Data Processing Techniques

Bibliography of Data Processing Techniques

This bibliography and associated classification system provide a means to identify selected IBM publications which, either wholly or in part, document data processing techniques information. *The listing of any given publication in this bibliography, however, does not preclude its appearance in other reference bibliographies such as the Systems Reference Library.*

Part I of this bibliography lists publications within major subject classification. Note that a publication may appear in more than one classification. Part II contains abstracts of the publications in order number sequence.

Please see the latest copy of the DPT Newsletter (Order No. GN20-1002) for information concerning the latest edition (suffix number) of the publications listed herein.

IBM

PREFACE

Systems techniques are those which aid in the work of surveying, designing, installing, operating and maintaining commercial and scientific data processing systems. Such techniques are illustrated and defined in various IBM publications. This bibliography directs the user to publications in which the techniques described are applicable to many types of IBM data processing systems. The reader will also find "technique-oriented" publications cataloged in SRL Bibliographies and their Newsletters (Subject code 50). The choice as to whether a technique applies to a particular system, or whether it applies to systems in general, is often difficult to make. The reader, therefore, should review the above-mentioned bibliographies and newsletters for a more complete review of IBM technique-oriented publications.

Manuals for IBM Type II programs that assist in analysis, design, implementation, documentation, etc. are listed under subject code 60 in the SRL Bibliographies and Newsletters.

SECTION 1:Order numbers of Publications included in the Bibliography of Data Processing Techniques are listed below

TITLE	ORDER NUMBER

STUDY

IBM STUDY ORGANIZATION PLAN DOCUMENTATION TECHNIQUES	SC20-8075
STUDY ORGANIZATION PLAN: THE APPROACH	SF20-8135
STUDY ORGANIZATION PLAN: THE METHCD, PHASE I	SF20-8136
STUDY ORGANIZATION PLAN: METHOD, PHASE II	SF20-8137
STUDY ORGANIZATION PLAN: THE METHOD, PHASE III	SF20-8138
IBM STUDY ORGANIZATION PLAN - BASIC SYSTEMS STUDY GUIDE	SF20-8150

ANALYSIS

IBM DATA PROCESSING TECHNIQUES DEPARTMENT AND SPECIALTY STORE ANALYSIS GUIDE	GC20-1742
INDEX ORGANIZATION FOR INFORMATION RETRIEVAL	GC20-8062
NUMERICAL CODES FOR STATES, COUNTIES AND CITIES OF THE UNITED STATES	GC20-8073
AN INTRODUCTION TO INFORMATION RETRIEVAL	GE20-0348
KEYWORD-IN-CONTEXT (KWIC) INDEXING	GE20-8091
AN INTRODUCTION TO LINEAR PROGRAMMING	GE20-8171
ANALYSIS OF SOME QUEUING MODELS IN REAL-TIME SYSTEMS	GF20-0007
A UNIQUE COMPUTABLE NAME CODE FOR ALPHABETIC ACCOUNT NUMBERING	GF20-8052
AN INTRODUCTION TO ENGINEERING ANALYSIS FOR COMPUTERS	SF20-8077
DECISION TABLES - A SYSTEMS ANALYSIS AND DOCUMENTATION TECHNIQUE	GF20-8102

DESIGN

DATA FILE HANDBOOK	GC20-1638
DATA COMMUNICATIONS PRIMER	GC20-1668
IBM 1287/1288 OCR ERROR RECOVERY GUIDE	GC20-1733
HANDPRINTING CONSIDERATIONS FOR THE IBM 1287/1288 OPTICAL CHARACTER READERS	GC20-1739
10,000 DIVISION CODE FOR PROPER NAMES	GC20-8071
NUMERICAL CODES FOR STATES, COUNTIES AND CITIES OF THE UNITED STATES	GC20-8073
FORM AND CARD DESIGN	GC20-8078
PRINCIPLES OF DATA ACQUISITION SYSTEMS	GE20-0090
URBAN MANAGEMENT INFORMATION SYSTEM: VOLUME 13 BUILDING	GE20-0365
CODING METHODS	GF20-8093

