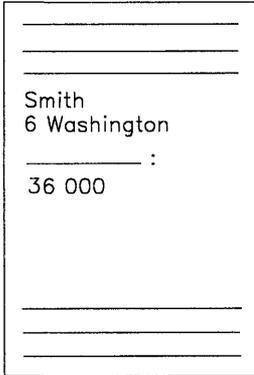
- You may want to print the shell document to use as a reference. If you do print the shell document, notice that some lines may wrap unevenly due to variables and instructions being printed. Once the shell document is merged with the data file, the uneven lines will adjust within the margins.
- You can specify different formats for numeric fields in the Output Format in the Variable menu. If you want to change the defaults for the Output Formats, use the Math Format menu in Profiles (Text Defaults).

## **To Revise a Variable Name**

1. To display the Variable codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
2. Position the cursor under the Variable code (!**PRICE!**), and press View/Revise (Ctrl + F8).
3. Revise the Variable Name in the Variable menu.
4. Press Enter to save the changes and return to the typing area.

## Generating Form Letters

After you create a data file, a file description, and a shell document, you can merge the data file with the shell document to produce *form letters*. Use the Merge with Data File function, accessed through the Merge menu, to generate the form letter.



\_\_\_\_\_

\_\_\_\_\_

Smith  
6 Washington

\_\_\_\_\_ :

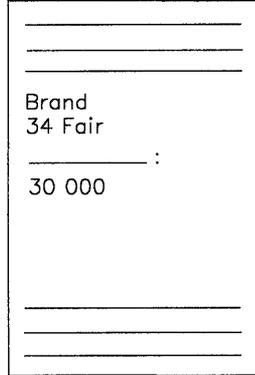
36 000

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Proposal 1



\_\_\_\_\_

\_\_\_\_\_

Brand  
34 Fair

\_\_\_\_\_ :

30 000

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Proposal 2

Form Letters

Choose the appropriate procedure for your data file format from those that follow.

### To Use Fixed Length or BASIC Sequential Files

1. Select Merge in the DisplayWrite 4 menu.
2. Select Data File in the Merge menu.
3. Type the Data File Name and Data File Format in the Data File menu, and press Enter.

**Notes:**

- a. The Data File Name is the name of the data file that contains your variable information.
  - b. The Data File Format is either Fixed Length or BASIC Sequential.
4. Type the File Description Name in the Data File Description menu, and press Enter. If the data file format is BASIC Sequential, the Processing File screen is displayed.

**Note:** The File Description Name is the name of the file description you created, or someone created for you.

5. When the Merge with Data File (1 of 2) menu is displayed, type the Shell Document name.

**Note:** Specify a Merged Document Name if you want the form letters to be saved on disk as well as printed. If you are only printing the form letter, there is no need to specify a name here.

6. If you want to make any other changes in the Merge with Data File (1 of 2) menu and the Merge with Data File (2 of 2) menu, do so now.
7. Press Enter to merge the data file with the shell document. The Merge with Data File Status screen is displayed.

**Notes:**

- a. To stop the Merge with Data File function, press Ctrl + Break.
- b. If you must stop the merge processing of a data file, you can later restart Merge with Data File by specifying a restart number in the Merge with Data File (1 of 2) menu. See "To Restart Merge with Data File" on page 116.

## To Use PDS, WKS or WRK, DIF, SYLK, or dBASE II Files

1. Select Merge in the DisplayWrite 4 menu.
2. Select Data File in the Merge menu.
3. Type the Data File Name and Data File Format in the Data File menu.

### Notes:

- a. The Data File Name is the name of the data file that contains your variable information.
  - b. The Data File Format is PDS, WKS or WRK, DIF, SYLK, or dBASE II.
4. Press Enter to display the Processing File screen. The Merge with Data File (1 of 2) menu is then displayed.
  5. Type the Shell Document name in the Merge with Data File (1 of 2) menu.

**Note:** Specify a Merged Document Name if you want the form letters to be saved on disk as well as printed. If you are only printing the form letters, there is no need to specify a name here.

6. If you want to make any other changes in the Merge with Data File (1 of 2) menu and the Merge with Data File (2 of 2) menu, do so now.
7. Press Enter to merge the data file with the shell document. The Merge with Data File Status screen is displayed.

### Notes:

- a. To stop the Merge with Data File function, press Ctrl + Break.
- b. If you must stop the merge processing of a data file, you can later restart Merge with Data File by specifying a restart number in the Merge with Data File (1 of 2) menu. See "To Restart Merge with Data File" on page 116.

## To Use a User-supplied Program

1. Select Merge in the DisplayWrite 4 menu.
2. Select Data File in the Merge menu.
3. Type the Data File Name and Data File Format in the Data File menu, and press Enter.

### Notes:

- a. The Data File Name is the name of the data file that contains your variable information.
  - b. The Data File Format is User-supplied.
4. Type the Program Name and File Description Name (if necessary) in the User-Supplied Program menu.

### Notes:

- a. The Program Name is the name of the User-supplied program.
  - b. If the User-supplied program generates its own file description, do not specify a file description name here. For more information, see "Data Files Support" in *Technical Reference*.
5. Press Enter to display the Processing File screen. Then, the Merge with Data File (1 of 2) menu is displayed.
  6. Type the Shell Document name in the Merge with Data File (1 of 2) menu.

**Note:** Specify a Merged Document Name if you want the form letters to be saved on disk as well as printed. If you are only printing the form letters, there is no need to specify a name here.

7. If you want to make any other changes in the Merge with Data File (1 of 2) menu and the Merge with Data File (2 of 2) menu, do so now.

8. Press Enter to merge the data file with the shell document. The Merge with Data File Status screen is displayed.

**Notes:**

- a. To stop the Merge with Data File function, press Ctrl + Break.
- b. If you must stop the merge processing of a data file, you can later restart Merge with Data File by specifying a restart number in the Merge with Data File (1 of 2) menu.

## To Restart Merge with Data File

1. Type the Restart Number in the Merge with Data File (1 of 2) menu.

**Note:** This is the Restart Number that was displayed in the Merge with Data File Status screen, and corresponds to the last record merged and printed.

2. If you want to make any other changes in the Merge with Data File (1 of 2) menu and the Merge with Data File (2 of 2) menu, do so now.
3. Press Enter to resume merge processing.

**Note:** The record following the specified restart number is the first record merged. For example, if you specify record 4, the Merge with Data File function begins merging the document with record 5.

*Related Topics:*

“Codes” on page 33

“Data Files Support” in *Technical Reference*

“Form Letters with Instructions” on page 117

“Format” on page 90

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## Form Letters with Instructions

If you are using Form Letters with Data Files to produce form letters, the shell document may contain instructions as well as constant text, variable names, and the format of the form letter.

Instructions indicate math calculations; where to print information on a specific line in the form letter; or where to print different information based on whether a field is empty or not empty.

Before inserting any instructions into your shell document, be sure to read “Form Letters with Data Files” on page 100.

To assist you with your work in Form Letters with Instructions, a list of terms and their definitions is provided here.

<b>If Statements</b>	Statements placed within the shell document that indicate what should be printed based on whether a field is empty or not empty.
<b>Math Instructions</b>	Instructions placed within the shell document that perform math calculations.
<b>Skip to Line Instructions</b>	Instructions placed within the shell document that cause certain information that follows to print on a specific line in the form letter. For example, use Skip to Line Instructions to print forms.
<b>Math Answer Variable Name</b>	A variable name that references the result of the math calculation when using Math instructions in the shell document. If the Math Answer Variable Name is inserted into the shell document (using a Variable code), the result of the math calculation is printed in the form letter.

## If Statements

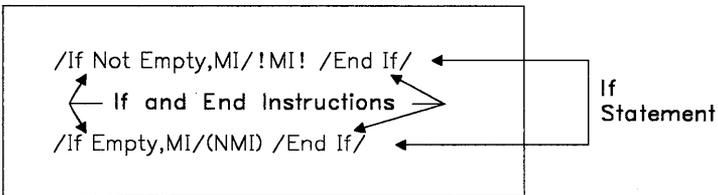
Use *If Statements* in the *shell document* to insert conditional information in the form letter depending on whether or not a field is empty.

For example, in the address list for a letter, some customers may or may not have a middle initial. The field that contains the middle initial may or may not be empty.

TITLE	FIRST_NAME	MI	LAST_NAME	STREET	CITY	ST	ZIP
Mr.	Peter	L.	Green	100 North Ave.	New Rochelle	NY	10803
Mr.	Harold	P.	Sanders	3060 Pine Tree	Dallas	TX	75264
Ms.	Emma		Bartlett	1 Gateway Blvd.	Charlotte	NC	28232
Ms.	Doris	C.	Knight	33 Ball Court	Hackensack	NJ	07603
Mr.	Thomas	E.	Rollerbrand	42 Lantern Court	Sacramento	CA	95802
Mr.	Lawrence	A.	Patton	50 Skylight St.	Albany	NY	12225
Ms.	Violet	R.	Wilson	12 Dogwood Lane	Buffalo	NY	14207
Ms.	Marcia		Stevenson	417 Mill Lane	Knoxville	TN	37917
Ms.	Jill	A.	Phillips	2 Oakwood Blvd.	Lubbock	TX	79409
Mr.	Joseph		Barker	3 Coldwater St.	Miami Beach	FL	33134
Mr.	Robert	L.	Marshall	900 Barton St.	Waco	TX	76710
Ms.	Cathy	T.	Goodman	321 Escondia	Reno	NV	89504
Mr.	Jason		Henderson	21 Far West Drive	Los Angeles	CA	90014
Ms.	Leslie	D.	Cummings	56 Hilltop Court	St. Paul	MN	56118

Middle Initial Field

You may want to print the middle initial if one exists in the middle initial field, and print (NMI) if no middle initial is there.



If during the Merge with Data File function the middle initial field is *empty*, the text (NMI) is printed in the form letter. If the field is not empty, the initial is printed in the form letter.

There are three instructions that can be used in an If Statement:

- |                              |  |
|------------------------------|--|
| <b>If Variable Empty</b>     | Begins a statement where the variable information or text (before the End “If” Test instruction) is printed in the form letter, when the specified field <i>is empty</i> .     |
| <b>If Variable Not Empty</b> | Begins a statement where the variable information or text (before the End “If” Test instruction) is printed in the form letter, when the specified field is <i>not empty</i> . |
| <b>End “If” Test</b>         | Ends an If statement.  |

**Note:** In numeric fields, values of zero are considered empty.

You can revise text between If and End instructions in the same way you revise text in your document.

## To Print Information if a Field is Empty

1. To display the If and End instructions in the typing area, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
2. At the point in the shell document where you want to place an If Empty instruction, press Instructions (F8).
3. Select Merge Instructions in the Instructions menu.
4. Select If Variable Empty in the Merge Instructions menu.
5. Type the Variable Name in the Test Variable menu.

**Note:** The variable name *must match* the corresponding field name in the data file, or match a Math Answer Variable Name. Remember that variable names are uppercase and lowercase sensitive.

6. Press Enter to insert the If Empty instruction in the shell document, and return to the typing area to display the If Empty instruction, for example:

**/If Empty,MI/**

7. Type, on the *same line* as the If Empty instruction, any text or variable information you want to be printed in the form letter, *only* if the field is empty. The variable can refer to a field name or a Math Answer, and the variable information can be a variable name surrounded by text, for example:

**/If Empty,MI/(NMI)**

8. Press Instructions (F8).
9. Select Merge Instructions in the Instructions menu.
10. Select End "If" Test in the Merge Instructions menu to return to the typing area to display the entire If Statement, for example:

**/If Empty,MI/(NMI) /End If/**

## **To Print Information if a Field is Not Empty**

1. To display the If and End instructions in the typing area, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
2. At the point in the shell document where you want to place an If Not Empty instruction, press Instructions (F8).
3. Select Merge Instructions in the Instructions menu.
4. Select If Variable Not Empty in the Merge Instructions menu.
5. Type the Variable Name in the Test Variable menu.

**Note:** The variable name *must match* the corresponding field name in the data file or match a Math Answer Variable Name. Remember that variable names are uppercase and lowercase sensitive.

6. Press Enter to insert the If Not Empty instruction in the shell document, and return to the typing area to display the If Not Empty instruction, for example:

**/If Not Empty,MI/**

7. Type, on the *same line* as the If Not Empty instruction, any conditional information you want to be printed in the form letter, *only* if the field is *not empty*. The conditional information can be a variable name surrounded by text. And, the variable can refer to a field name or a Math Answer, for example:

***/If Not Empty,MI!MI!***

8. Press Instructions (F8).
9. Select Merge Instructions in the Instructions menu.
10. Select End “If” Test in the Merge Instructions menu to return to the typing area to display the whole If statement, for example:

***/If Not Empty,MI!MI! /End If/***

## **Math Instructions**

Use *Math instructions* in the shell document to add, subtract, multiply, and divide. Then, you can print the answer to the math calculation in the form letter. The result of the math calculation can be placed in the shell document using a Variable code that specifies one of four math formats defined through Profiles. The numbers can be displayed and printed in a variety of formats, for example, with or without dollar signs (\$).

The Math instruction performs its calculation using two numbers. The numbers can be from a designated numeric field in the data file, a number typed directly into the Math instruction, or a number that is a result of a previous math calculation. The Math Answer can be inserted/printed several times in the form letter.

If you use more than one Math instruction to find the result of a math calculation, you *must* type the Math instructions in the order they are to be used.

For example, suppose there is a *field* called PRICE in the file description of your data file. You want to calculate the total amount of a purchase, including the tax rate. This tax rate is 5%.

You need two Math instructions to perform this calculation. The first Math instruction calculates the *amount of tax*.

**TaxAmount = PRICE x .05**

The second Math instruction calculates the *total* of the purchase.

**Total = PRICE + TaxAmount**

Remember, you must insert the Math instructions in the order they are shown, because the answer to the first calculation is used to calculate the total purchase price in the second calculation.

You should insert the Math instructions at the beginning of the shell document before you type any text.

The Math instruction is *not* printed in your form letter, nor does the Math instruction take up a line. This instruction simply performs the math calculation. The result of the math calculation, the *Math Answer*, is printed in the form letter at the position you indicate. The Math Answer is printed by inserting a Variable code in the form letter. The Variable code specifies the Math Answer name.

## To Define a Math Instruction

1. To display the Math instruction in the typing area, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
2. Position the cursor at the beginning of the shell document, and press Instructions (F8).

**Note:** Remember to insert Math instructions in the order they are used.

3. Select Merge Instructions in the Instructions menu.
4. Select Math in the Merge Instructions menu.

5. Type the Math Answer Variable Name, First Number, Calculation, and Second Number in the Math menu.

**Note:** Math Answer Variable Name is the variable where the answer for the math calculation is stored. Use this name to print the math calculation in the form letter, or for other math calculations. This name must be different from any other field name within the file description of the data file.

6. Press Enter to return to the typing area to display the completed math formula, for example:

**/TaxAmount = PRICE \* .05/←**

7. To print the Math Answer in the form letter, continue with the procedure "To Insert a Math Answer."

*Hint:*

- While inserting Math instructions in the shell document, each instruction is automatically ended with a Zero Index Carrier Return (ZICR). A ZICR (←) returns the cursor to the left margin and moves the cursor to the next line. When a ZICR is printed, the paper does not advance. This enables the Math instruction to be displayed on a line by itself, but also allows you to begin typing your text on the same line.

## **To Insert a Math Answer**

1. Define a Math instruction in the shell document.
2. To display a Variable code, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
3. Position the cursor at the point in the shell document where you want to insert the Math Answer from the math calculation, and press Instructions (F8).
4. Select Merge Instructions in the Instructions menu.
5. Select Variable in the Merge Instructions menu.

6. Type the Variable Name (for the Math Answer) in the Variable menu.

**Note:** The Math Answer Variable Name is the name you gave to the math calculation in the procedure “To Define a Math Instruction” on page 122. The result of the Math Answer can be placed in the shell document using one of four math formats defined through Profiles.

7. Type the Output Format in the Variable menu, if necessary.
8. Press Enter to return to the typing area to display the Variable name, for example:

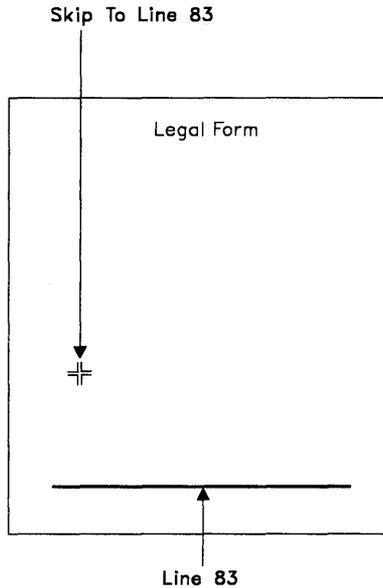
**!TaxAmount,2!**

## To Revise a Math Instruction

1. To display a Math instruction in the typing area, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
2. Position the cursor under the Math instruction (**/TaxAmount = PRICE \* .05/**) and press View/Revise (Ctrl + F8).
3. Make any changes in the Math menu.
4. Press Enter to return to the typing area.

## Skip to Line Instructions

*Skip to Line Instructions* are instructions placed within the shell document that allow certain text or variable information to be printed on a specific line in the form letter.



For example, exact placement of certain text or variable information is especially important when working with preprinted forms such as insurance claims, employment applications, or tax return forms.

### To Define a Skip to Line Instruction

1. To display the Skip to Line instruction in the typing area, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.

2. Position the cursor at the point in the shell document where you want to skip to a specific line, and press Instructions (F8).

**Note:** The Skip to Line instruction must be inserted prior to any text or variable information that you want printed on a specific line in the form letter. You can only skip to lines that follow the current line.

3. Select Merge Instructions in the Instructions menu.
4. Select Skip to Line Number in the Merge Instructions menu.
5. Type the Skip to What Line Number? in the Skip to Line Number menu.

**Notes:**

- a. Skip to What Line Number is the number of the line you want to skip to or begin printing on in the form letter.
  - b. While inserting Skip to Line instructions in the shell document, each instruction is automatically ended with a Zero Index Carrier Return (ZICR). A ZICR (←) returns the cursor to the left margin and moves the cursor to the next line. When a ZICR is printed, the paper does not advance. This enables the Skip to Line instruction to be displayed on a line by itself, but also allows you to begin typing your text on the same line.
6. Press Enter to return to the typing area and display the Skip to Line instruction, for example:

**/Skip to Line,55/←**

7. Type any text, or variable names you want to start printing on a specific line, for example:

**!Last Name! !First Name!**

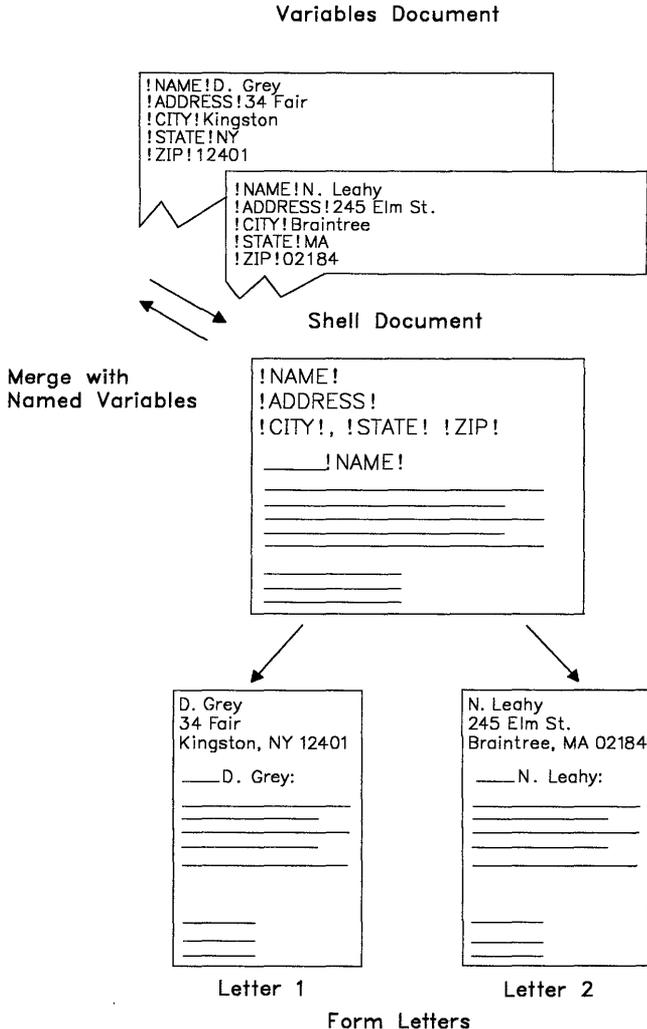
*Related Topics:*

“Codes” on page 33

“Profiles” on page 203

# Form Letters with Named Variables

Use *Form Letters with Named Variables* to produce form letters by combining a DW4 document with another DW4 document containing variables. The Form Letters with Named Variables method uses the Merge with the Named Variables function, accessed through the Merge menu. For example, you may send a letter to three customers with different names and addresses.



The *variables document* (instead of the data file) contains the variable names and the variable information for the name, street address, city, state, and zip code of each customer. The *shell document* contains the format, constant text of the letter, and the variable names for the name, street address, city, state, and zip code from the variables document.

To assist you with your work in Form Letters with Named Variables, a list of terms and their definitions is provided here:

<b>Constant Text</b>	Text that is the same in all form letters to be produced/created.
<b>Variable Names</b>	<p>A name in the shell document that identifies a placeholder for variable information in the variables document. Variable names:</p> <ul style="list-style-type: none"><li>● Cannot contain more than 16 characters</li><li>● Must start with a letter</li><li>● May contain letters, numbers, or underscores</li></ul> <p><b>Note:</b> When you type a space as part of a variable name, the system converts the space to an underscore.</p> <ul style="list-style-type: none"><li>● Cannot contain punctuation marks</li><li>● Are uppercase and lowercase sensitive</li><li>● Must be unique.</li></ul>
<b>Shell Document</b>	A document that determines the format for form letters. The shell document can contain constant text and variable names.

**Variable Information** Information in the variables document that is different for each form letter. This information is preceded by a variable name that matches the same variable name in the shell document.

**Variables Document** A document that contains variable names and the related variable information to be inserted into the shell document.

When using Form Letters with Named Variables to produce form letters, you should:

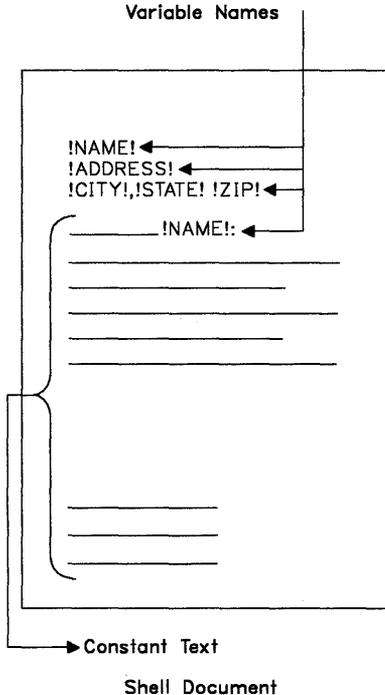
- Create and save a *shell document*.
- Create and save a *variables document*.
- Generate your form letters using the Merge with Named Variables function.

# Creating a Shell Document

You should first create a *shell document* to use with Form Letters with Named Variables. The shell document contains the format of the form letters, any constant text, and the variable names.

The variable names in the shell document reserve places and identify the associated variable information in the variables document. Therefore, the variable names in this document *must match* the variable names in the variables document.

For example, in the letter you may send to three customers, the constant text and the variable names for the customers' names and addresses are saved in the shell document. These variable names *must match* the variable names for the associated variable information in the variables document.



## To Create a Shell Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu, and press Enter to go to the typing area.
3. If you want to change the format for your form letters, press Document Options (Ctrl + F7), select Document Format under Change in the Document Options menu, and set the format.

**Note:** The format you set here determines the format of your form letters.

4. To display the Variable codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.

**Note:** To revise the variable name, see “To Revise a Variable Name” on page 133.

5. Type any constant text to the point where you want to place a variable name.
6. Press Instructions (F8).
7. Select Merge Instructions in the Instructions menu.
8. Select Variable in the Merge Instructions menu.
9. Type the Variable Name in the Variable menu, and press Enter to return to the typing area to display the variable name.

**Note:** The variable name *must match* the corresponding variable name used in the variables document. Remember that variable names are uppercase and lowercase sensitive.

10. Continue typing constant text to the point where you want to place the next variable name.
11. Repeat steps 6 through 9 for each variable name used in the shell document, as appropriate.
12. Press End/Save (F2) to save the shell document.

*Hint:*

- You may want to print the shell document to use as reference. If you do print the shell document, notice that some lines may wrap unevenly due to variables being printed. Once the shell document is merged with the variables document, the uneven lines will adjust within the margins.

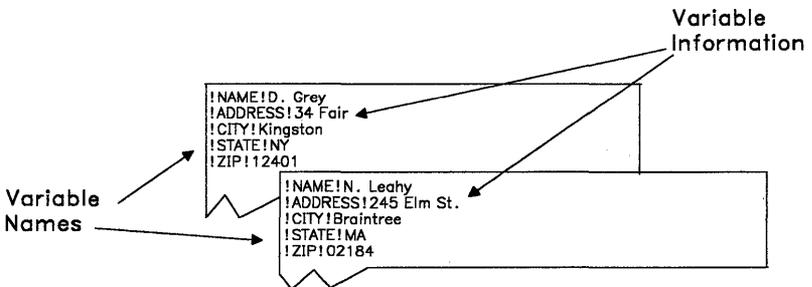
## To Revise a Variable Name

1. To display the Variable codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
2. Position the cursor under the Variable code (!NAME!), and press View/Revise (Ctrl + F8).
3. Revise the Variable Name in the Variable menu.
4. Press Enter to save the changes and return to the typing area.

## Creating a Variables Document

After you create the shell document, you should create a *variables document* to use with Form Letters with Named Variables. This document contains variable names that *must match* the variable names in the shell document, and the accompanying variable information. The variable names and the accompanying variable information for *one* form letter *must* all be saved on the *same page* in the variables document.

For example, you may want to send a single letter to three customers with different names and addresses. The variable names and variable information for *one* customer's name, street address, city, state, and zip code are saved on the *same page* in the variables document. During the Merge with Named Variables function, each page of the variables document produces one form letter for *each* customer.



Variables Document Saved On  
Separate Pages

## To Create a Variables Document

1. Select Create Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Create Document menu, and press Enter to go to the typing area.
3. Press Document Options (Ctrl + F7).
4. Select Document Comment in the Document Options menu.
5. Set Preserve Page Numbers to Yes in the Document Comment menu, and press Enter to return to the typing area.
6. To display the Variable codes, press Edit Options (Ctrl + F5), and set Display All Codes to Yes.
7. To prevent unwanted page ends, set Auto Page End to No in the Edit Options menu, and press Enter.
8. Press Instructions (F8).
9. Select Merge Instructions in the Instructions menu.
10. Select Variable in the Merge Instructions menu.
11. Type the Variable Name in the Variable menu, and press Enter to return to the typing area to display the variable name.

**Note:** The variable name *must match* the variable name in the shell document. Remember that variable names are uppercase and lowercase sensitive.

12. Type the variable information for that variable name on the *same line* as that variable name.

**Note:** If the variable information contains more than one line of text, press Enter after each line.

13. Repeat steps 8 through 12 for all the variable names used in the shell document to produce *one* form letter.

14. If you are using the shell document to produce a *single* form letter, continue with step 17.

If you are using the shell document to produce *several* form letters, continue with the next step.

15. Press Page End (Ctrl + E) so you can create the variable information for the next form letter on another page.

**Notes:**

- a. Remember, *all* the variable names and variable information for *one* form letter *must* be placed on the same page.
  - b. Do *not* press Page End (Ctrl + E) after the last page.
16. Repeat steps 8 through 15 for *each* form letter.
  17. Press End/Save (F2) to save the variables document.

**Hints:**

- To avoid retyping the same variable names, you can copy all variable names (each on a separate line) to a Notepad (Ctrl + F4). Then, use Recall from Notepad in the Notepad menu to get a copy of the variable names for each page of the variables document. Use Next Variable (Ctrl + N) to move the cursor to the end of each variable name.
- The Merge with Named Variables function ignores variable names and their accompanying variable information that do not have matching counterparts in the shell document.
- If you are using the same variable name several times in the shell document, insert its matching variable name and the accompanying variable information in the variables document only once.
- To revise the variable name, see “To Revise a Variable Name” on page 111.

## Generating Form Letters

After you create and save a shell document and a variables document, you can merge the two documents to produce form letters. Use the Merge with Named Variables function, accessed through the Merge menu, to produce form letters.

During the Merge with Named Variables function, the variable names from the variables document match their counterparts in the shell document. Then, the variable information from the variables document is merged with the shell document to produce form letters.

D. Grey 34 Fair Kingston, NY 12401
_____ D. Grey:
_____
_____
_____
_____
_____
_____
_____

Letter 1

N. Leahy 245 Elm St. Braintree, MA 02184
_____ N. Leahy:
_____
_____
_____
_____
_____
_____
_____

Letter 2

Form Letters

## To Generate and Print Several Form Letters

1. Select Merge in the DisplayWrite 4 menu.
2. Select Named Variables under Merge With in the Merge menu.
3. Type the Shell Document Name and Variables Document Name in the Merge with Named Variables (1 of 2) menu.

**Note:** Specify a Merged Document Name if you want the form letters to be saved on disk as well as printed. If you are only printing the form letters, there is no need to specify a name here.

4. If you want to make other changes in the Merge with Named Variables (1 of 2) menu or the Merge with Named Variables (2 of 2) menu, do so now.
5. Press Enter to display the Merge in Progress screen. When Merge is complete, the DisplayWrite 4 menu is displayed.

*Hints:*

- If you want to merge specific pages of the variables document, select System Page Number(s) in the Merge with Named Variables (1 of 2) menu, and type the system page numbers of the sets of variables in the variables document.
- If the shell document contains footnotes, Merge with Named Variables sequences the footnotes and places them at the bottom of the appropriate page. You do not need to paginate the document to incorporate the footnotes.
- If the form letter includes footnotes and you want a copy of the footnotes stored with the document, type the Merged Document Name in the Merge with Named Variables (1 of 2) menu and set Collect Footnotes in Merged Document to Yes in the Merge with Named Variables (2 of 2) menu. This is useful if you are storing the form letter on disk and later want to revise the footnotes.
- To stop the Merge with Named Variables function, press Ctrl + Break.

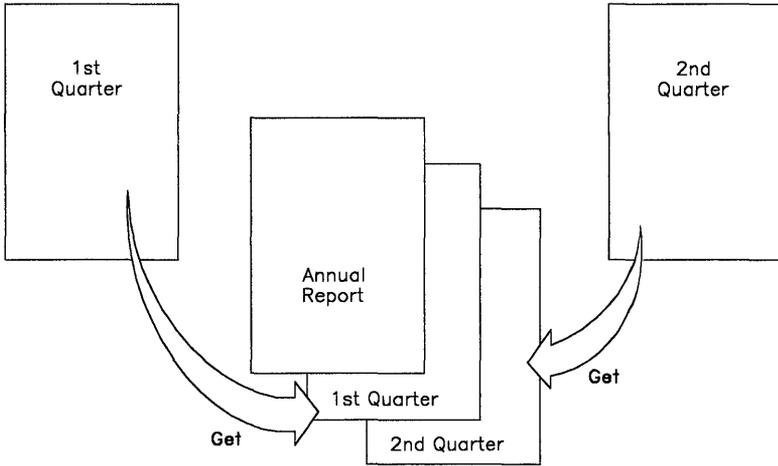
*Related Topics:*

- “Codes” on page 33
- “Footnotes” on page 83
- “Format” on page 90
- “Notepad” on page 181

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## Get

Use Get (Ctrl + F6) to insert pages of documents or entire documents into the document you are currently creating or revising. DW4 inserts the pages or the entire document at the cursor position in the current document.



You can get a copy of:

- One or more pages from an IBM Displaywrite 3 document
- One or more pages from a DisplayWrite 4 document
- One or more pages from a revisable-form text document
- A standard ASCII file
- A 7-bit ASCII file. 7-bit ASCII files are created by some word processing packages.

## To Get a Document or File

1. In the typing area, move the cursor to the point where you want the other document or file inserted and press Get (Ctrl + F6).
2. Type the File Name and the File Type in the Get File menu.
3. If you want to make any other changes in the Get File menu, do so now.
4. Press Enter to retrieve the document or selected pages.

### Hints:

- To get a DisplayWrite Assistant document, you must first save it, using DisplayWrite Assistant, as revisable-form text.
- When you get an ASCII file, some characters may be displayed and printed differently. For a list of these characters, see "ASCII to EBCDIC Conversion" in *Technical Reference*.
- Files from DOS applications must be converted into a standard ASCII format in the originating application before using Get.
- Page End codes may be removed when you get more than one page of a document. You should insert Page End (Ctrl + E) codes or paginate the document.
- On a dual diskette-based system, ensure that the document you want to get is on the same diskette as the document you are currently creating or revising. While using Get, you should not remove the diskette that contains your current document.
- You can get other pages from the current document.

### Related Topics:

- “ASCII Copy to File” on page 21
- “Application Support” in *Technical Reference*
- “Page Ends” on page 191
- “Page Numbers” on page 194
- “Paginate” on page 196

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## Go To Page

You can go directly to a specific page in a document by selecting Go To Page in the Search (F6) menu. Go To Page allows you to scroll backward and forward in a document.

### To Go To a Page

1. In the typing area, press Search (F6).
2. Select Go To Page in the Search menu.
3. Type the Page Number you want to go to in the Go To Page menu, and press Enter.

#### *Hints:*

- If you do not type a number in the Go To Page menu, the next page is displayed.
- To display the last page of the document, you can type a page number greater than the last page of the document. For example, typing 99 displays the last page of a 10-page document.

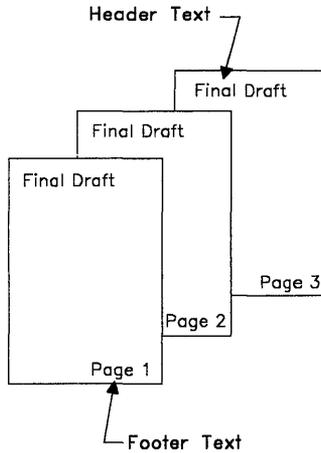
#### *Related Topic:*

“Page Numbers” on page 194

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## Headers and Footers

A header is text that is printed at the top of a page; a footer is text that is printed at the bottom of a page. For example, your document can contain page numbers in the footer. Headers and footers are part of the format of a document, and can be created or revised through Document Options (Ctrl + F7) or Format (F7).



Headers and Footers

You type headers and footers in the header or footer typing areas. The headers and footers are not displayed in the typing area, but will be printed in your document. You can print your header or footer on all pages, on even-numbered or odd-numbered pages, or both. You can create a header or footer for odd-numbered pages, and a different header or footer for even-numbered pages.

You can create headers or footers for the entire document by changing the Document Format using Document Options (Ctrl + F7). These headers and footers are in effect for the entire document when you paginate, and remain in effect until you make a page format change.

You can also create headers and footers for part of a document using Format (F7) at the top of a page. These changes affect the text from the current format change code to the end of the document, or to the next page format change code.

## **To Create or Revise Headers or Footers for the Entire Document**

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format under Change in the Document Options menu.
3. Select Header or Footer in the Change Document Format menu to reach the appropriate header or footer typing area.
4. Type the text for the header or footer.

**Note:** The maximum size for headers and footers is up to 512 characters or codes.

5. Press Return/Save (F2) and select Return and Save to save the header or footer.
6. Press Esc enough times to return to the typing area.

### *Hints:*

- To create headers or footers for part of a document, position the cursor on the first line on the page and press Format (F7). To return to the Document Format, select Reset Format in the Format menu, and select All Formats under Return to Starting Choice in the Reset Format menu.
- You can insert a page number in a header or footer. In the Header or Footer typing area, position the cursor where you want a page number to appear and press Instructions (F8). Select Page Number or System Page Number in the Instructions menu to insert the appropriate code.

- You can insert a user-defined control in a header or footer. A user-defined control is a number that represents a print control sequence; this control sequence can define a unique printed output. For example, insert a user-defined control to define a color change for printing of the letterhead. For more information on creating and inserting user-defined controls, see “User-defined Control” in *Technical Reference*.

## **To Create Or Revise Even or Odd Headers or Footers for the Entire Document**

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format under Change in the Document Options menu.
3. Select Even/Odd Headers & Footers in the Change Document Format menu.
4. Select Even Pages or Odd Pages under Headers or under Footers in the Even/Odd menu.
5. Type the text for the even or odd header or footer in the Even or Odd Header or Footer typing area.

**Note:** The maximum size for even or odd headers or footers is up to 256 characters or codes.

6. Press Return/Save (F2) and select Return and Save to save the header or footer.
7. Press Esc enough times to return to the typing area.

### *Hint:*

- To create even or odd headers or footers for part of a document, position the cursor on the first line of the page and press Format (F7). To return to the Document Format, select Reset Format in the Format menu, and select All Formats under Return to Starting Choice in the Reset Format menu.

## To Specify the Location for Headers or Footers for the Entire Document

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format under Change in the Document Options menu.
3. Select Page Layout/Paper Options in the Change Document Format menu.
4. Make any changes in the Page Layout/Paper Options (1 of 2) menu and the Page Layout/Paper Options (2 of 2) menu.
5. Press Enter to save the changes and return to the Change Document Format menu.
6. Press Esc enough times to return to the typing area.

### *Hint:*

- To specify the header or footer location for part of a document, position the cursor on the first line of the page and press Format (F7). To return to the Document Format, select Reset Format in the Format menu, and select All Formats under Return to Starting Choice in the Reset Format menu.

### *Related Topics:*

“Codes” on page 33

“Format” on page 90

“Page Numbers” on page 194

“Paginate” on page 196

“User-defined Control” in *Technical Reference*

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## Hyphenation

You can use dictionary-assisted hyphenation during pagination, or during Check Document in Spell, to further adjust the line endings of a document. You can also hyphenate words manually by pressing Line Adjust (Alt + 2) and responding to any hyphenation prompts.

Dictionary-assisted hyphenation inserts a syllable hyphen code and a Carrier Return code to split any word that crosses the right margin. The syllable hyphen identifies where a word can correctly be divided if it crosses the right margin. A syllable hyphen is only displayed or printed if a word must be split between two lines. If you revise a document, and a word no longer crosses the right margin, the system does not display the syllable hyphen or print it.

### To Use Dictionary Hyphenation

1. In the typing area, press End/Save (F2).
2. Select Paginate, End, and Save in the End/Save menu.
3. Set Dictionary Hyphenation to Prompted in the Paginate Document menu.

**Note:** If you do not want to be prompted for hyphenation decisions, set Dictionary Hyphenation to Automatic in the Paginate Document menu.

4. Press Enter to begin pagination.
5. When prompted for a hyphenation decision:
  - To accept the suggested dictionary hyphenation, press Enter.
  - To indicate a different hyphenation point, position the cursor after the last character of the appropriate syllable and press Enter.
  - To move the entire word to the next line, position the cursor under the first character of the word, and press Enter.
  - To keep the entire word on the same line, position the cursor one space to the right of the last character of the word, and press Enter.
6. Repeat step 5 for each hyphenation decision.