IMPLEMENTATION

MANAGEMENT OF THE PUNCHED CARD DATA PROCESSING DEPARTMENT   GC20-1611
ORGANIZING THE DATA PROCESSING INSTALLATION   GC20-1622
IDENTIFICATION TECHNIQUES   GC20-1707
FLOWCHARTING TECHNIQUES   GC20-8152
MANAGEMENT CONTROL OF ELECTRONIC DATA PROCESSING   GF20-0006
PLANNING FOR AN IBM DATA PROCESSING SYSTEM   GF20-6088

PROGRAMMING

FLOWCHARTING TECHNIQUES   GC20-8152
PLANNING FOR AN IBM DATA PROCESSING SYSTEM   GF20-6088

DOCUMENTATION

IBM 6430 ACCOUNTING SYSTEM
  PAYROLL APPLICATION USER'S GUIDE   GC20-1701
IBM STUDY ORGANIZATION PLAN DOCUMENTATION TECHNIQUES   SC20-8075
KEYWORD-IN-CONTEXT (KWIC) INDEXING   GE20-8091
PLANNING FOR AN IBM DATA PROCESSING SYSTEM   GF20-6088
DECISION TABLES - A SYSTEMS ANALYSIS AND DOCUMENTATION
  TECHNIQUE   GF20-8102
STUDY ORGANIZATION PLAN: THE APPROACH   SF20-8135
STUDY ORGANIZATION PLAN: THE METHOD, PHASE I   SF20-8136
STUDY ORGANIZATION PLAN: METHOD, PHASE II   SF20-8137
STUDY ORGANIZATION PLAN: THE METHOD, PHASE III   SF20-8138
IBM STUDY ORGANIZATION PLAN - BASIC SYSTEMS STUDY GUIDE   SF20-8150

INSTALLATION

MANAGEMENT PLANNING GUIDE FOR A MANUAL OF DP STANDARDS   GC20-1670
INSTALLATION MANUAL - PHYSICAL PLANNING, UNIT RECORD DATA
  PROCESSING EQUIPMENT   GC24-1037

OPERATION

MANAGEMENT PLANNING GUIDE FOR A MANUAL OF DP STANDARDS   GC20-1670

SCIENTIFIC

OUTLINES OF STATISTICAL TECHNIQUES, APPLICATIONS, AND
  PROGRAMS FOR INDUSTRY, ENGINEERING AND SCIENCE   GC20-1645
APPLICATIONS AND TECHNIQUES OF OPERATIONS RESEARCH
  BIBLIOGRAPHY   GC20-1671

A KWIC INDEX IN OPERATIONS RESEARCH   GC20-1673
RANDOM NUMBER GENERATION AND TESTING   GC20-8011
INDEX ORGANIZATION FOR INFORMATION RETRIEVAL   GC20-8062
PRINCIPLES OF DATA ACQUISITION SYSTEMS   GE20-0090
AN INTRODUCTION TO LINEAR PROGRAMMING   GE20-8171
AN INTRODUCTION TO ENGINEERING ANALYSIS FOR COMPUTERS   SF20-8077
BIBLIOGRAPHY ON SIMULATION   G320-0924

GENERAL

DATA COMMUNICATIONS PRIMER   GC20-1668
AN INTRODUCTION TO IBM DATA PROCESSING SYSTEMS   GC20-1684
OCR INPUT PREPARATION GUIDE FOR THE IBM 1287/1288 OPTICAL   GC20-1686
  CHARACTER READER
COMPUTER MATH   GC20-1687
A DATA PROCESSING GLOSSARY   GC20-1699
PREPARING BRAILLE USING SYSTEM/360   GF20-0012
INTRODUCTION TO THE LIST PROCESSING FACILITIES OF PL/I   GF20-0015
AN INTRODUCTION TO IBM PUNCHED CARD DATA PROCESSING   GF20-0074
IBM MARKETING PUBLICATIONS KWIC INDEX   G320-1621
SYSTEMS SCIENCE EDUCATION PROMOTIONAL CATALOG   G520-2327