*Related Topics:*

“Line Adjust” on page 160

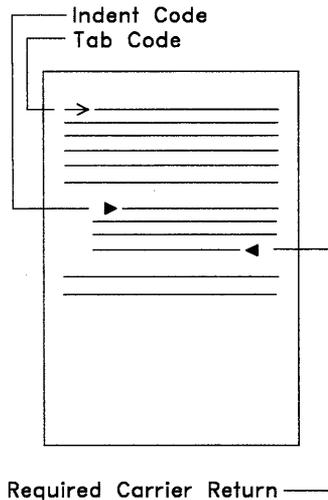
“Paginate” on page 196

“Required Hyphen” on page 208

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## Indent

You can indent text anywhere in your document. Use Tab to indent the first line of a paragraph, or to move a single line of text to a particular tab setting. To indent an entire paragraph, use Indent (Ctrl + T) (also known as Required Tab) to set a temporary left margin at a tab setting.



Tab and Text Indents

## To Indent Entire Paragraphs

1. In the typing area, press Indent (Ctrl + T) one or more times to position the cursor at the tab setting where you want the indented text to begin. The appropriate number of Indent codes are inserted.

**Note:** Indent code placement is determined by the tab settings in your document. Set a tab to position indented text at a particular place. For example, if you want to indent a paragraph 18 spaces, set a tab 18 spaces from the left margin and press Indent (Ctrl + T) until you reach that position.

2. Type the text at the temporary left margin. This margin is indicated by the < symbol on the scale line.
3. Press Enter to return the cursor to the original left margin.

### *Hints:*

- To indent text that is already typed, position the cursor at the beginning of the first line of the text you want to indent and press Indent (Ctrl + T).
- Indent does not change the right margin.

### *Related Topics:*

“Carrier Return” on page 30

“Codes” on page 33

“Tabs” on page 241

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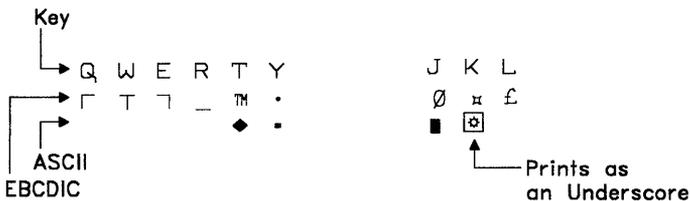
## Keyboard Extensions

Keyboard extensions are sets of characters and symbols that can be used in addition to those engraved on your keyboard. If the original default values for the four keyboard extensions do not contain the character or symbol you want, these extensions can be revised using Revise Keyboard Extensions in the Profiles menu (Work Station Defaults).

Keyboard extensions define the characters that are created when you hold down Alt and press keys A through Z. The two Characters Sets and the two Symbols Sets in the chart that follows are already defined by DW4. They are:

- Symbols Set 1
- Symbols Set 2
- Characters Set 3
- Characters Set 4.

In the chart that follows, the second line of characters and symbols, shown in blue, are EBCDIC characters. The third line of characters and symbols are ASCII characters. They are only shown if they differ from the EBCDIC characters. Those characters that are enclosed in a box are printed as an underscore on the IBM Proprinter or equivalent.



ASCII characters appear if your display uses Character mode. The additional EBCDIC characters appear if your display uses APA mode.

Symbols Set 1 is the active keyboard extension shipped with DW4. You can change the active keyboard extension to one of the other Characters Sets or to Symbols Set 2 within an individual document, or for future use through the Profiles menu (Work Station Defaults).

Symbols Set 1

Q W E R T Y U I O P  
 Γ T 7 \_ ™ • < > = Rk  
 ◆ ■ ■ ■ ■  
 A S D F G H J K L  
 † † † \ ø || Ø ¤ £  
 || ■ ■ □  
 Z X C V B N M  
 L ⊥ J I ∫ □ ~  
 - ■ n

Symbols Set 2

Q W E R T Y U I O P  
 ² Ω € ÷ T > < ≡ √ π  
 > <  
 A S D F G H J K L  
 α σ ∫ Σ Γ e { ≈ Φ  
 δ ≈ ∞  
 Z X C V B N M  
 ∞ • < } β > μ

Characters Set 3

Q W E R T Y U I O P  
 ! @ # \$ % ± ö ü ² ³  
 n  
 A S D F G H J K L  
 § □ \ ° ½ ü ¼ " μ  
 Z X C V B N M  
 [ ] ´ ö B Ä ä

Characters Set 4

Q W E R T Y U I O P  
 ! ¢ R \$ £ ^ ñ Ñ / ..  
 ■  
 A S D F G H J K L  
 ¡ | \ ¸ ½ ¯ ° " μ  
 Z X C V B N M  
 < > ° à ù è é

Keyboard extensions give you added flexibility in creating your documents. For example, you can type characters used in other languages, or include symbols for scientific or business purposes:

- To include Greek symbols in your document, such as Sigma (Σ) or Omega (Ω), change the keyboard extension in the Edit Options (Ctrl + F5) menu to Symbols Set 2. Type Alt + F for Σ and Alt + W for Ω.
- To include a scientific symbol such as degrees (°), change the keyboard extension in the Edit Options (Ctrl + F5) menu to Characters Set 3. Type Alt + F for °.

- To include a business symbol, such as pounds (£), be sure the keyboard extension in the Edit Options (Ctrl + F5) menu is set to Symbols Set 1. Type Alt + L for £.

You can rearrange the Characters Sets and Symbols Sets to include other characters and symbols you need from these sets, or choose from other characters and symbols listed in “Charts for Characters and Symbols Sets” in *Technical Reference*.

To print the keyboard extension character properly, you must have a printer with a print element, font, or cartridge that includes the same character(s) as the keyboard extension. Also, the profile you are using should specify the information for your printer, and the printer function table must support that character.

## To Use an Active Keyboard Extension

1. In the typing area, position your cursor where you need a character or symbol from the active keyboard extension.
2. Select the characters or symbols you need from the chart of the active keyboard extension.
3. Press and hold Alt, then press key or keys A through Z to type the appropriate character(s) or symbol(s).

**Note:** A Keyboard Change code (■) is inserted on each side of the symbols in Symbols Sets 1 and 2.

## To Change the Active Keyboard Extension

1. In the typing area, press Edit Options (Ctrl + F5).
2. Type your choice for the Keyboard Extension in the Edit Options (Ctrl + F5) menu.
3. Press Enter to change the active keyboard extension and return to the typing area.

### Hints:

- When you change an active keyboard extension, the new keyboard extension remains in effect for all documents until you exit DW4. Then, the keyboard extension returns to the default setting.
- You can change the active keyboard extension for future use through the Profiles menu (Work Station Defaults).

### Related Topics:

“Characters and Symbols Support” in *Technical Reference*

“Codes” on page 33

“Displays” in *Technical Reference*

“Keyboard Extensions, Revise”

“Print” on page 199

“Printer Support” in *Technical Reference*

“Profiles” on page 203

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## Keyboard Extensions, Revise

If the original default values provided for the four Keyboard Extensions do not contain the character or symbol you want, these extensions can be revised using Revise Keyboard Extensions in the Profiles menu (Work Station Defaults). You can assign the character or symbol you want to a key in one of the keyboard extensions; then use the revised keyboard extension to type the character or symbol.

To select the characters and symbols you want within the four Characters and Symbols Sets, use the “Charts for Characters and Symbols Sets” in *Technical Reference*.

For example, you may want to revise Symbols Set 2 to include the male (♂) and female (♀) symbols. You can assign the male symbol to Alt + N and the female symbol to Alt + B, replacing the default values of the Greater Than (>) and Beta Small (β) symbols respectively.

Or, perhaps you frequently type documents in Swedish. You may want to add the ae Diphthong Small (æ) and the ae Diphthong Capital (Æ) characters to either Characters Set 3 or Characters Set 4.

To print the keyboard extension character properly, you must have a printer with a print element, font, or cartridge that includes the same character(s) as the keyboard extension. Also, the profile you are using should specify the appropriate information for your printer, and the printer function table must support that character.

## To Revise a Keyboard Extension

1. Determine which Keyboard Extension you want to revise, and then select Profiles in the DisplayWrite 4 menu.
2. Select Create Profile or Revise Profile in the Profiles menu.
3. Type the Profile Name in the Profile menu, and press Enter.
4. Select Work Station under Defaults For in the Create Profile menu or the Revise Profile menu.
5. Select Revise Keyboard Extensions in the Work Station Defaults menu.
6. Select the Characters Set or Symbols Set you want to revise in the Revise Keyboard Extensions menu.
7. Type your choice for Alt + A through Z in the Revise Symbols - Set # (1 of 2) menu, the Revise Symbols - Set # (2 of 2) menu, the Revise Characters - Set # (1 of 2) menu, or the Revise Characters - Set # (2 of 2) menu.

**Note:** Refer to the “Charts for Characters and Symbols Sets” in *Technical Reference* to find the symbol or character you want to add and its numeric equivalent in the Keyboard Extension Choices column. Use the “Characters Set Chart” in *Technical Reference* for Characters Set 3 and Characters Set 4. Use the “Symbols Set Chart” in *Technical Reference* for Symbols Set 1 and Symbols Set 2.

For example, to change Alt + P in Symbols Set 2 to the registered trademark symbol (®), type 64 beside Alt + P in the Revise Symbols - Set 2 (2 of 2) menu.

8. Press Enter to return to the Revise Keyboard Extensions menu.
9. Press Esc enough times to display the End/Save menu.
10. Select End and Save in the End/Save menu to save your changes and return to the Profiles menu.
11. Activate the profile you changed, if necessary.
12. Press Esc to return to the DisplayWrite 4 menu.

**Note:** To use the revised keyboard extension in a document, see “To Use an Active Keyboard Extension” and “To Use a Different Keyboard Extension” in “Keyboard Extensions” on page 148.

*Related Topics:*

“Characters and Symbols Support” in *Technical Reference*

“Keyboard Extensions” on page 148

“Print” on page 199

“Printer Support” in *Technical Reference*

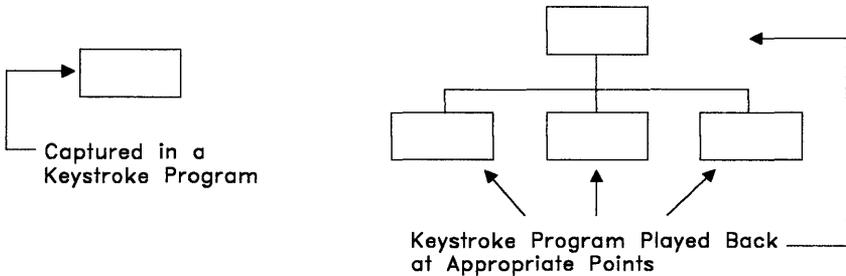
“Profiles” on page 203

“Printer Function Table Support for Typestyles” in *Technical Reference*

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## Keystroke Programming

Keystroke Programming allows you to save a sequence of keystrokes in memory and use the keystrokes again without retyping them. For example, you can capture the keystrokes used to type a paragraph of text, to draw with Cursor Draw, to select tasks from menus, or to fill in menu items.



With Keystroke Programming, you can also:

- Store captured keystrokes in a file for later recall
- Play back captured keystrokes one at a time in order to make changes to a keystroke program
- Temporarily pause during Capture so you can type information that you want to change each time you use the keystroke program
- Program the function keys to recall and initiate specific keystroke programs
- Save about 500 keystrokes in a keystroke program. These remain in memory until you capture a new keystroke program, recall another keystroke program, or exit DW4.

### To Capture Keystrokes

1. At the point where you want to begin capturing keystrokes, press Key Program (Ctrl + F1).
2. Select Capture, under Keystroke Capture, in the Keystroke Programming menu.
3. Type the keystrokes you want to capture.

4. Press Key Program (Ctrl + F1) and select End Capture in the Keystroke Programming menu to stop capturing keystrokes.
5. Follow the prompt to save your captured keystrokes, or press Esc.

## To Pause During Keystroke Capture

1. At the point where you want the keystroke program to pause, press Key Program (Ctrl + F1).
2. Select Pause in the Keystroke Programming menu to temporarily suspend keystroke capture.

**Note:** When you play back this keystroke program, the keystroke program will pause at this point, allowing you to type information (for example, a document name in a menu).

3. Type the characters you do not want captured.
4. To resume capturing keystrokes, press Key Program (Ctrl + F1) and select Continue Capture in the Keystroke Programming menu.
5. Press Key Program (Ctrl + F1) and select End Capture in the Keystroke Programming menu to stop capturing keystrokes.

## To Play Back Keystrokes Automatically

1. At the point where you want to use the keystroke program, press Key Program (Ctrl + F1).

**Note:** You should always play back a keystroke program in the same environment in which the keystroke program was captured. For example, if you begin the *capture* of a keystroke program in the Spell menu, you should have the Spell menu displayed when you start *play back* of that keystroke program.

2. Select Auto Playback, under Keystroke Playback, in the Keystroke Programming menu.

### *Hint:*

- To cancel playback, press Key Program (Ctrl + F1) and select End Playback.

## To Save a Keystroke Program

1. After you End Capture, press Key Program (Ctrl + F1), if the Keystroke Programming menu is not displayed.
2. Select Save, under Keystroke Program, in the Keystroke Programming menu.
3. Determine how you want to save the keystroke program:
  - To save the keystroke program in a file (for example, DRAWBOX.KEY), type a Keystroke Program Name in the Save Keystroke Program menu and press Enter.

OR

- To save the keystroke program as a programmable function key, press Alt and a function key (F1 – F12), or Shift and a function key (F1 – F12) (for example, Alt + F1), in the Save Keystroke Program menu.

## To Recall a Saved Keystroke Program

1. At the point where you want to use the keystroke program, press Key Program (Ctrl + F1).
2. Select Recall, under Keystroke Program, in the Keystroke Programming menu.
3. If you saved the keystroke program in a file, type the Keystroke Program Name you want to recall in the Recall Keystroke Program menu, and press Enter.

**Note:** If you saved the keystroke program as a programmable function key, press that programmable function key.

## To Make Changes to a Keystroke Program

1. Recall the keystroke program, if necessary, or press Key Program (Ctrl + F1).
2. Select Playback Singly, under Keystroke Playback, in the Keystroke Programming menu.

3. As each keystroke is displayed on the status line:

- To play back the keystroke, press Enter

OR

- To delete the keystroke, press Del

OR

- To add more keystrokes, press Key Program (Ctrl + F1) and select Capture, under Keystroke Capture, in the Keystroke Programming menu.

**Notes:**

- a. The keystrokes you capture are inserted before the keystroke currently displayed on the status line.
  - b. Remember to End Capture before you continue playback.
4. When you have finished revising the keystroke program, press Key Program (Ctrl + F1), and select End Play, under Keystroke Playback, in the Keystroke Programming menu.
  5. Press Key Program (Ctrl + F1) and select Save, under Keystroke Program in the Keystroke Programming menu, to save the revised keystroke program.

*Hints:*

- You can change to Auto Playback during Playback Singly by pressing Key Program (Ctrl + F1) and selecting Auto Playback in the Keystroke Programming menu.
- If you want to store your keystroke programs in a specific directory, you can specify the Keystroke Save/Recall Path through the Profiles menu (System Paths). If you do not specify a path as part of the keystroke program name, keystroke programs are stored in the current directory.
- Keystroke programming is not active during DOS Commands.

*Related Topics:*

“Keystroke Programming, Programmable Function Keys” on page 158  
“Profiles” on page 203

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## Keystroke Programming, Programmable Function Keys

Programmable function keys provide a short cut for recalling and playing back keystroke programs. Instead of naming a keystroke program, you assign the program to a function key. In the future, when you press that programmable function key, the system recalls the keystroke program associated with the key and automatically plays it back.

By pressing Shift or Alt with a function key, you can define from 20 to 24 programmable function keys, depending on the type of keyboard you use.

You may want to use the programmable function keys for operations you perform frequently. For example, you may want to use a particular heading for all your business correspondence. Instead of typing the heading each time, you can capture it in a keystroke program, save the keystroke program as a programmable function key, and simply press that key at the beginning of each business letter.

### To Define a Programmable Function Key

1. Capture or Recall a keystroke program.
2. Press Key Program (Ctrl + F1) and select Save, under Keystroke Program, in the Keystroke Programming menu.
3. Instead of typing a Keystroke Program Name in the Save Keystroke Program menu, press Alt and the function key, or Shift and the function key you want to assign to the keystroke program. For example, Alt + F9 or Shift + F9.

**Note:** The system assigns a name, based on the programmable function key you specified, and saves it for you (for example, AF09.KEY or SF09.KEY). These names are displayed when you list the directory.

### *Hints:*

- To use a programmable function key, position the cursor at the point you want to use the keystrokes, and press the programmable function key.
- You can type a Keystroke Comment in the Save Keystroke Programming menu for identification before you assign the programmable function key.
- When you press a programmable function key, the keystroke program assigned to that key must be accessible through the Keystroke Save/Recall Path in Profiles (System Paths), or available in the current directory if no Keystroke Save/Recall Path is defined.

### *Related Topics:*

“Keystroke Programming” on page 154

“Profiles” on page 203

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## Line Adjust

Although the DW4 program automatically adjusts line endings when you paginate, there may be instances when you want to manually adjust some of the line endings in a document. For example, after copying a block of text with different margin settings from one document to the current document, you can press Line Adjust (Alt + 2 or F12) to realign the text within the current margin settings without paginating.

When you press Line Adjust (Alt + 2 or F12) and a word crosses the right margin, Line Adjust prompts you for a hyphenation decision. You determine if you want to move the whole word to the next line, keep the word on the same line, or hyphenate the word.

If you choose to hyphenate the word, the system inserts a syllable hyphen where you want the word to be divided. A syllable hyphen is printed or displayed only when it is at the end of a line.

Line Adjust does not adjust text across page boundaries, Required Carrier Return codes, Page End codes, or Required Page End codes. Paginate your document when you have revisions that affect page endings.

### To Manually Adjust a Line

1. In the typing area, position the cursor at the first line to be adjusted and press Line Adjust (Alt + 2 or F12).
2. When prompted for a hyphenation decision:
  - To indicate a hyphenation point, position the cursor after the last character of the appropriate syllable, and press Enter.
  - To move the entire word to the next line, position the cursor under the first character of the word, and press Enter.
  - To keep the entire word on the same line, position the cursor one space to the right of the last character of the word, and press Enter.
3. Continue to press Line Adjust (Alt + 2 or F12) as necessary for other lines that need to be adjusted.

*Hint:*

- To turn off Line Adjust, for example, for a chart or list, set Adjust Line Endings to No in the Line Spacing/Justification menu. Access the Line Spacing/Justification menu through Format (F7), Document Options (Ctrl + F7), or for future use through Profiles (Text Defaults).

*Related Topics:*

- “Codes” on page 33
- “Format” on page 90
- “Hyphenation” on page 145
- “Paginate” on page 196
- “Required Hyphen” on page 208

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## List Services

Using List (F3), you can:

- Change the current directory on the default drive
- Change the default drive
- Display a directory with or without comments and optionally select a document or file from the displayed directory.

### To Display a Directory and Select a Document

1. Press List (F3).
2. Select either Directory or Comments with Directory under List in the List Services menu.
3. Type the Directory Name in the Directory Selection menu. Type a drive and path, if necessary.

**Notes:**

- a. Press Enter if you want to accept the default drive and directory.
- b. Use the DOS global characters \* and ? to display a subset of a directory.