GC20-1611
MANAGEMENT OF THE PUNCHED CARD DATA PROCESSING DEPARTMENT
This manual is a guide to the mangement of an IBM punched
card data processing department. The responsibilities of
the IBM department manager are described for four major
areas of management: procedure development, manuals of
procedure, workloads, and evaluation and improvement.

GC20-1622
ORGANIZING THE DATA PROCESSING INSTALLATION
This manual is a guide for organizing a data processing
department. It describes organizational structures designed
for companies of various sizes and requirements. The
personnel and organizational needs are outlined for three
basic types of data processing organizations: (1) transition
from a punched card installation, (2) new data processing
organization, (3) expanded data processing organization.

GC20-1638
DATA FILE HANDBOOK
This manual is a basic primer that provides fundamental
information about the use, composition, organization, and
design of data files for all types of IBM equipment,
including System/360. Reference material is included on
the characteristics of various processor, I/O devices, and
IOCS programs, since these factors affect the design of
data files.

GC20-1645
OUTLINES OF STATISTICAL TECHNIQUES, APPLICATIONS, AND
PROGRAMS FOR INDUSTRY, ENGINEERING AND SCIENCE
This manual outlines nine statistical techniques, giving
simple definitions and examples, a summary of input and
output, and references to numerous applications and computer
programs. The techniques covered are: correlation, factor
analysis, cluster analysis, regression, descriminant
analysis, experimental analysis, evolutionary operation,
Bayes formula, and time-series analysis.

GC20-1668
DATA COMMUNICATIONS PRIMER
This manual is intended for the user of data processing
equipment who has a need for data communications services.
It introduces the reader to the world of data communications
and enables him to approach the common carriers for
competent, detailed, up-to-date information on facilities,
specifications and tariffs to satisfy his needs.

GC20-1670
MANAGEMENT PLANNING GUIDE FOR A MANUAL OF DP STANDARDS
The purpose of this guide is to assist data processing
management in the selection and documentation of standards.
The preface discusses the necessity of standards and the
sources from which they are obtained. Suggestions are
given as to standards manual format and methods of enforcing
standards. The remainder of the guide depicts a specimen
set of standards covering the areas of standards policy,
management procedures, system environment, systems analysis,
programming, and installation operating procedures and
rules. Although this guide assumes the use of an IBM
System/360 Disk Operating System in a multiprogramming
environment, other types of installations may also find
it useful in developing their standards.

GC20-1671
APPLICATIONS AND TECHNIQUES OF OPERATIONS RESEARCH
BIBLIOGRAPHY
This is a special bibliography on the tools of Operations
Research, Management Science, Industrial Engineering, and
Systems Engineering. Topics from 200 periodicals and trade
journals for the years 1961 to 1966 are sampled. This
manual was prepared using the IBM computer and an automatic
text processor. The bibliography runs alphabetically
through three kinds of entries: industries, functions,
and techniques.

GC20-1673
A KWIC INDEX IN OPERATIONS RESEARCH
This manual enables a user to find articles on selected
topics in Operations Research, Management Science,
Industrial Engineering, and Systems Engineering.
    The manual has three sections. Section A gives
    references and full titles for 345 special topics
    including:
    techniques (linear programs, queue analysis, ...)
    industries (finance, process, utilities, ...)
    functions (control, forecasting, routing, ...)
    Section B is a KWIC index of keywords in the titles
of over 3,200 articles. It includes the 345 topics in
Section A and a great many more. The reader can look up
first author names in the index, also.
    Section C is a listing of titles according to journal
and within journal, by year and by page.
    Fifteen publications in Operations Research and related
subjects are represented.

GC20-1684
AN INTRODUCTION TO IBM DATA PROCESSING SYSTEMS
This manual presents concepts and principals essential
to a basic knowledge of computers. It is designed for
use in training programs that serve as prerequisites for
a detailed study of an IBM system. Covered in general
terms are topics such as Data Representation, Storage
Devices, CPW Functions, I/O Devices, Stored Program
Principles, Programming Systems, Operating Systems,
Conversion, and Procedural Controls. Reference to specific
Systems is made to illustrate general principles.

GC20-1686
OCR INPUT PREPARATION GUIDE FOR THE IBM 1287/1288 OPTICAL
CHARACTER READER
This manual is a guide to achieving acceptable input quality
for IBM's 1287 and 1288. The topics stressed include
sample document designs from several application areas,
human factors considerations, document design specifications
and procedures, a discussion of important considerations
for each type of OCR input device, and a description of
some OCR support services available to IBM customers.

GC20-1687
COMPUTER MATH
Course administration and curriculum guide is described
for a computer mathematics course for secondary schools.

GC20-1699
A DATA PROCESSING GLOSSARY
This glossary contains over 2,000 definitions of terms
in the data processing field. It contains definitions
from:
1. The American National Standard Vocabulary for Infor-
    mation Processing, published by the American National
    Standards Institute, Inc. (ANSI).
2. The proposed American National Standard Vocabulary.
3. The IBM Data Communications Glossary (C20-1666).
4. The IBM Glossary of Information Processing.

GC20-1701
IBM 6430 ACCOUNTING SYSTEM
PAYROLL APPLICATION USER'S GUIDE
The 6430 User's Guide is designed to provide necessary
documentation to install and operate the payroll
application. Four different types of payrolls are
described, including sample journal, ledger, and check
arrangements and detailed flowcharts and coding. The
payrolls are made up of program segments that are readily
modified to accommodate specific earnings, tax, and
deductions situations. Programs are loaded and stored in
magnetic core storage and processed by a solid state
arithmetic unit. Data can be entered from the keyboard
or a card reader.

GC20-1707
IDENTIFICATION TECHNIQUES
This manual explains and compares a survey of several types
of coding techniques for individuals and non-individuals.
An approach to improving coding methods involving a
statistical approach is outlined. The publication is
basically a state-of-the-are description of the
identification techniques.

GC20-1733
IBM 1287/1288 OCR ERROR RECOVERY GUIDE
Discusses tools, techniques, and methods of importance
for error recovery when planning, programming, and
installing the IBM 1287 and IBM 1288 Optical Character
Readers.

GC20-1739
HANDPRINTING CONSIDERATIONS FOR THE IBM 1287/1288
OPTICAL CHARACTER READERS
This publication was written to help determine why
handprinted characters reject or substitute, and to help
define input problems related to character shape and size.
Included is general information about handprinting
requirements and why characters reject or substitute.
Varying character shapes and sizes are also included for
reference purposes.

GC20-1742
IBM DATA PROCESSING TECHNIQUES DEPARTMENT AND
SPECIALTY STORE ANALYSIS GUIDE
This Analysis Guide may be used as an aid in obtaining
application data of a retail organization. Applications
covered are sales audit, merchandise control, accounts
receivable, accounts payable, and payroll and commissions.
    This guide should make it possible to obtain data in a
logical and concise manner. It is recommended that this
analysis guide be used with customers and prospects being
studied for the mechanization of retail applications. The
data will also aid an industry representative in rendering
assistance, both from an information and time-saving
standpoint.

GC20-8011
RANDOM NUMBER GENERATION AND TESTING
Random sampling, simulation studies, and Monte Carlo methods
have been in use for many years. Papers describing various
aspects of these topics have appeared in technical journals
and textbooks available to a relatively small percentage
of computer users. Meanwhile, applications requiring
random numbers are becoming more important and more common
in business and industry as well as purely scientific
areas. Therefore, this manual has been prepared which
gives the mathematical development of the power residue
method, outlines computer techniques for implementing it
and also offers brief comments on other methods. An
appendix provides programming illustrations for binary and
decimal computers.