4. Press Enter to display the directory.
5. Use the cursor movement keys to select the document you want and press Enter. If List (F3) was pressed from a document or file name field in a menu, the selected document fills in the field.
6. Press Esc to return.

## **To Change the Current Directory**

1. Press List (F3).
2. Select Current Directory under Change in the List Services menu.
3. Type the new Current Directory in the Change Current Directory menu. Type a path, if necessary.
4. Press Enter to change the directory.

### *Related Topics:*

"Default Drive" on page 44

"Document Comment" on page 76

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## Margins

Margin defaults, which are part of the Document Format, define the margins for all your documents until you change the margins.

You can change the margins for the entire document by changing the Document Format using Document Options (Ctrl + F7). These margins are in effect for the entire document when you paginate, and remain in effect until you make a format change.

You can also change the margins for part of a document using Format (F7). These changes affect the text from the format change code to the end of the document, or to the next format change code. Change the margin settings for future documents through the Profiles menu (Text Defaults).

### To Change the Margins

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format under Change in the Document Options menu.
3. Select Margins and Tabs in the Change Document Format menu.
4. Follow the instructions in the Margins and Tabs menu to change the margins. The Margins and Tabs menu is displayed as you make your changes.
5. Press Enter to save the changes and return to the Change Document Format menu.
6. Press Esc enough times to return to the typing area.

### *Hints:*

- To change margins for part of a document, press Format (F7) and select Margins and Tabs in the Format menu.
- To return the format back to the Document Format (or Alternate Format, if it is in use), position the cursor at the top of the page where you want to return to the starting format. Press Format (F7), and select either All Formats or Margins and Tabs, Line Spacing/Justification, Typestyle in the Reset Format menu.
- Previously typed text that is displayed after a format change code may not be displayed in correct format. Paginate the document to reformat the text.
- Paginate the completed document to activate your margin changes.
- When you paginate, changes made with Document Options (Ctrl + F7) affect the entire document up to the next format change code.

### *Related Topics:*

- “Codes” on page 33
- “Format” on page 90
- “Paginate” on page 196
- “Profiles” on page 203
- “Tabs” on page 241

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## Math

Use Math (Ctrl + F9) when creating or revising a document to add, subtract, multiply, and divide numbers. In addition, you can use Block Add to add rows and/or columns of numbers. The rows or columns of numbers must be typed with decimal tabs in order to use Block Add.

<u>XXX</u>	<u>XXX</u>	<u>Total</u>
1.11	111	112.11
1.11	111.11	112.22
11.1	11.11	22.21
11.1	11.11	22.21
24.42	244.33	

You can also:

- Check calculations in a table
- Insert totals into a document
- View averages
- Use constants
- Change the sign for total, average, and constant.

## To Add, Subtract, Multiply, or Divide

1. In the typing area, position the cursor under the first number in your calculation and press Math (Ctrl + F9).
2. Select Add in the Math menu.

**Note:** Always select Add when you enter the first number in your calculation even if you intend to do a different math operation. This enters the number into the system, for example,  
**Total = 1234.**

3. Position the cursor under the next number in your calculation and press Math (Ctrl + F9).
4. Select one of the four math operations in the Math menu.
5. Repeat steps 3 and 4 for every number in your calculation.

**Note:** The result of the calculation, and the number of items counted, appear on the status line at the upper left corner of the screen.

6. If you want to insert the total into your document, position the cursor where you want the total to appear and press Math (Ctrl + F9).

**Note:** When inserting a total, the cursor must be positioned so that the entire total fits on the current line.

7. Select Insert Total in the Math menu to place the total in your document.

**Note:** Before doing another calculation, you should clear the total. To do this, press Math (Ctrl + F9), and select Clear Total in the Math menu. This also removes the highlighting from the numbers.

8. Press Esc to exit Math.

## To Add Columns or Rows Using Block Add

1. In the typing area, position the cursor under the first number in the column or row you want to add and press Math (Ctrl + F9).

**Note:** The numbers in the columns or rows must be typed with decimal tabs. You can set decimal tabs in the Margins and Tabs menu or when laying out a table.

2. Select Block Add in the Math menu.
3. Follow the prompt to position the cursor under the last number in the column or row you want to add and press Enter.

**Note:** The total is displayed on the status line.

4. If you want to insert the total in your document, position the cursor where you want the total to appear and press Math (Ctrl + F9).
5. Select Insert Total in the Math menu to place the total in your document.

**Note:** You should clear the total to perform another calculation. To clear the total, press Math (Ctrl + F9), and select Clear Total in the Math menu.

6. Press Esc to exit Math.

## To Change the Sign for Total and Average or Constant

1. While using Math, press Math (Ctrl + F9).
2. Select Options for Math in the Math menu.
3. Select either Total and Average, or Constant in the Math Options menu and press Enter.

### *Hints:*

- Block Add automatically sets Display All Codes to No.
- You can only Block Add in a downward or left-to-right direction.
- When you use add, subtract, multiply, or divide, numbers may be anywhere in text or tables. Only when you use Block Add do numbers have to be aligned on decimal tabs.

- Remember to press Esc to exit Math when you are finished. The total disappears from the status line.
- Negative numbers must be preceded or followed by a Required Hyphen (-) or placed in parentheses.

*Related Topics:*

“Codes” on page 33

“Math Constants”

“Math Format” on page 171

“Tabs” on page 241

“Tables” on page 231

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## Math Constants

You can use Math to add, subtract, multiply, or divide by a constant number. A constant is a number entered and retained by the system for repeated use.

When using constants to perform math calculations, always enter the constant before you begin your calculations.

### To Enter or Change a Math Constant

1. In the typing area, press Math (Ctrl + F9).
2. Select Use a Constant in the Math menu.
3. Select Enter or Change Constant in the Use a Constant menu.
4. Type the constant number you want to use in the Enter or Change Constant menu, and press Enter.

**Note:** When you press Esc to exit Math, the constant value is reset to zero.

## To Use a Constant

1. In the typing area, position the cursor under the number with which you want to use the constant and press Math (Ctrl + F9). The number can be anywhere within the text.
2. Select Add in the Math menu. This enters the number you want to use into the system.
3. Press Math (Ctrl + F9) again.
4. Select Use a Constant in the Math menu.
5. Select Enter or Change Constant to verify that your constant is correct before continuing. If the constant is incorrect, type in the correct one and press Enter.
6. Press Math (Ctrl + F9) and select the math function you want to perform in the Use a Constant menu.
7. Position the cursor where you want the total to appear, press Math (Ctrl + F9), and select Insert Total.
8. Press Math (Ctrl + F9) and select Clear Total.
9. Press Esc to exit Math.

**Note:** When you press Esc to exit Math, the constant value is reset to zero.

### *Hints:*

- The decimal point character, if it exists, must be the same as that which appears in the total.
- The constant value may be typed with or without a thousands separator.
- A constant is interpreted as a percent if the character to the right is a %.
- Negative numbers must be preceded or followed by a Required Hyphen (-) or placed in parentheses.

## To Insert Constant or Average Values in a Document

1. In the typing area, position the cursor where you want to insert your result and press Math (Ctrl + F9).
2. Select Options for Math in the Math menu.
3. Determine the operation you want to perform in the Math Options menu:
  - If you want to insert the constant into the document, select Replace Total with Constant.

OR

- If you want to insert the average into the document, select Replace Total with Average.
4. Press Math (Ctrl + F9).
  5. Select Insert Total in the Math menu to place the total in your document.
  6. Press Esc to exit Math.

### *Hints:*

- If the value of the constant is in a percent form, it is converted to a decimal form.
- If you select Replace Total with Average, the Item Count in the status line is set to zero.

### *Related Topic:*

“Required Hyphen” on page 208

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## Math Format

There are four different formats that you can use to change the way math totals and averages appear in your document. You specify which format you want to use in the Active Math Format/View Average menu. You can change the appearance of each format through the Math Format menu in Profiles (Text Defaults).

Math formats contain the following formatting characteristics:

- **Decimal Point Character** determines the character used for decimal points. For example, the default character in Math Format 1 is a period, but you can use a comma or a colon.
- **Thousands Separator Character** determines which character is used to separate thousands. For example, the default character in Math Format 1 is a comma, but you can use a period, a required space, or no character.
- **Number of Positions Past Decimal** shows how many digits appear to the right of a decimal point. For example, the default in Math Format 1 is 2 digits, but you can choose from 0–15 digits. If the total number of digits to the left and right of the decimal exceeds 15, the number is rounded to 15 digits.
- **Rounding Rule** indicates how the system rounds off numbers. For example, the default in Math Format 1 is to round down numbers 1 through 4, and round up numbers 5 through 9. You can choose other rounding rules specified in the menu or not round at all.
- **Leading or Trailing Characters** refers to your choice for the character or description preceding or following numbers. For example, the system inserts a minus sign (hyphen) before negative numbers as a default in Math Format 1. Leading or trailing characters can be different letters, symbols, words, codes, or spaces before or after numbers (up to 8 characters).

You can use any or all of the four math formats for math totals within your document. You need only to determine which formats you want to use.

Math Formats are also used to format the printed output of numeric variables in Merge with Data File.

## **To Activate a Different Math Format or View the Average**

1. In the typing area, press Math (Ctrl + F9).
2. Select Options for Math in the Math menu.
3. Select Active Math Format/View Average in the Math Options menu. The current average displays in the Active Math Format/View Average menu.
4. If you want to activate a different math format, type the Math format for Total and Average in the Active Math Format/View Average menu and press Enter.

**Note:** Use the Active Math Format to perform any calculations or insert the Total in your document.

5. Press Esc to exit Math.

**Note:** When you press Esc to exit Math, the Active Math Format resets to the default format.

### *Hint:*

- The decimal point character of the number used in calculations must be the same as the one specified in the Active Math Format.

### *Related Topics:*

“Form Letters with Data Files” on page 100

“Form Letters with Instructions” on page 117

“Math Constants” on page 168

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## Merge

Use Merge to produce form letters or assemble personalized documents from one or more documents. Depending on your business needs, you can use one of two Merge methods to create form letters or personalized documents. The methods are *Form Letters* and *Document Assembly*.

For the Form Letters method, use either the Merge with Data File function or the Merge with Named Variables function accessed through the Merge menu.

For the Document Assembly method, use either the Merge with Includes Only function or the Merge with Named Variables function accessed through the Merge menu.

### Form Letters

Use the *Form Letters* method to produce form letters by combining a single document with a file such as a file of names and addresses. The file can be created by DW4, or another application program such as the IBM Personal Decision Series (PDS), Lotus 1-2-3, Symphony, VisiCalc, Multiplan, or dBASE II; or you can use a User-supplied program.

For example, you may want to send a proposal with various pricing figures to several contracting companies. The proposal is contained within one document, with instructions to insert the various pricing figures, names, and street addresses from the file.

The data for the pricing figures, names, and street addresses is contained within the file. During Merge, you combine the document with the file to produce a form letter for each contracting company. For more information about Form Letters, see "Form Letters" on page 97.

DisplayWrite 4  
Variables Document

Application Data File

```
!NAME!D. Grey
!ADDRESS!34 Fair
!CITY!Kingston
!STATE!NY
!ZIP!12401
```

OR

NAME	ADDRESS	CITY	STATE	ZIP
D. Grey	34 Fair	Kingston	NY	12401
N. Leahy	245 Elm St.	Braintree	MA	02184

```
!NAME!N. Leahy
!ADDRESS!245 Elm St.
!CITY!Braintree
!STATE!MA
!ZIP!02184
```

Merge with Data File

Shell Document

Merge with  
Named Variables

```
!NAME!
!ADDRESS!
!CITY!, !STATE! !ZIP!
____!NAME!
_____
_____
_____
_____
_____
_____
```

```
D. Grey
34 Fair
Kingston, NY 12401
____D. Grey:
_____
_____
_____
_____
_____
_____
```

```
N. Leahy
245 Elm St.
Braintree, MA 02184
____N. Leahy:
_____
_____
_____
_____
_____
_____
```

Form Letters

### Document Assembly

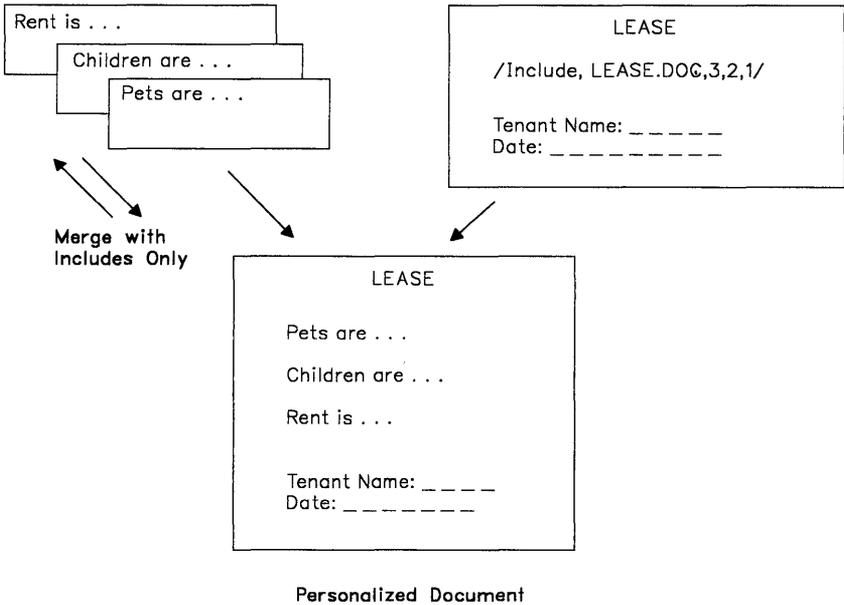
Use the *Document Assembly* method (Document Assembly without Variables or Document Assembly with Variables) to assemble and produce personalized documents that include text or paragraphs from one or more documents.

For example, using *Document Assembly without Variables*, a lawyer needs to draw up a contract for a housing lease for a client. The standard paragraphs related to leases are saved in one document, the paragraph selection document. To prepare the contract, the lawyer selects from this document those paragraphs that are appropriate for the client's housing lease.

Document Assembly without Variables

Paragraph Selection Document  
(LEASE.DOC)

Shell Document



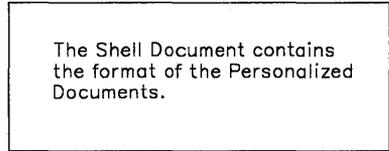
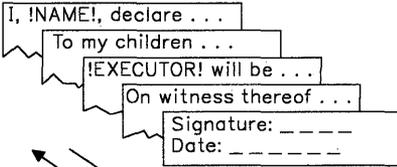
Another document, the shell document, contains the format of the contract (legal size paper) and instructions to include the selected paragraphs from the paragraph selection document. During merge, the two documents are combined to produce the client's contract for a housing lease.

Using *Document Assembly with Variables*, variable information from a DW4 variables document can be inserted into the selected paragraphs from the paragraph selection document. For example, a lawyer needs to prepare separate wills for a husband and wife. The clauses and standard paragraphs related to wills are already created and saved in one document.

### Document Assembly with Variables

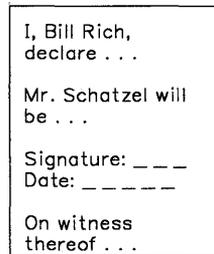
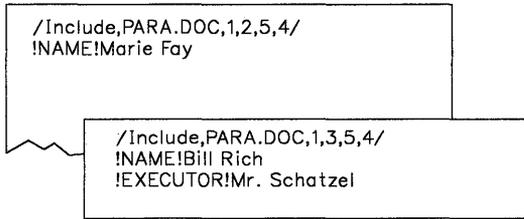
Paragraph Selection Document  
(PARA.DOC)

Shell Document



Merge with  
Named Variables

DisplayWrite 4 Variables Document



Personalized Documents

For these particular clients, it is necessary for the lawyer to further personalize the saved paragraphs by inserting each client's name and the executor's name. To do so, placeholders for this information are inserted within the saved paragraphs.

A second document contains the information for the placeholders (each client's name and the executor's name), as well as instructions to insert selected paragraphs from the first document into this document. A third document contains the format for the final will and a link variable which matches the first variable in the variables document. During merge, the documents are combined to produce the clients' wills.

For more information about Document Assembly without Variables and Document Assembly with Variables, see "Document Assembly" on page 48.

*Related Topics:*

"Document Assembly" on page 48

"Form Letters" on page 97

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## Mouse Interaction

You can choose an item on a menu bar, menu, or select line with a mouse. You can also use the mouse to define a block of text for use in Block (F4) or Notepad (Ctrl + F4). Defining a block using a mouse is different from defining a block using the keyboard. With a mouse, you usually define the block before you choose the action to be performed.

DW4 is designed to be used with a two-button mouse. Use Button 1 to select. Button 1 is the button closest to your index finger. Use Button 2 to escape. Button 2 is the button closest to your middle finger. You can change the mouse options for future use through the Profiles menu (Work Station Defaults).

If you are using a three-button mouse, DW4 ignores the third button.

### To Select with a Mouse

1. Press and hold Button 1 on the mouse.
2. Position the mouse cursor on the item you want to select, and release Button 1.

**Note:** The item is not selected until you release Button 1 on the mouse.

#### *Hint:*

- You can also select with a mouse by positioning the mouse cursor on the item you want to select and clicking (press and release) Button 1 on the mouse.

## To Define a Block of Text using a Mouse

1. Position the mouse cursor where you want the block to begin.
2. Press and hold Button 1 on the mouse to align the text cursor with the mouse cursor.
3. Release and repress Button 1 quickly to begin the block.

**Note:** This action must be done quickly. If the block does not begin on your first attempt, try again.

4. Hold Button 1 and drag the mouse to the point where you want the block to end.
5. Release button 1.
6. Determine the action you want to perform. You can select:
  - F4=Block to perform a block operation
  - F5=Functions and select Notepad (Ctrl + F4) in the Functions menu to perform a Notepad function.

### *Hints:*

- You can select F4=Block from the menu bar or Notepad (Ctrl + F4) from the Functions (F5) menu before defining the block of text with the mouse. If you do so, you must press Enter after the block is defined.
- To cancel a selection, click Button 2 on the mouse.

### *Related Topic:*

“Profiles” on page 203

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## Name Document

You name documents as you create them. You assign document names in the Create Document menu.

The following rules apply in naming documents:

- A document name can contain 1 to 8 characters plus an optional extension of 1 to 3 characters.

Valid characters are:

- A–Z (uppercase) and a–z (lowercase)
- 0–9
- These special characters: ! @ # \$ % ^ & ( ) - \_ { } ~ ‘ ’

- A document name can specify a drive, for example:

**A:LETTER.DOC**

- A document name can specify a directory path, for example:

**C:\MYMAIL\LETTER.DOC**

Directory and subdirectory information can precede the document name but must end with a \ before the document name.

In the Create Document menu, you can also add a Document Comment of up to 44 characters. Document Comments are stored with the document and can be displayed when listing a directory using List (F3).

You can revise a document comment by selecting Document Comment in the Document Options (Ctrl + F7) menu while you are creating or revising a document.