GC20-8062
INDEX ORGANIZATION FOR INFORMATION RETRIEVAL
Methods of indexing vary with the nature of the material
to be indexed and the ways in which this material will be
used. This book presents, in simplified form, the basic
principles behind organizing indexes of various types.
It is written to help systems personnel understand the
problems they will encounter in organizing information for
eventual retrieval.
    Stressing that an indexing system should always be
developed in the light of the particular retrieval problem,
and that the specific equipment to be used is a secondary
consideration, the book covers name indexing, special
indexing (including auto-encoding and the KWIC index), and
indicative and informative indexing.

GC20-8071
10,000 DIVISION CODE FOR PROPER NAMES
This manual contains a four-digit code based on the name
frequencies found by the University of Oregon.

GC20-8073
NUMERICAL CODES FOR STATES, COUNTIES AND CITIES OF THE
UNITED STATES
This book is based on the 1960 census. Every urban place
with a population of 2,500 or more is listed in alphabetic
sequence by state and is assigned a four-digit code. In
order not to confuse users of the older three-digit code,
both the old and new code numbers are shown.

SC20-8075
IBM STUDY ORGANIZATION PLAN DOCUMENTATION TECHNIQUES
This manual describes a related total approach to
documenting the study, analysis and design of business
systems. Examples are given of the use of a series of
forms in recording survey data, analyzing system
requirements, and describing the new system that emerges.
A brief discussion of the concepts and problems of system
design is also included. The series of forms used consists
of the File Sheet (MO8-4603), Message Sheet (MO8-4604),
Operation Sheet (MO8-4605), Input Output Sheet (MO8-4606),
Resource Usage Sheet (MO8-4607), Activity Sheet (MO8-4608),
Required Operations Sheet (MO8-4609) and Resource Sheet
(MO8-4610).

GC20-8078
FORM AND CARD DESIGN
This manual is divided in two sections--the first devoted
to form design and the second to card design. Its use
presupposes a knowledge of IBM data processing equipment.
It can be used as a guide for individual study or a text
for class study.

GC20-8152
FLOWCHARTING TECHNIQUES
Adherence to standard techniques for the preparation of
flowcharts of data processing systems and procedures greatly
increases the effectiveness of communication between the
programmer-analyst and the many groups with whom he deals.
The manual describes in detail the preparation of system
and program flowcharts. The symbols used are those provided
by the IBM Flowcharting Template (GX20-8020). A flowchart
worksheet (GX20-8021) is a means of standardizing
documentation. It provides space for drawing program
flowcharts and contains an area for identification of the
job, including application, procedure, date, and pagination.

GC24-1037
INSTALLATION MANUAL - PHYSICAL PLANNING, UNIT RECORD DATA
PROCESSING EQUIPMENT
This publication contains pertinent, detailed physical
planning information concerning IBM unit record data
processing equipment. Included are sections on floor
planning, electrical requirements, environmental
requirements, lighting, noise reduction, and safety. These
sections are supplemented by charts listing various
requirements for each item of unit record equipment.

GE20-0090
PRINCIPLES OF DATA ACQUISITION SYSTEMS
For IBM customers who require a basic understanding of the
functions of data acquisition systems, this manual provides
an introductory description of their operation and use in
a system environment. This manual acquaints the reader
with many of the various items of hardware commonly
encountered in data acquisition systems, the means of
connecting them in a system configuration and the central
processing unit, features and programming capabilities
necessary for efficient operation.

GE20-0348
AN INTRODUCTION TO INFORMATION RETRIEVAL
This manual uses the language of the nonspecialist to
present ways in which digital computers can be used in
information storage and retrieval systems. Indexing
methods, file organization, and search strategies are
discussed, and a brief bibliography is given. The manual
is intended as a first reader for those interested in the
broad aspects of data banks and mechanized libraries.