*Related Topics:*

“Document Comment” on page 76

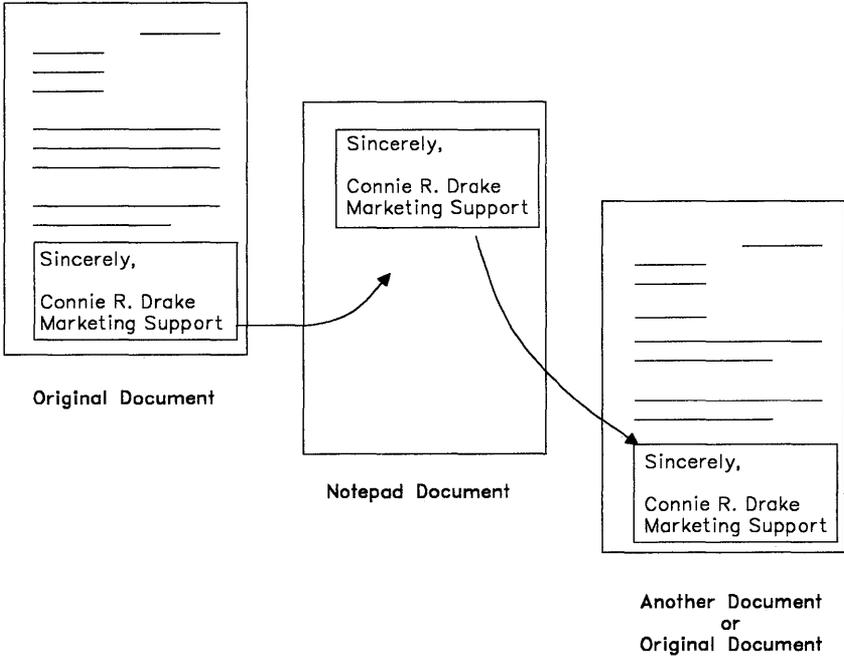
“Extensions” on page 79

“List Services” on page 161

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# Notepad

In the typing area, you can move or copy text from a document you are currently creating or revising to another document called a Notepad. The text in the Notepad document can then be recalled from the same document or another document for later use. To use the Notepad, press Notepad (Ctrl + F4).



You can save your Notepad information in the default Notepad, \$NOTEPAD.DOC, or create and name your own Notepad. If you want to name your own Notepad, first set Notepad Choice to User-Named Notepads in the Edit Options (Ctrl + F5) menu. Change the Notepad Choice for future use in the Edit Defaults menu in Profiles (Text Defaults).

**Note:** If you want to use a page from a different document, use Get (Ctrl + F6).

## **To Move or Copy to Notepad**

1. In the typing area, position the cursor at the beginning of the text you want moved or copied to the Notepad, and press Notepad (Ctrl + F4).
2. Select Move to Notepad or Copy to Notepad in the Notepad menu.
3. Follow the prompt to position the cursor at the end of the text you want moved or copied to the Notepad, and press Enter.

### **Notes:**

- a. Information in a Notepad is replaced each time you store something else in it.
- b. If you have set Notepad Choice to User-Named Notepad in the Edit Options (Ctrl + F5) menu, type the Notepad Name of the document in the Notepad Selection menu, and press Enter to return to the typing area.

## **To Recall from Notepad**

1. In the typing area, position the cursor where you want the Notepad text to be inserted and press Notepad (Ctrl + F4).
2. Select Recall from Notepad in the Notepad menu.

**Note:** If you have set Notepad Choice to User-Named Notepad in the Edit Options (Ctrl + F5) menu, type the Notepad Name of the document in the Notepad Selection menu, and press Enter to return to the typing area.

*Hint:*

- If you want to store the notepad in a specific directory, you can specify the Notepad Path through the Profiles menu (System Paths). Otherwise, if you do not specify a path as part of the User-Named Notepad name, notepads are stored in the current directory.

*Related Topics:*

“ASCII Copy to File” on page 21

“Block Edit” on page 26

“Defaults” on page 45

“Get” on page 138

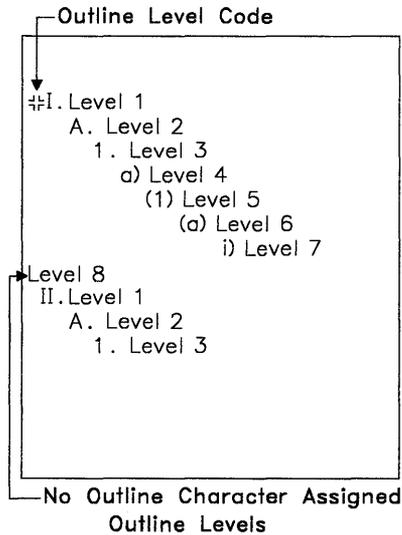
“Profiles” on page 203

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## Outlines

You can create and revise outlines. When you press Outline (Ctrl + O), an Outline Level code is inserted and the first outline level is displayed.

Each outline level is marked with a different character type which is specific to that level. The DW4 defaults are set to display Roman numerals for each Level 1 outline. For example, Roman numeral III is a Level 1 outline character. Level 2 entries are marked with an uppercase letter, Level 3 with an Arabic number, and so on. You can change the default settings for the types of characters used to mark each outline level for a single document by changing the outline appearance in Document Options (Ctrl + F7), or for future use through Profiles (Text Defaults).



Each time Outline (Ctrl + O) is pressed, the Outline Level is incremented up to Level 8. If you press Outline (Ctrl + O) again, the Outline Level moves back to Level 1. The name of the current level is displayed on the status line.

## To Create or Add an Outline Entry

1. In the typing area, position the cursor and press Outline (Ctrl + O) until you reach the level you want.

**Note:** The Outline Level number appears in the status line.

2. Type the text for the outline entry.

### *Hints:*

- You can delete, move, and copy outlines using Block (F4). The block should include all the outline formatting codes, such as the Outline Level, Begin Formatted Text, and End Formatted Text.
- Paginate the completed document to renumber a revised outline.
- To help locate outline codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
- Set Adjust Line Endings and Adjust Page Endings to Yes in the Paginate Document menu when you paginate a document that includes outlines.
- If you want to create more than one outline in a single document, reset the outline level value to start numbering the outlines from the new value.

### *Related Topics:*

“Block Edit” on page 26

“Codes” on page 33

“Outline Appearance” on page 186

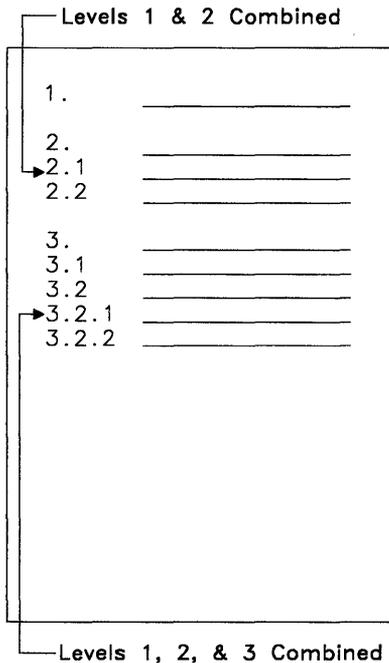
“Outline Level Revisions” on page 189

“Paginate” on page 196

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## Outline Appearance

You can modify the appearance of outlines through Document Options (Ctrl + F7) for an individual document by changing the numbering or lettering styles for each outline level. You can also create different types of outlines: for example, you can create outlines with section numbers by combining outline levels. To activate the outline format changes, paginate your document. You can change outline formats for future use through the Profiles menu (Text Defaults).



### To Change Outline Appearance in a Document

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format under Change in the Document Options menu.
3. Select Outline in the Change Document Format menu.

4. Select the number of the outline level (Levels 1 through 8) you want to change in the Outline Format menu.
5. Make any changes in the Outline Level Format menu, and press Enter to save the changes.
6. Repeat steps 4 and 5 for each level you want to change.
7. Press Esc enough times to return to the typing area.

*Hints:*

- The Leading and Trailing Characters assigned by the system are appropriate for most outlines, but you can add or change the characters or codes to modify the outline appearance or further define your outline entries.
- Outline Level 8 has no outline character or leading and trailing characters assigned. You can, however, make choices for this level.

## **To Combine Outline Levels in the Document Format**

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format in the Document Options menu.
3. Select Outline in the Change Document Format menu.
4. Select the number of the outline level (Levels 2 through 8) you want to combine with the previous level in the Outline Format menu.
5. Set Combine with Previous Level to Yes in the Outline Level Format menu, and press Enter.
6. Repeat steps 4 and 5 for each level you want to combine.
7. Press Esc enough times to return to the typing area.

*Hints:*

- If a combined outline level exceeds the number of character spaces between the tabs, change the tab settings in the Margins and Tabs menu.
- Outline Level 1 has no level above it. Do not select to combine it with a previous level. You can, however, change the other format settings for Level 1. For example, if you want this level to be a number followed by a period and a zero (1.0), set the Numbering or Lettering Type to Arabic numbers and type a period, a zero, and an Indent (Ctrl + T) code for trailing characters.
- Combined outline levels are automatically separated by a period. The trailing characters from the preceding level and the leading characters from the current level are omitted.

*Related Topics:*

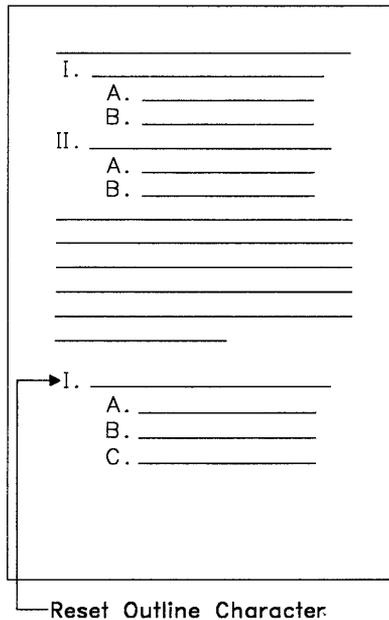
- “Codes” on page 33
- “Format” on page 90
- “Paginate” on page 196
- “Profiles” on page 203
- “Tabs” on page 241

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## Outline Level Revisions

You can change the outline level values within an outline. For example, you may want to change a Level 4 entry to Level 5, or a Level 5 entry to Level 4.

If you want to create more than one outline in a single document, reset the outline level value to start numbering the following outline entries from the new value.



### To Change an Outline Level

1. In the typing area, position the cursor under the Outline Level code (¶) for the level you want to change and press View/Revise (Ctrl + F8).
2. Follow the prompt to press Outline (Ctrl + O) enough times to change the outline level to the level you want.
3. When you reach the level you want, type, or move the cursor.

*Hint:*

- Paginate the completed document to reorder the outline entries.

## **To Reset the Outline Level Value**

1. In the typing area, press Outline (Ctrl + O) until you reach the level you want.
2. Press View/Revise (Ctrl + F8).
3. Type the Value you want to reset in the Reset Outline Level menu, and press Enter to return to the typing area.
4. Type the text for the outline entry.

*Hints:*

- To help locate the Outline Level code, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
- To reset the outline level value for an existing outline value, position the cursor under the Outline Level code for the level you want to reset, and press View/Revise (Ctrl + F8) twice.
- When you reset an outline level value, that value is not changed by pagination.
- To undo a reset level value, press Erase End of Line (Alt + 8) at the top of the keyboard to delete the Value in the Reset Outline Level menu and press Enter.

*Related Topics:*

“Codes” on page 33

“Paginate” on page 196

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## Overstruck Characters

You can use Required Backspace (Ctrl + Backspace) to build a composite character by typing one character over another.

### To Type an Overstruck Character

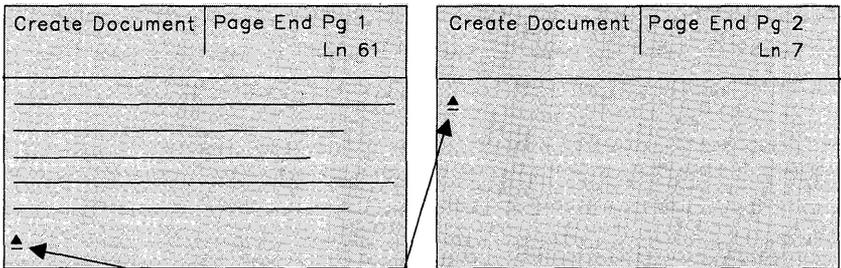
1. In the typing area, type the first character.
2. Press Required Backspace (Ctrl + Backspace) to position the cursor under the first character.
3. Type the second character.

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## Page Ends

There are three ways to end a page and start another page:

- Page End (Ctrl + E) temporarily ends a page, saves that page, displays a new screen for typing the next page, and increases the system page number on the status line. During pagination, page ends adjust to fit the specified format.

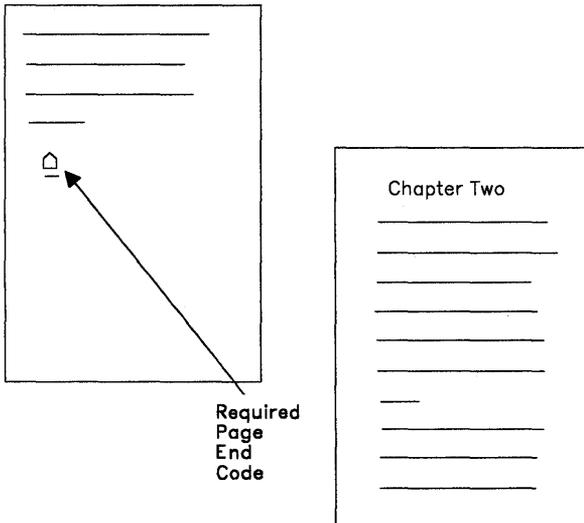


Page End Codes

Before Pressing Page End

After Pressing Page End

- Auto Page End automatically inserts the Page End code for you. Auto Page End, when set to Yes in the Edit Options (Ctrl + F5) menu, works the same as Page End except that the system inserts a Page End code when you create a document and type past the last typing line of the page. When you revise a document, Auto Page End only works for the last page of the document. This way you can keep typing without having to be concerned about page endings.
- Required Page End (Ctrl + R) inserts a code that causes a page to end at the designated point during pagination. This code is not rearranged or deleted during pagination. The page always ends at this point.



## To Insert a Page End Code

1. In the typing area, position the cursor where you want to insert the Page End code.
2. Press Page End (Ctrl + E) to insert a Page End code and display a new page.

## To Set Auto Page End to Yes or No

1. In the typing area, press Edit Options (Ctrl + F5).
2. Set Auto Page End to Yes or No in the Edit Options menu, and press Enter to return to the typing area.

**Note:** For future documents, set Auto Page End to Yes or No in the Edit Defaults menu in Profiles (Text Defaults).

## To Insert a Required Page End Code

1. In the typing area, position the cursor at the point where you want your page to end.
2. Press Required Page End (Ctrl + R) to insert a Required Page End code.

### *Hint:*

- Auto Page End is only effective if the cursor is on the last page of the document.

### *Related Topics:*

“Codes” on page 33

“Paginate” on page 196

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## Page Numbers

As you create or revise documents, the system assigns a number to each page you type.

You can include page numbers as part of header or footer text in your document. The page numbers are not displayed but are printed as part of the header or footer text.

Because the system keeps track of the page numbers, you can specify page numbers for print, spell check, paginate, get, and merge.

There are two types of page numbers you can use in a header or footer:

- **System Page Number** is a number assigned by the system to each page as you type your document. This is the page number that is displayed on the Status Line in the typing area. System page numbers are usually whole numbers (for example, 1,2,3). When you insert pages in your document through revisions, the system assigns decimal system page numbers between the pages of your original document (for example, 1, 2, 2.1) so that following pages are not renumbered.

System Page Numbers are renumbered to whole numbers when you paginate.

- **Use Page Number** if you want whole numbers regardless of the System Page Numbers. You can also reset the Page Number Value at any point in the document. For example, you may want to break a document into separate chapters. You can start Chapter Two on page 35 of the document, and reset the page number to 1 so that Chapter Two begins numbering with Page 1.

## To Insert Page Numbers in Headers and Footers

1. In the Header or Footer typing area, position the cursor where you want the page number to print, and press Instructions (F8).
2. Select Page Number or System Page Number in the Instructions menu to insert a Page Number code or System Page Number code.

**Note:** To reset the Page Number, select Reset Page Number in the Instructions menu, type the Page Number Value you want, and press Enter. Remember to select Page Number, since the Reset Page Number must go with an existing Page Number code.

3. Continue typing the header or footer.

### *Hint:*

- Select User-defined Control in the Instructions menu to insert a user-defined control in a header or footer. A user-defined control is a number that represents a print control sequence that defines a unique printed output. For example, insert a user-defined control to define a color change for printing of the letterhead. For more information on creating and inserting user-defined controls, see “User-defined Control” in *Technical Reference*.

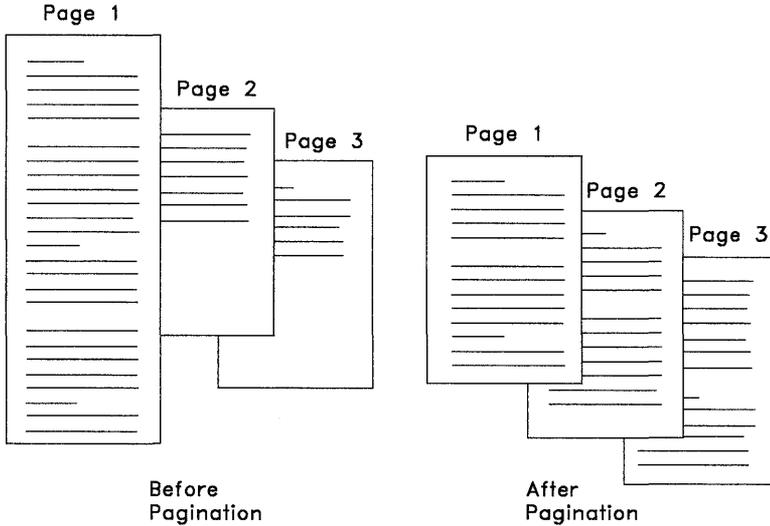
### *Related Topics:*

- “Codes” on page 33
- “Format” on page 90
- “Get” on page 138
- “Headers and Footers” on page 141
- “Merge” on page 173
- “Paginate” on page 196
- “Print” on page 199
- “Spell” on page 221
- “User-defined Control” in *Technical Reference*

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# Paginate

Paginate adjusts new or revised pages of a document to conform to the format of the document (for example, first typing line, last typing line, left and right margins, footnotes, outlines, and page numbers). Paginate is available through both Document Options (Ctrl + F7) and End/Save (F2). You can also paginate during Spell and Merge.



Paginate allows you to:

- Adjust line and page endings
- Prevent widow or orphan lines
- Specify dictionary hyphenation
- Optionally remove revision marking
- Optionally delete overstruck text.

## To Paginate a Document

1. Press End/Save (F2) after the document is created or revised.
2. Select Paginate, End, and Save in the End/Save menu.
3. If you want to make any changes in the Paginate Document menu, do so now.
4. Press Enter to paginate the document.

### *Hints:*

- Insert Begin Keep and End Keep codes around text you do not want split across pages during pagination.
- The Remove Highlighting and Delete Overstruck Text menu items do not remove revision marking or overstruck characters from headers and footers.
- Paginate ends pages at Required Page End (Ctrl + R) codes.
- To keep text, words, or numbers on the same line, use Required Space (Ctrl + V) in place of a normal space.
- To paginate a document while you are creating or revising it, press Document Options (Ctrl + F7), and select Paginate Document.

### *Related Topics:*

“Begin/End Keep” on page 24

“Hyphenation” on page 145

“Merge” on page 173

“Page Ends” on page 191

“Required Space” on page 208

“Spell” on page 221

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## Paper Clip

When you revise a document, you can return to the last cursor position where you were working before you previously ended and saved the document. The system positions the cursor where it was when you ended the document and displays the two preceding lines above the cursor. This is called Paper Clip.

Paper Clip is temporarily set through the Edit Options (Ctrl + F5) menu. If you want to return to the beginning of the document each time you revise, you can change the Paper Clip for future use through the Edit Defaults menu in Profiles (Text Defaults).

**Note:** Paper Clip is reset to the beginning of the document when you use Recover, Spell, or Paginate.

### To Change the Paper Clip

1. Select Profiles in the DisplayWrite 4 menu.
2. Select Revise Profile in the Profiles menu.
3. Type the Profile Name in the Profile menu, and press Enter.
4. Select Text under Defaults For in the Revise Profile menu.
5. Select Edit Defaults in the Text Defaults menu.
6. Set Return to Paper Clip under Edit Options to No in the Edit Defaults menu, and press Enter.
7. Press Esc enough times to return to the End/Save menu.
8. Select End and Save in the End/Save menu to save your profile changes.
9. Press Esc in the Profiles menu to return to the DisplayWrite 4 menu.

#### *Related Topics:*

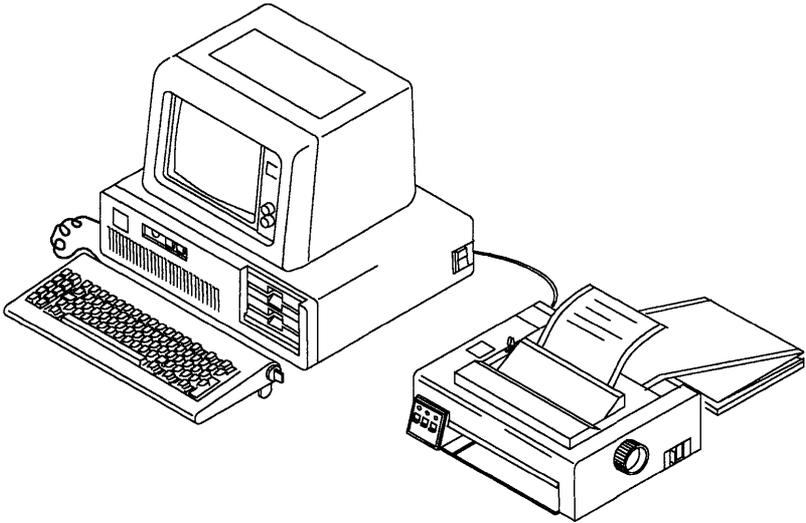
- “Paginate” on page 196
- “Profiles” on page 203
- “Recover Documents” on page 205
- “Spell” on page 221

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## Print

You can print several types of documents with DisplayWrite 4:

- DisplayWrite 4 documents
- IBM DisplayWrite 3 documents
- Final-Form Text documents
- Print-ready ASCII documents.



Two modes for print processing are available: Foreground or Background.

DisplayWrite 4 Foreground Print is the system default. Foreground Print enables you to perform only print-related tasks while a document is printed.

DisplayWrite 4 Background Print enables you to perform print-related tasks, as well as other tasks, while a document is converted and printed. Other tasks might include Create Document, Utilities, Spell, and so on. Background Print requires 64Kb more memory than Foreground Print. See "Memory Requirements" in *Technical Reference* for more information.

DisplayWrite 4, DisplayWrite 3, and Final-Form Text documents are automatically converted, as they are printed, to the appropriate format for the printer you are using. If you want to save a converted, print-ready, version of these document types, you can print the converted version later using DisplayWrite 4 or DOS Print. The converted version has an extension of .PRN. ASCII documents are already converted for printing.

## To Print a Document

1. Select Print in the DisplayWrite 4 menu.

**Note:** If you need to make any changes in the Options for Printer menus, you must make these changes *before* you print the document.

2. Select Print Document in the Print menu.
3. Type the Document Name in the Print Document (1 of 2) menu, if necessary.
4. If you want to make any other changes in the Print Document (1 of 2) menu or Print Document (2 of 2) menu, do so now.
5. Press Enter to begin print processing.

### Notes:

- a. If you selected Foreground processing, the document is placed in the print queue and the Foreground Processing for Print menu remains displayed until all print jobs are converted and printed; then the DisplayWrite 4 menu is displayed.
- b. If you selected Background processing, the document is placed in the print queue, the Print menu is displayed, and you can continue with other tasks. During Background processing, no print messages are displayed.

### *Hints:*

- The number of jobs in the print queue is displayed on the first status line.
- If you change the defaults in the Print menus often, you may want to change print defaults for future use through Profiles (Work Station Defaults). For example, if you want all documents sent to Printer 2 printed in quality mode, set Draft Mode to No in the Options for Printer 2 menu in Profiles.
- If you want to use DisplayWrite 4 Background Print as the default, set the Type of Processing Available to Background and Foreground in the Print Document Options menu in Profiles (Work Station Defaults).
- Depending on the printer you are using, the converted and/or printed output can vary. For example, one printer may print bold using double-strike, and another may use emphasis mode. The way your printer prints is defined by the printer function table you are using.

When the DisplayWrite 4 Install program was run for your system, a printer function table was identified for each of the three Printer Choices in DisplayWrite 4. If the printer function table you are using is not using the full capabilities of your printer, perhaps you should modify the printer function table for that printer. For information on printer support and how to create or modify a printer function table, see “Printer Function Table Tasks” in *Technical Reference*.

- Be sure your document is printed on the printer for which it was converted. If a document is converted for one printer, and then printed on another, the results are unpredictable.

### *Related Topics:*

- “ASCII Copy to File” on page 21
- “Final-Form Text Conversion” on page 81
- “Install Support” in *Technical Reference*
- “Print Queue” on page 202
- “Printer Support” in *Technical Reference*
- “Profiles” on page 203

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## Print Queue

You may want to cancel a print job or rearrange the printing order of some of the documents you have sent to the printer. In addition, you may want to add a document to the print queue. Up to 10 documents can be queued for printing at one time.

### To Add Jobs to the Print Queue

1. Determine the type of processing you are using:

If you are using Foreground processing, press **Ctrl + Break** in the Foreground Processing for Print screen to temporarily suspend Foreground printing.

If you are using Background processing, continue with step 2.

2. Select Print Document in the Print menu.
3. Type the Document Name in the Print Document (1 of 2) menu.
4. If you want to make any other changes in the Print Document (1 of 2) menu and the Print Document (2 of 2) menu, do so now.
5. Press **Enter** to add the job to the print queue.

---

## Profiles

Profiles provide a way to customize DW4 to work with your PC hardware and also to change format and other DW4 options. For example, the printers and mouse types you specified during Install are stored in the default profile, PROFILE.PRF.

If you want to change these defaults, you can revise the default profile (PROFILE.PRF) or you can create a new profile. Multiple profiles can be created and saved depending on your needs. Once you create a profile, you must activate this profile before it can be used by the system.

**Note:** When you select Create Profile, the system makes a copy of the active profile, and you modify this copy to create the new profile. To create a profile starting from the shipped defaults, activate the System Profile, then create a new profile.

If you want a particular profile active every time you load DW4, you can select Create Batch File in the Profiles menu to create a batch file that specifies that profile name. You then use the new batch file to load DW4. For more information on creating batch files, see “Batch Files for Loading DW4” in the *Technical Reference*.

You can revise a profile and change the defaults for the following menus:

#### Text Defaults

Document Format and Alternate Format

Margins and Tabs

Line Spacing/Justification

Typestyle (Typeface and Pitch)

Page Layout/Paper Options

Footnote Format

Outline Format

Edit Defaults (Edit Options)

Math Format

Paginate Defaults

Spell Defaults

Merge Tasks Defaults

#### Work Station Defaults

Options for Printers 1 through 3

Print Document Options

Keyboard/Mouse Options

Revise Keyboard Extensions

Display Options

Unit of Measure within Menu

Default System Paths

Revisable-Form Text Conversion Defaults

## To Create or Revise a Profile

1. Select Profiles in the DisplayWrite 4 menu.
2. Select Create Profile or Revise Profile in the Profiles menu.
3. Type the Profile Name in the Profile menu and press Enter.
4. Make any choices and changes in the Create Profile or Revise Profile menus.
5. Press Esc and select End and Save to save the profile you have created or revised.
6. Press Esc to return to the DisplayWrite 4 menu.

## To Activate a User Profile

1. Select Profiles in the DisplayWrite 4 menu.
2. Select User Profile under Activate in the Profiles menu.
3. Type the Profile Name in the Profile menu.
4. Press Enter to activate the profile and return to the Profiles menu.
5. Press Esc to return to the DisplayWrite 4 menu.

### *Hints:*

- When you enter Profiles, the active profile name is displayed on the status line.
- If you revise the active profile, you do not need to activate it after your revisions are complete.

---

## Recover Documents

Recover enables you to recover single documents, or specified documents in a directory that were ended abnormally. For example, information may be lost from a disk or document because of a loss of electrical power or the premature removal of a diskette. After recovering the document, you may want to revise the document to check for and replace any lost information.

You can recover documents through the Utilities menu.

## To Recover a Document

1. Select Utilities in the DisplayWrite 4 menu.
2. Select Recover in the Utilities menu.
3. Type the Document Name in the Recover menu.

**Note:** To recover multiple documents or a directory, use the DOS global characters ? and \* as part of the Document Name.

4. Press Enter to recover the document.

### *Hints:*

- Recover can only be used to recover DisplayWrite 4 documents.
- To stop the recovery of multiple documents, press Ctrl + Break.
- If your document was ended abnormally, for example, there was a power failure while you were revising the document, you may need to do the following before you can revise the document again:
  - Rename the file that has the same document name and a .\$\$C extension (the backup copy) to a different name and extension.
  - Erase the file that has the same document name and a .\$\$T extension. This file was created for saving the last deleted block (if any) during revisions.
  - Recover the original document.
  - Revise the recovered original document. If none of the information was lost, you may want to erase the backup copy you renamed. If information was lost, you can use the backup copy.

### *Related Topics:*

- “Erase Documents” on page 78
- “Extensions” on page 79
- “Rename Documents” on page 207
- “Working Copy” on page 251

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## Rename Documents

You can change the name of single documents and DOS files by using Rename in the Utilities menu.

### To Rename a Document or File

1. Select Utilities in the DisplayWrite 4 menu.
2. Select Rename in the Utilities menu.
3. Type the File Name in the Rename menu.
4. Type the New File Name in the Rename menu.
5. Press Enter to rename the document or file.

#### *Hint:*

- You can use Rename to move a file to a different directory. The directory you specify for the File Name can be different than that specified for the New File Name. However, they both must be on the same drive.

#### *Related Topics:*

- “Erase Documents” on page 78
- “Recover Documents” on page 205
- “Working Copy” on page 251

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## Required Hyphen

Insert a Required Hyphen using the Hyphen key if you need to insert a hyphen that is always displayed and printed. For example, a telephone number such as 111 – 2222, should be typed with a required hyphen.

You can redefine the Hyphen key in the Keyboard/Mouse Options menu in Profiles (Work Station Defaults).

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## Required Space

Use Required Space (Ctrl + V) in place of a normal space, to ensure that text, words, or numbers are displayed and printed on the same line. For example, if you are typing a date, press Required Space (Ctrl + V) between the month and day so that they are displayed and printed on the same line.

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## Revisable-Form Text Conversion

Revisable-form text (.RFT) is a form of document that allows exchange of documents between DW4 and other systems or application programs that support revisable-form text.

You can convert revisable-form text documents generated by another system or application program to DisplayWrite 4 (.DOC) documents. Revisable-form text conversion also converts DisplayWrite 4 documents to revisable-form text documents.

Revisable-form text documents are used in DW4 in four ways:

- You can convert revisable-form text documents to DisplayWrite 4 documents automatically by specifying the revisable-form text document name in the Revise Document menu.
- You can convert documents to and from revisable-form text through the Utilities menu.
- You can use Get to insert (and convert to DW4) a copy of a page(s) or all of a revisable-form text document into your DisplayWrite 4 document.
- You can convert a DisplayWrite 4 document to revisable-form text after creating or revising the document by selecting one of the Convert to Revisable-Form Text menu items in the End/Save menu.

If you exchange revisable-form text documents often, set Provide Revisable-Form Text Options in the End/Save Menu to Yes in the Revisable-Form Text Conversion Defaults menu in Profiles (Revisable-Form Text Defaults). However, when you revise a revisable-form text document, DW4 automatically provides the revisable-form text menu items in the End/Save menu, regardless of your profile setting.

Once a DisplayWrite 4 (.DOC) document is converted to revisable-form text, you can use it with IBM DisplayWrite/36 (DW/36), IBM DisplayWrite/370 (DW/370), IBM DisplayWrite 3 (DW3), and IBM DisplayWrite Assistant (DWA). Within DW4, you can also use revisable-form text documents originally created by DW/36, DW/370, DW3, and DWA.

*Related Topics:*

“Applications Support” in *Technical Reference*

“Final-Form Text Conversion” on page 81

“Get” on page 138

“Profiles” on page 203

“Save Document” on page 215

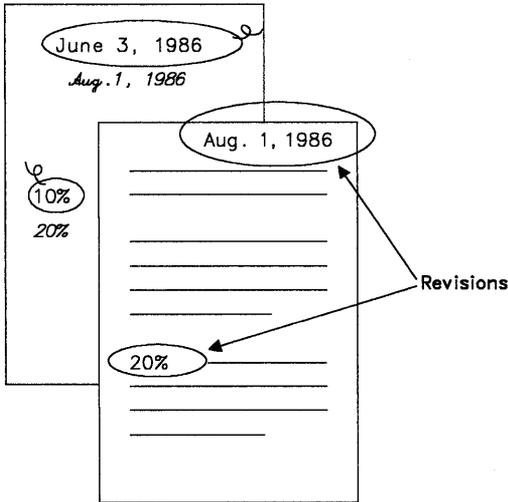
“Utilities” on page 247

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## Revise Document

Use Revise Document to change both the content and the format of any previously created DW4 document. When you select Revise Document in the DisplayWrite 4 menu, the system displays the last portion of the document on which you were working before you ended the document, using the Paper Clip option. You can reset Return to Paper Clip to No for future use through the Edit Defaults menu in Profiles (Text Defaults).

When you revise a document, you can make several types of revisions. For example, you can insert, delete, or move characters or words, and manipulate blocks of text. You can use Search (F6) to locate text you want to revise.



In addition, you can change the format of a document. Examples include margins and tabs, page length, headers and footers, outline levels, and footnotes. You can change the format for individual documents or you can change the format for future use through the Profiles menu (Text Defaults).

While you are revising a document, you may want to see the codes within the document. To see the codes, press Edit Options (Ctrl + F5) set Display All Codes to Yes, and press Enter.

Each time you revise a document, you are actually making changes in a *working copy* of the document. A working copy is available if Edit Copy of Document is set to Yes in the Edit Defaults menu in Profiles (Text Defaults). If you make changes to a document and then decide you want the previous version of it, you can cancel the current changes by selecting Quit without Saving in the End/Save menu.

## To Revise a Document

1. Select Revise Document in the DisplayWrite 4 menu.
2. Type the Document Name in the Revise Document menu, if necessary.
3. Press Enter to go to the typing area and make your revisions.
4. Press End/Save (F2) and select the appropriate menu item in the End/Save menu.

### *Hints:*

- You can revise or add a Document Comment using Document Options (Ctrl + F7).
- If you are using a diskette-based system, do not remove the diskette containing the document until you have ended and saved the document.

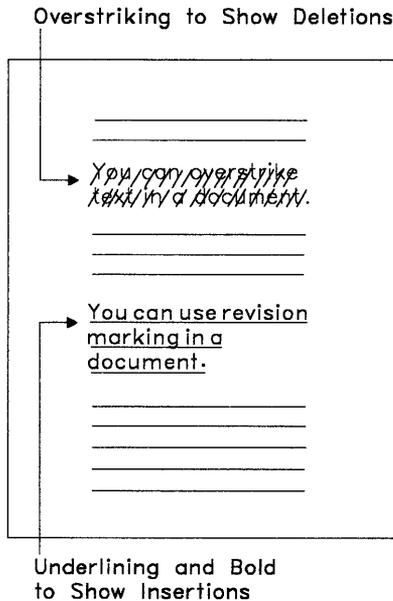
### *Related Topics:*

“Block Edit” on page 26  
“Carrier Return” on page 30  
“Codes” on page 33  
“Corrections and Revisions” on page 36  
“Document Comment” on page 76  
“Format” on page 90  
“Go To Page” on page 140  
“Line Adjust” on page 160  
“List Services” on page 161  
“Notepad” on page 181  
“Paper Clip” on page 198  
“Profiles” on page 203  
“Save Document” on page 215  
“Search” on page 218  
“Working Copy” on page 251

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## Revision Marking

Revision Marking identifies sections of text that have been revised before your document is final. Insertions are indicated by underlining and bold; deletions are indicated by overstriking the text. When the document content is final, both the underlining and bold for the inserted text, and overstruck text, can be removed during pagination.



You can indicate text to be added in one of two ways:

- Press Mark (Ctrl + M)
- Select Mark in the Block (F4) menu.

You can indicate text to be deleted in one of two ways:

- Select Overstrike in the Block (F4) menu
- Press Overstrike (Ctrl + S).

## To Mark Inserted Text

1. In the typing area, position the cursor where you want to insert text, and press Mark (Ctrl + M).
2. Type the text you want to insert.
3. Press Mark (Ctrl + M) to end marking the insertion.

### Hints:

- Depending on your display and display adapter combination, bold may or may not appear brighter on the screen. For more information, see “Displays” in *Technical Reference*.
- You can also mark text for insertion after you have typed it by using Mark in the Block (F4) menu. Position the cursor under the first character to be marked, and press Block (F4). Select Mark, follow the prompt to position the cursor one space to the right of the last character to be marked, and press Enter.

## To Mark Text to be Deleted

1. In the typing area, position the cursor at the beginning of the text to be marked for deletion, and press Block (F4).

**Note:** The default overstrike character is a /. To change the overstrike character, press Edit Options (Ctrl + F5), and change the Overstrike Character.

2. Select Overstrike in the Block menu.
3. Follow the prompt to position the cursor where you want the overstriking to end, and press Enter.

### Hints:

- You can also overstrike text using Overstrike (Ctrl + S).
- To change the overstrike character for future use, use the Edit Defaults menu in Profiles (Text Defaults).

## To Delete Revision Marking

1. In the Paginate Document menu, determine the selections for Revision Marking:
  - To remove highlighting from your marked insertions, set Remove Highlighting to Yes.

OR

- To delete text marked for deletion, set Delete Overstruck Text to Yes.

**Note:** The Remove Highlighting and Delete Overstruck Text menu items do not remove revision marking or overstruck characters from headers and footers.

2. Make any other changes in the Paginate Document menu.
3. Press Enter to paginate your document and remove the revision marks.

### *Related Topics:*

- “Block Edit” on page 26
- “Codes” on page 33
- “Displays” in *Technical Reference*
- “Mouse Interaction” on page 178
- “Paginate” on page 196

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## Save Document

To save a document is to store it on media such as a fixed disk or a diskette.

The default End/Save (F2) menu offers four options when you save a document:

- End and Save
  - The system ends the document, saves your work, and displays the DisplayWrite 4 menu.
- Save and Continue
  - The system saves the work you have done so far (the working copy) and returns to the typing area so that you can continue working on the document. You can save the working copy to the current document name or to a different document name.
- Quit without Saving
  - If you have created a document, the system returns to the DisplayWrite 4 menu without saving the document.
  - If you have revised a document, the system returns to the DisplayWrite 4 menu without saving your changes to the document.
- Paginate, End, and Save
  - The system paginates and ends the document, saves it, and displays the DisplayWrite 4 menu. If you made format changes in your document, be sure to paginate the document before you print it.

Other options may also appear on the End/Save menu. For more information on these options, see “Applications Support” in *Technical Reference*.

## To Save a Document

1. In the typing area, press End/Save (F2).
2. Select your choice in the End/Save menu.
3. If your choice was Save and Continue, type the Save Document Name in the Save and Continue menu, if necessary, and press Enter.

### *Hints:*

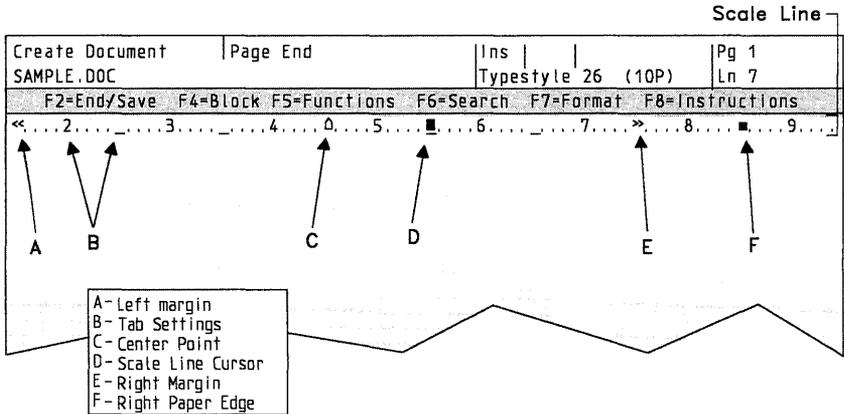
- Quit without Saving and Save and Continue are not selectable if Edit Copy of Document is set to No in the Edit Defaults menu. You can change this option through the Profiles menu (Text Defaults).
- You can save a document as an ASCII file by using Notepad (Ctrl + F4).

### *Related Topics:*

- “Applications Support” in *Technical Reference*
- “ASCII Copy to File” on page 21
- “Notepad” on page 181
- “Paginate” on page 196
- “Profiles” on page 203
- “Revisable-Form Text Conversion” on page 208
- “Working Copy” on page 251

## Scale Line

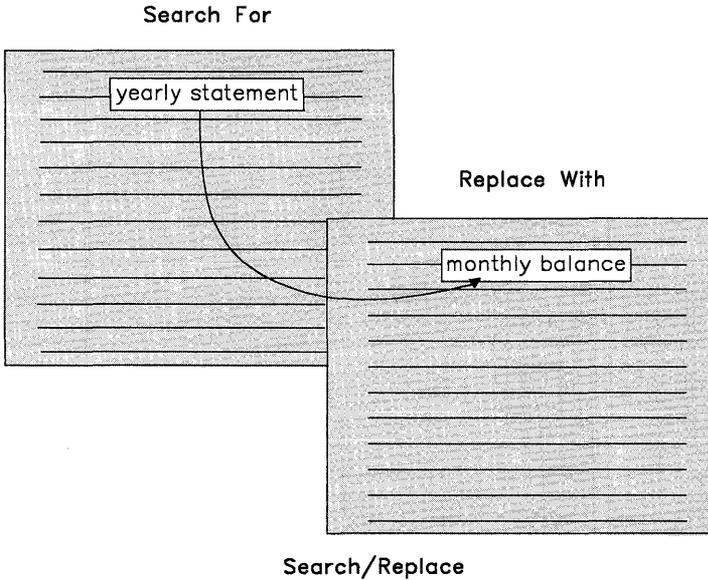
The scale line is the fourth line at the top of the screen. The scale line shows right and left margin settings, tab settings, the center point, the right paper edge, and the position of the cursor. Use the scale line as a guide while you are typing.



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## Search

Use Search (F6) to locate a specific character, code, number, word, phrase or page in a document. You can also search for and replace text. For example, if you want to change “yearly statement” to “monthly balance” in a document, you can use Search/Replace to change each occurrence of the phrase.



Using Search you can:

- Find a character string (a series of characters and codes)
- Search for a character string and replace it with another character string in either prompted or automatic mode
- Repeat the previous Search, Replace, or Find operation
- Go to a page in the current document.

Search strings can consist of 1 to 60 characters and codes. If you are using Search/Replace, you can indicate whether you want to search for entire words or exact characters that may or may not be within a word. For example, using Exact Character instead of Word to replace **his** with **her** would replace **history** with **herstory**.

## To Find a Character String

1. In the typing area, position the cursor at the point you want the search to begin, and press Search (F6).
2. Select Find in the Search menu.
3. Type the character string you want to find, exactly as it appears in the text, in the Find menu and press Enter.

### Notes:

- a. The system positions the cursor under the first occurrence of the character string.
- b. To find the next occurrence of the same string, press Search (F6) and select Repeat.

## To Use Search/Replace

1. In the typing area, position the cursor at the point you want the Search to begin, and press Search (F6).
2. Select Search/Replace in the Search menu.
3. Type the character string you want to search for, exactly as it appears in the text, in the Search/Replace (1 of 2) menu.
4. Type the character string you want to replace with.

**Note:** To delete a character string, do not specify a Replace With character string.

5. If you want to make any other changes in the Search/Replace (1 of 2) menu or the Search/Replace (2 of 2) menu, do so now.

**Note:** To search for and replace more than one character string, use the Search/Replace (2 of 2) menu.

6. Press Enter to begin the search.
7. If Search/Replace is:
  - Prompted, select one of the menu items in the Prompted Search/Replace menu that is displayed each time the specified string is found.
  - Automatic, all the searched for characters are replaced.

*Hints:*

- If you type spaces while identifying a character string, the system searches for the characters and the spaces.
- Find and Search/Replace search in a forward direction only.
- To search for a Carrier Return code, press Ctrl + Enter.
- To search for a Required Carrier Return code, press Ctrl + L.
- To search for a Tab code, press Ctrl + Q.
- To find format change codes, press Format (F7).
- To find codes inserted using the Instructions key, press Instructions (F8).
- To find any other code, press the inboard key that corresponds to the code you want to find.
- To stop a search, press Ctrl + Break.

*Related Topics:*

“Carrier Return” on page 30

“Codes” on page 33

“Go To Page” on page 140

“Page Ends” on page 191

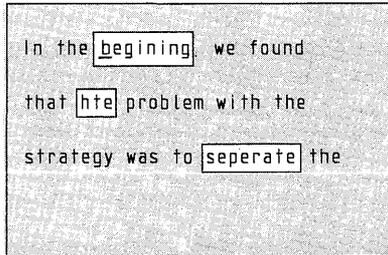
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## Spell

Spell can be initiated two ways:

- Using Spell through the DisplayWrite 4 menu, you can verify the spelling of an entire DW4 document.
- Using the Spell (F10) key you can verify the spelling of a single word, a single page, or the entire current document while in the typing area.

You can choose to do either a prompted spell check or an automatic spell check. In both types of spell check, the system highlights words that do not match an entry in the active dictionary.



In a prompted spell check, the system stops at each unrecognized word so you can do an immediate revision to the word, if necessary. In an automatic spell check, the system checks the entire page or document and highlights each unrecognized word for later revision.

If you begin a spell check from the DisplayWrite 4 menu, you can choose either a prompted or automatic type of spell check each time, and you can change the dictionary or supplement. If you begin a spell check from within a document using the Spell (F10) key, the active system defaults are used. You can modify these defaults for future use through the Spell Defaults menu in Profiles (Text Defaults).

## To Spell Check a Document While in the Typing Area

1. In the typing area, press Spell (F10).
2. Select Document, under Check, in the Spell menu.
3. If the spell check is:
  - Prompted – Select the appropriate item in the Prompted Spell menu for each word the system highlights.
  - Automatic – For each highlighted word, position the cursor under the word and press Esc to remove the highlighting; then retype or spell check the word, if necessary.

## To Spell Check a Word

1. In the typing area, position the cursor under the word to be spell checked, and press Spell (F10).
2. Select Word, under Check, in the Spell menu.
3. Select the correct spelling from the list of words that is displayed, or press Esc and retype the word, as necessary.

## To Spell Check a Page

1. In the typing area, position the cursor at the beginning of the page to be spell checked, and press Spell (F10).
2. Select Page, under Check, in the Spell menu.
  - For each highlighted word, position the cursor under the word and press Esc to remove the highlighting.
  - Retype or spell check the word, if necessary.

**Note:** Spell checks for single pages are always processed as automatic.

## To Spell Check a Document from the DisplayWrite 4 Menu

1. Select Spell in the DisplayWrite 4 menu.
2. Select Check Document in the Spell menu.
3. Make any changes in the Check Document (1 of 2) menu, or in the Check Document (2 of 2) menu, and press Enter to begin the spell check.
4. If the spell check is:
  - Prompted – Select the appropriate item in the Prompted Spell menu for each word the system highlights.
  - Automatic – Revise the document. For each highlighted word, position the cursor under the word and press Esc to remove the highlighting; then retype or spell check the word, if necessary.

### *Hints:*

- It is not necessary to remove the highlight marks left by a spell check. Although the highlight marks are displayed on the screen, they do not show when you print the document. However, you can select Remove All Marks from Page in the Spell (F10) menu to remove highlighting that resulted from an automatic spell check.
- Footnote text is not spell checked if you paginate the document while spell checking.

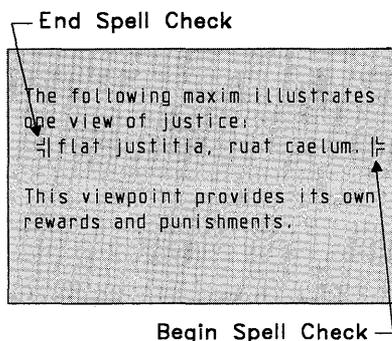
### *Related Topics:*

- “Dictionary” on page 46
- “Hyphenation” on page 145
- “Paginate” on page 196
- “Profiles” on page 203
- “Spell, End and Begin Check” on page 224
- “Supplements” on page 228

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## Spell, End and Begin Check

You can mark text you do not want to spell check by inserting End and Begin Spell Check codes. For example, you may want to mark off foreign words or quotations.

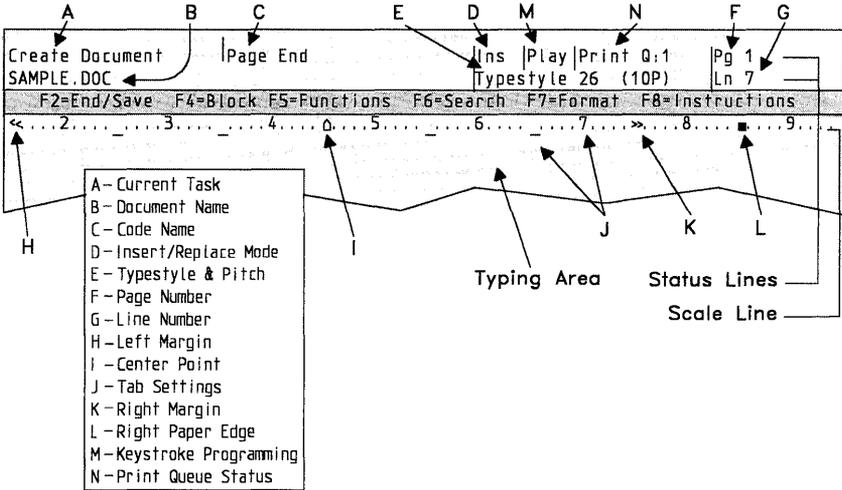


### To Mark for No Spell Check

1. In the typing area, position the cursor at the beginning of the text you do not want spell checked, and press Instructions (F8).
2. Select End in the Instructions menu.
3. Select Spell Check in the End menu to insert the End Spell Check code.
4. In the typing area, position the cursor where you want the system to resume the spell check, and press Instructions (F8).
5. Select Begin in the Instructions menu.
6. Select Spell Check in the Begin menu to insert the Begin Spell Check code and return to the typing area.

# Status Lines

Status lines are the first two lines at the top of the screen and are reserved for information that guides you as you are using DW4. Status lines indicate such things as the current task being performed, the document name, the name of any code the cursor is under, the system page number, and the line number.



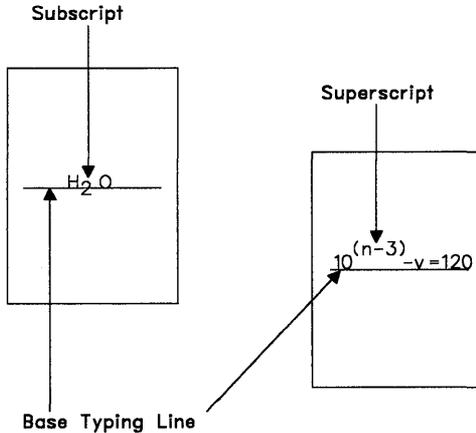
# Stop Codes

To type a Stop code in a document, press Stop (Ctrl + 6). To locate a Stop code, press Next (Ctrl + N).

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## Subscripts and Superscripts

Subscripts are characters that are printed a half line below the base typing line. Superscripts are characters that are printed a half line above the base typing line.



### To Create Subscripts

1. In the typing area, position the cursor where you want a subscript and press  $\frac{1}{2}\downarrow$  (Ctrl + H) to insert a Half Index Down code.
2. Type the character(s) you want for the subscript. Your display may or may not show the characters indexed down on the screen.
3. Press  $\frac{1}{2}\uparrow$  (Ctrl + Y) to insert a Half Index Up code and return to the base typing line.

## To Create Superscripts

1. In the typing area, position the cursor where you want a superscript and press  $\frac{1}{2}\uparrow$  (Ctrl + Y) to insert a Half Index Up code.
2. Type the character(s) you want for the superscript. Your display may or may not show the characters indexed up on the screen.
3. Press  $\frac{1}{2}\downarrow$  (Ctrl + H) to insert a Half Index Down code and return to the base typing line.

### *Hints:*

- To delete a Half Index Down code or a Half Index Up code, position the cursor under the Half Index Down code or Half Index Up code and press Del and Enter.
- To help locate the Half Index Down codes and Half Index Up codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.

### *Related Topic:*

“Codes” on page 33

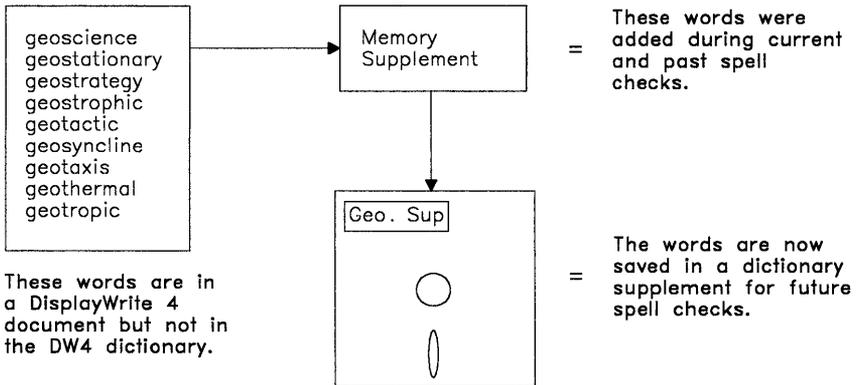
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## Supplements

If you frequently use words that are not in the DW4 dictionary (for example, proper names), you can create a supplement to the dictionary as an additional aid in checking spelling.

There are two types of supplements that work with the dictionary. The first is the memory supplement, which is reserved during Spell, in which you can add words that the dictionary does not recognize. If you add a word to the memory supplement, the system recognizes other occurrences of the word during the current spell check and only highlights those which are spelled differently. During prompted spell check, the system prompts you to add words to the memory supplement.

The second type of supplement is the dictionary supplement, a file in which you can save words from the memory supplement for future use. You can also save words unique to your work in one or more dictionary supplements. You can convert DW4 documents to dictionary supplements.



## To Create a Dictionary Supplement

1. Create a DW4 document.
2. In the typing area, type each word and all the variations of each word you want to include in your dictionary supplement (for example: **plate-let plate-lets plate-let's Plate-lets**).

**Note:** To indicate hyphenation points, insert syllable hyphens between syllables. A syllable hyphen is only displayed or printed if a word must be divided between lines in a document.

3. Press End/Save (F2) and select End and Save in the End/Save menu.
4. Select Spell in the DisplayWrite 4 menu.
5. Select Dictionary Change in the Spell menu.
6. Type the Supplement Name of the supplement you want to create in the Dictionary Change menu, if necessary, and press Enter.
7. Select Remove All Words from Supplement in the Spell menu.
8. Select Add Words to Supplement in the Spell menu.
9. Type the Document Name in the Document for Supplement menu.

**Note:** This document is the one that contains the words you want added to the supplement.

10. Press Enter to add the words to the memory supplement.
11. Press Esc to exit from the Spell menu.
12. Follow the prompt to press Enter to save the additions to the dictionary supplement, and return to the DisplayWrite 4 menu.

### *Hint:*

- To create or use a different dictionary supplement, select Dictionary Change in the Spell menu. You can change the default supplement in the Spell Defaults menu through Profiles (Text Defaults).

## To Revise a Dictionary Supplement

1. Select Spell in the DisplayWrite 4 menu.
2. Select Dictionary Change in the Spell menu.
3. Type the Supplement Name of the supplement you want to revise in the Dictionary Change menu, if necessary, and press Enter.
4. Select Store Supplement to Document in the Spell menu.
5. Type the Document Name in the Document for Supplement menu and press Enter to return to the Spell menu.

**Note:** This document is the one in which you want the supplement words saved.

6. Press Esc to exit the Spell menu, and return to the DisplayWrite 4 menu.
7. Revise the document as you would any other document.
8. Follow steps 4 through 12 in “To Create a Dictionary Supplement” on page 229 to copy the revisions from the document back to the dictionary supplement.

### *Hint:*

- The capacity of a supplement is approximately 4500 characters. Words already in the dictionary or supplement are not duplicated.

### *Related Topics:*

“Dictionary” on page 46

“Hyphenation” on page 145

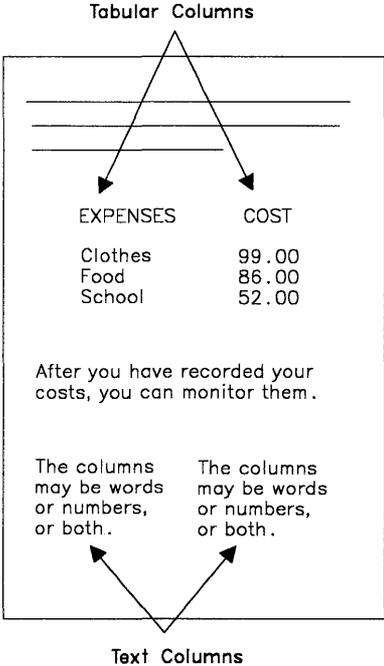
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# Tables

You can use Table (F9) to create tables that contain one or more columns.

There are two types of columns which make up tables:

- *Tabular columns* contain text or numbers or both. Each column uses one of the following types of tab settings: Center, Flush Left, Flush Right or Decimal. Tab settings define the column appearance (for example, a column of names or one of dollar amounts).
- *Text columns* contain words that adjust within a defined width (for example, in left-justified magazine or newspaper articles).



DW4 calculates the column spacing when you lay out the table. If you must revise the columns or table later by adding, deleting, or rearranging entries or columns, DW4 recalculates the spacing and resets the tabs accordingly.

You can revise tables by moving, copying, or deleting specific columns within a table. Columns typed with Table Layout may be simpler to revise because you can isolate each column you want to revise.

You can also insert new columns into an existing table or change and readjust the spacing of the columns within the table.

If you have typed columns without using Table Layout, you can later define the columns as a table. This allows you to revise the text using the table functions.

## To Create a Table of Tabular Columns

1. In the typing area, position the cursor where you want the table to begin and press Table (F9).
2. Select Layout New Table in the Table menu to go to the Layout Table typing area.
3. Follow the instructions in the Layout Table screen to lay out your table in the Layout Table typing area. The a's that appear as you lay out your table represent the pattern for your table layout.

**Note:** For a column that is:

- Flush Left – Press Tab, then type the entry.
- Decimal – Type the number with the decimal point in the appropriate position. Decimal tabs should be used for numbers only. DW4 arranges the numbers in the proper order around the decimal point, even if the number you type does not contain a decimal point.
- Center – Type the entry, then press Center (Ctrl + C).
- Flush Right – Type the entry, then press Shift + Tab.

4. Press Enter to go to the Create Table typing area and start typing your columns.

**Note:** An End Table code is displayed, but moves to the next line as you begin typing.

5. Press Tab to position the cursor under the first tab on the scale line.

**Note:** If the first column is flush left, do not press Tab.

6. Type the entry.
7. Press Tab to reach the next tab setting.
8. Type the next entry.
9. Repeat steps 7 and 8 for the first entry of each column in the table.
10. Press Enter when you have typed all the entries in the first line of the table.
11. Type subsequent lines of the table in the same way you typed the first line.
12. When you have completed typing the table, press Return/Save (F2) to save the table and return to the typing area (Create Document or Revise Document).

*Hint:*

- Decimal tabs should be used for numbers upon which you want to perform math operations.

## To Create a Table of Text Columns

1. In the typing area, position the cursor where you want the table to begin, and press Table (F9).
2. Select Layout New Table in the Table menu.

3. Follow the instructions in the Layout Table screen to lay out your table of text columns in the Layout Table typing area.

**Note:** The a's that appear as you lay out your table represent the pattern for your table layout.

4. Press Enter to go to the Create Table typing area.

**Note:** Do not type the text columns in the Create Table typing area. Continue with step 5.

5. Press Return/Save (F2) to save the table layout and return to the typing area (Create Document or Revise Document).

6. Position the cursor under the Begin Table code (||=).

**Note:** To locate the Begin Table code, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.

7. Press Table (F9) and select Revise Column to go to the Revise Column typing area.

8. Type the text column. The text word wraps for you to fit into the column you laid out.

9. Press Return/Save (F2) and select Return and Save to return to the typing area (Create Document or Revise Document).

10. Position the cursor under the tab setting (on the scale line) for the next column and repeat steps 7 through 9.

**Note:** The cursor must be on the same line as the Begin Table Code to revise a column.

#### *Related Topics:*

"Math" on page 165

"Tabs" on page 241

"Tables for Existing Text" on page 235

"Tables, Reference Areas" on page 236

"Tables, Revise" on page 238

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## Tables for Existing Text

If you have typed columns without using Table Layout, you can define the columns as a table. Then, if you need to revise the text, you can isolate a column to make your revision without having to adjust the other columns in the table.

### To Create a Table for Existing Text

1. In the typing area, position the cursor on the first line of the text you want to lay out as a table, and press Table (F9).
2. Select Define Existing Text as a Table in the Table menu.
3. Follow the instructions on the Layout Table screen to set up the type of columns you want.

**Note:** Determine what type of tab settings correspond to your current columns. Be sure you lay out each column entry to be as long as the longest entry in the current text.

4. Press Enter to exit the Layout Table screen.
5. Follow the prompt to position the cursor on the last line of the text you want in the table.
6. Press Enter to return to the typing area.

#### *Related Topics:*

- “Tables, Reference Areas” on page 236
- “Tables, Revise” on page 238

## Tables, Reference Areas

Reference Areas provide a point of reference for revising a column. For example, you may use a Reference Area to view the leftmost column in a table that exceeds the screen width or the top row of a column that exceeds screen length.

You can set up a side reference area, a top reference area, or both. The side reference area is the leftmost column unless you are revising the leftmost column, then the side reference area contains the columns to the right.

A top reference area allows you to have your column heading remain on the screen to ensure that you are typing or revising text within the correct column.

Without Top  
Reference Area

Revise Column
<< ..... >>
8654
9780
2560
1123

With Top  
Reference Area

Revise Column
<< ..... >>
1984
8654
9780
2560
1123

Without Side  
Reference Area

Revise Column
<< ..... >>
12,600
12,000
500

With Side  
Reference Area

Revise Column
<< ..... >>
Earnings 12,600
Expenses 12,000
Taxes 500

## To Set Up Reference Areas For An Existing Table

1. In the typing area, position the cursor on the same line as the Begin Table code, and press Table (F9).
2. Select Set Up Reference Areas in the Revise Table menu.
3. Set Side Reference Area to Yes and/or Number of Lines in Top Reference Area to the appropriate number for the top reference area in the Set Up Reference Area menu.
4. Press Enter to return to the Revise Table menu.
5. Revise the table or press Esc to return to the typing area.

## To Set Up Reference Areas While Laying Out a New Table

1. In the Layout Table screen, press F6.
2. Set Side Reference Area to Yes and/or Number of Lines in Top Reference Area to the appropriate number for the top reference area in the Set Up Reference Area menu.
3. Press Enter to return to the Layout Table screen.

### *Hint:*

- If your table has headings, specify enough lines in the top reference area for the headings. The top reference area cannot be revised as part of the column. You must revise any text in the top reference area (such as headings) in the Create or Revise typing area

### *Related Topics:*

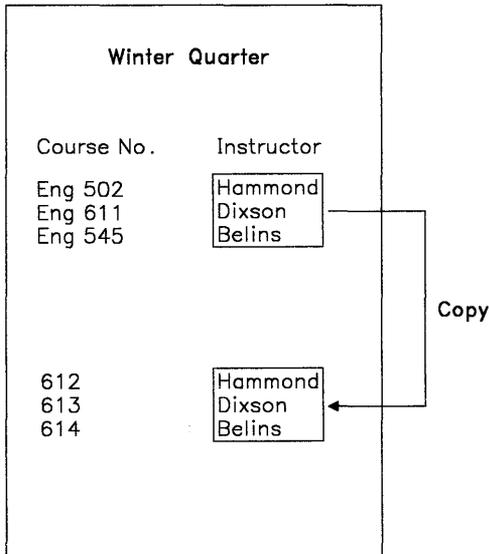
- “Codes” on page 33
- “Tables” on page 231

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## Tables, Revise

You can revise a column in a table without having to retype and rearrange the other columns in your table. You can also revise the layout of the entire table.

You can move, copy, or delete entire columns within a table. You can also move or copy a column from one table to another.



### To Revise a Column

1. In the typing area, position the cursor on the first line of the column and press Table (F9).

**Note:** The cursor must be on the same line as the Begin Table code.

2. Select Revise Column in the Revise Table menu.

3. Make your revisions to the column in the Revise Column Typing area.
4. Press Return/Save (F2) to return to the typing area (Create Document or Revise Document).

## To Insert a Column in a Table

1. In the typing area, position the cursor where you want to insert the column.

### Notes:

- a. If you want to insert a new column at the left margin as the first column or between existing columns, position the cursor on the first character of the column the new column is to precede.
  - b. If you want to insert a new column after the last column in the table, position the cursor on, or to the right of, the right margin symbol.
  - c. The cursor must be on the same line as the Begin Table code.
2. Press Table (F9) and select Insert New Column in the Revise Table menu.
  3. Follow the instructions in the Insert New Column menu to insert the new column.

**Note:** The o's that appear as you lay out the new column represent the pattern for your column layout.

4. Press F7 to adjust column spacing.
5. Press Enter, and type the new column in the Create Column typing area.
6. Press Return/Save (F2) when you have finished typing the column to return to the typing area (Create Document or Revise Document). The new column is included in the table.

## To Revise Table Layout

1. In the typing area, position the cursor on the first line of the table and press Table (F9).

2. Select **Revise Table Layout** in the **Revise Table** menu.
3. Follow the instructions on the **Layout Table** screen to revise the table layout.
4. Press **Enter** to return to the typing area.

*Hint:*

- If you move, copy, or delete a column, you should revise the layout of the table and press **F7** to adjust the column spacing.

## **To Move or Copy a Column**

1. In the typing area, position the cursor on the first line of the column and press **Table (F9)**.
2. Select **Move Column** or **Copy Column** in the **Revise Table** menu.
3. Follow the prompt to position the cursor where you want the column to be moved or copied, and press **Enter**.

**Notes:**

- a. If you want to move a column to the left margin as the first column or between existing columns, position the cursor on the first character of the column the new column is to precede.
- b. If you want to move a column after the last column in the table, position the cursor on, or to the right of, the right margin symbol.

## **To Delete a Column**

1. In the typing area, position the cursor on the first line of the column to be deleted and press **Table (F9)**.

**Note:** The cursor must be on the same line as the **Begin Table** code.

2. Select **Delete** in the **Revise Table** menu.
3. Follow the prompt to press **Enter** and delete the column.

---

## Tabs

Tab settings, which are part of the Document Format, are initially set every five spaces. You can change tab settings for an entire document by changing the Document Format using Document Options (Ctrl + F7). These tab settings are in effect for the entire document when you paginate, and remain in effect until you make a format change.

You can also change tab settings for part of a document using Format (F7). These changes affect the text from the format change code to the end of the document, or to the next format change code. Change the tab settings for future documents through the Profiles menu (Text Defaults).

### To Change Tabs

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format under Change in the Document Options menu.
3. Select Margins and Tabs in the Change Document Format menu.
4. To set a tab, position the scale line cursor where you want to set a tab. To set a:
  - Decimal tab, position the cursor where you want a decimal tab and type a period.
  - Comma tab, position the cursor where you want a comma tab and type a comma.
  - Colon tab, position the cursor where you want a colon tab and type a colon.
  - Center tab, position the cursor on the point at which you want text to be centered and press Center (Ctrl + C).
  - Flush Right tab, position the cursor where you want a flush right tab and press Shift + Tab.

- Flush Left tab, position the cursor where you want a flush left tab and press Tab. This tab is like the tab you set on a typewriter.
  - Series of equally spaced tabs (tab grid), position the cursor at the left margin, type a number for the number of spaces you want between the tab settings, and press Enter.
5. Press Enter to save the tab settings.
  6. Press Esc enough times to return to the typing area.

*Hints:*

- To clear all tabs, position the cursor at the left margin and press Del.
- To move a tab setting, position the cursor on the tab setting you want to move and press Space or Backspace. All settings to the right of this tab setting also move.
- To change tab settings for part of a document, press Format (F7) and select Margins and Tabs in the Format menu.
- To return the tab settings back to the Document Format (or Alternate Format, if it is in use), position the cursor at the point where you want to return to the starting format. Press Format (F7), and select either All Formats or Margins and Tabs, Line Spacing/Justification, Typestyle in the Reset Format menu.
- Previously typed text that is displayed after a format change code may not be displayed in correct format. Paginate the document to reformat the text.
- When you paginate, changes made with the Document Options (Ctrl + F7) affect the entire document up to the next format change code.

*Related Topics:*

- “Format” on page 90
- “Margins” on page 163
- “Profiles” on page 203

---

## Typestyle

Typestyle refers to the style, design, and pitch (number of characters per inch) in which your text can be printed. The lower the pitch number, the larger the characters are printed. There are seven different pitch ranges listed in the Typestyle menu. The typestyle numbers and pitch you can choose depend on the printer you are using.

Typestyle 26 (10 pitch) is the system default typestyle number. You can change the typestyle for an entire document by changing the Document Format using Document Options (Ctrl + F7). The typestyle number is in effect for the entire document when you paginate, and remains in effect unless you make a format change or a typestyle change. You can also change the type style for a line or word using Format (F7) or Typeface (Ctrl + F). These changes affect the text from the format change code or Typestyle Change code to the next typestyle change or format change, or to the end of the document.

Change the typestyle for future documents through the Profiles menu (Text Defaults). The typestyle number is displayed on the second status line.

### To Change the Typestyle for a Document

1. In the typing area, press Document Options (Ctrl + F7).
2. Select Document Format under Change in the Document Options menu.
3. Select Typestyle in the Change Document Format menu.
4. Type the Typestyle number you want in the Typestyle menu and press Enter.
5. Press Esc enough times to return to the typing area.

## To Change the Typestyle for a Paragraph or Page

1. In the typing area, position the cursor on the line where you want the typestyle change to begin and press Format (F7).
2. Select Typestyle in the Format menu.
3. Type the Typestyle number you want in the Typestyle menu and press Enter.
4. Press Esc enough times to return to the typing area.

### Hints:

- If your cursor is not at the beginning of a line, the system moves it to the beginning of the line and the typestyle change begins there.
- When you change the typestyle with the Format (F7) key at the beginning of a line or page, you can change to a typestyle number with a different pitch, for example, from 10 pitch to 12 pitch. When you change the pitch, the margin values are changed to reflect the new pitch, but the distance from the paper edges remain the same.
- To return the format back to the Document Format (or Alternate Format, if it is in use), position the cursor at the point where you want to return to the starting format. Press Format (F7), and select either All Formats or Margins and Tabs, Line Spacing/Justification, Typestyle in the Reset Format menu.

## To Change the Typestyle Within a Line

1. In the typing area, position the cursor where you want the new typestyle to begin and press Typeface (Ctrl + F).
2. Type the Typestyle Number you want in the Change Typeface menu.

**Note:** If the cursor is within a line, you can only select a typestyle with the same pitch as the rest of the line.

3. Press Enter to return to the typing area.

## To Revise a Tpestyle Change

1. Position the cursor under the Tpestyle Change code (⌈) and press View/Revise (Ctrl + F8).
2. Type the Tpestyle Number you want in the Change Typeface menu.
3. Press Enter to return to the typing area.

### *Hints:*

- To help locate the Tpestyle Change code, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.
- If your printer supports multiple tpestyles (pitch and font), you can define these tpestyles in the printer function table you are using. For more information, see “Printer Function Table Tasks” in *Technical Reference*.

### *Related Topics:*

“Codes” on page 33

“Format” on page 90

“Paginate” on page 196

“Printer Support” in *Technical Reference*

“Profiles” on page 203

---

## Underline

You can underline a character, word, phrase, or block of text. You can underline text as you type it, or afterwards. The underlined text may be displayed differently (underlined or a different color).

### To Underline a Word

1. In the typing area, position the cursor one position to the right of the last character of the word you want to underline.
2. Press Word Underline (Ctrl + W) to underline the word.

### To Type Underlined Text Using the Underline Key

1. In the typing area, position the cursor where you want to begin underlining and press Underline (Ctrl + U) to insert a Begin Underline code (|).
2. Type the text you want underlined.
3. Press Underline (Ctrl + U) to insert an End Underline code (|).

### To Underline Existing Text

1. In the typing area, position the cursor under the first character you want to underline.
2. Press Underline (Ctrl + U) to insert a Begin Underline code.
3. Position the cursor after the last character you want to underline.
4. Press Underline (Ctrl + U) to insert an End Underline code.

#### *Hints:*

- To remove the underline codes, position the cursor under the Begin Underline code (|) and press Del and Enter. Then position the cursor under the End Underline code (|) and press Del and Enter again.
- To help locate the Begin and End Underline codes, press Edit Options (Ctrl + F5), set Display All Codes to Yes, and press Enter.

- Pressing Underline (Ctrl + U) turns underlining on and off depending on whether a Begin Underline code or End Underline code exists already.

*Related Topics:*

“Block Edit” on page 26

“Codes” on page 33

“Display Options” on page 47

---

## Utilities

Utilities are tools that help you maintain and organize your DisplayWrite 4 documents, as well as documents you have received from other systems or application programs (for example, IBM DisplayWrite/36, IBM DisplayWrite/370, IBM DisplayWrite 3, or IBM DisplayWrite Assistant).

You can:

- Copy text documents and files already on your disk
- Erase documents and files
- Rename documents and files
- Compress documents to remove unused space
- Recover documents
- Convert documents to final-form text and revisable-form text documents
- Convert final-form text and revisable-form text documents to DisplayWrite 4 documents.

**Note:** Copy, Erase, and Rename can also be used for DOS files.

*Related Topics:*

“Compress Documents” on page 34

“Copy Documents” on page 35

“Erase Documents” on page 78

“Final-Form Text Conversion” on page 81

“Recover Documents” on page 205

“Rename Documents” on page 207

“Revisable-Form Text Conversion” on page 208

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## View Document

Use View Document when you want to review DisplayWrite 4 or IBM DisplayWrite 3 documents or revisable-form text documents but do not plan to make any revisions. Because you cannot alter a document when in View Document, accidental entries are prevented. When you view a document, the DOS date and time for the document are not changed.

View Document allows you to play voice notes if your system is set up to support Voice/Audio Annotation.

### To Use View Document

1. Select View Document in the DisplayWrite 4 menu.
2. Type the Document Name in the View Document menu and press Enter.
3. Use cursor movement to move through the document.
4. Press End/Save (F2) and select End and Save to return to the DisplayWrite 4 menu.

#### *Related Topics:*

“Codes” on page 33

“Cursor Movement” on page 43

“Voice Note” on page 249

“Voice/Audio Support” in *Technical Reference*

---

## Voice Note

Voice notes enable you to incorporate verbal comments, instructions, or attention-getting statements into your document. The voice note is stored with the document. You insert voice notes using Instructions (F8). You can Record, Play, or Re-record a voice note.

To use the voice note capability, you must have the IBM Voice Communications Adapter card and the IBM Voice Communications Operating Subsystem program installed on your system, and it must be loaded. You also need a microphone and speaker. For more information, see “Voice/Audio Support” in *Technical Reference*.

The Voice Note code, a musical note, is displayed in the typing area to indicate the location of the voice note.

### To Record a Voice Note

1. In the typing area, position the cursor where you want to record the voice note and press Instructions (F8).
2. Select Voice Note in the Instructions menu.
3. Select Record in the Voice Note menu.
4. Record your message.
5. Press Enter to end the recording and return to the Voice Note menu.
6. Press Esc to insert the Voice Note code and return to the typing area.

### To Play a Voice Note

1. In the typing area, position the cursor under the Voice Note code (a musical note) and press View/Revise (Ctrl + F8).
2. Select Play in the Voice Note menu to play the voice note.

## To Re-record a Voice Note

1. In the typing area, position the cursor under the Voice Note code you want to re-record and press View/Revise (Ctrl + F8).
2. Select Re-record in the Voice Note menu.
3. Re-record your message, and press Enter in the Voice Note menu.
4. Press Esc to save your voice note and return to the typing area.

### *Hints:*

- To locate a voice note, look for the musical note character in your document, or use Search (F6) and press Instructions (F8) in the Find menu.
- To delete a voice note, position the cursor under the Voice Note code, then press Del and Enter. If you delete a Voice Note code, the voice note is also deleted.
- After you delete a voice note, you may want to compress your document to free the disk space used by the voice note.

### *Related Topics:*

“Codes” on page 33

“Compress Documents” on page 34

“Cursor Movement” on page 43

“Install Support” in *Technical Reference*

“Voice/Audio Support” in *Technical Reference*

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## Working Copy

Whenever you revise a document, DW4 creates a backup copy of the document. Your revisions are actually made in the original, or working copy of the document. The backup copy of the document remains unchanged. The creation of a backup copy allows you to undo your changes using the End/Save (F2) menu and return to the previous version of the document.

If you want to save your changes, select End and Save in the End/Save (F2) menu. If you want to save the changes you have made so far and return to the typing area, select Save and Continue. You can name the document where you want the changes saved. If you do not specify a new document name, the backup copy is replaced by the working copy.

If you want to restore the backup copy of the document without the changes, select Quit Without Saving in the End/Save (F2) menu. The working copy of the document is replaced by the backup copy.

If you do not want to create a backup copy each time you revise a document, you can set Edit Copy of Document to No in the Edit Defaults menu in Profiles (Text Defaults). If you do so, Save and Continue and Quit without Saving are not selectable.

When you revise a document, the working copy of the document retains the .DOC extension, while the backup copy is assigned an extension of .\$\$C. When you End and Save, or Save and Continue, the .DOC version replaces the .\$\$C version of the document.

### *Hints:*

- If you need to recover the backup copy, rename it with a different extension, and then recover it.
- DW4 also creates a backup copy of the document if you select Save and Continue while you are creating a document.

*Related Topics:*

- “Extensions” on page 79
- “Profiles” on page 203
- “Recover Documents” on page 205
- “Revise Document” on page 210
- “Save Document” on page 215

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