GE20-0365
URBAN MANAGEMENT INFORMATION SYSTEM:
VOLUME 13 BUILDING
This publication is one of 28 volumes describing the
objectives, responsibilities, problems, of the city
department shown in the title with specific proposals for
application programs and data sets proposed to solve the
problems mentioned. The publications resulted from a study
of a medium-size city by IBM's ASD Division. The
information is useful for salesmen, SEs, and heads of the
various city departments in the background, and general
solutions available with data processing hardware and
software to aid in department operations, and to solve
department problems. Each volume lists the other volumes in
the series.

GE20-8091
KEYWORD-IN-CONTEXT (KWIC) INDEXING
KWIC indexes constitute a new approach to the problem of
how to furnish information promptly about new literature.
This manual presents the principles and advantages of KWIC
indexing and gives essential details about the parts of
an overall KWIC index -- the KWIC index proper, reference
code, bibliography and author index. An extensive list
of recommendations is included for preparing master
machinable records. This involves reserving particular
card columns for specific items and includes suggested
punctuation substitutions and other special indications.
The manual also gives instructions for machine printout,
mounting copy for reproduction, and binding.

GE20-8171
AN INTRODUCTION TO LINEAR PROGRAMMING
This manual is a primer on what can be accomplished on a
computer with linear programming systems. The presentation
covers the entire scope of linear programming application:
problem formulation, computer operations, interpretation
of results, and additional information that can be obtained
through the use of complete linear programming system for
a computer. The manual assumes no mathematical background
beyond high school algebra.
     The first chapter deals with concepts and examples of
linear programming. The second chapter deals with deriving
additional information about a solution. The third chapter
completely describes a larger example of linear programming
in oil refinery scheduling. The fourth chapter is a
description of the simplex method of linear programming.
A detailed glossary of linear programming terms is included.

GF20-0006
MANAGEMENT CONTROL OF ELECTRONIC DATA PROCESSING
Establishes the need and responsibility for adequate EDP
controls in a customer organization. Discusses types of
control needed in input, programming, and analysis of
output. the manual was written for IBM by Price Waterhouse
& Company.

GF20-0007
ANALYSIS OF SOME QUEUING MODELS IN REAL-TIME SYSTEMS
This manual presents basic theory which describes
relationships among the principal elements in a queuing
situation. Several queuing models are discussed, and the
theory is applied to 32 short examples of problems
encountered in real-time systems; numerical solutions are
given for these problems. The manual concerns single
server and multi-server queues, machine interference,
networks of queues, and combinations of random variables
encountered in queuing analysis.

GF20-0012
PREPARING BRAILLE USING SYSTEM/360
This brochure acquaints readers with rudiments of Braille
and the way in which IBM can help by furnishing material
on magnetic tapes that can be translated to Braille.

GF20-0015
INTRODUCTION TO THE LIST PROCESSING FACILITIES OF PL/I
This manual discusses and illustrates usage of PL/I
facilities for organizing, processing, and relocating data
in list form. A data list is a chain of based variable
structures that contain data plus pointers that link the
structures. List-processing techniques are useful for
handling data that has logical complexities not conveniently
represented by conventional PL/I array and structure
representation.
     Illustrative programs were processed by the PL/I (F)
Compiler (Version 4) under control of the IBM System/360
Operating System (Release 16).
     The list-processing facilities of PL/I are an advanced
topic in programming; this manual is intended for the
experienced programmer.
     Additional information is presented in Techniques for
Processing Data Lists in PL/I (GF20-0018).

GF20-0074
AN INTRODUCTION TO IBM PUNCHED CARD DATA PROCESSING
The purpose of this publication is to introduce IBM punched
card accounting to the reader. The material is comprised
of historical information, fundamentals and principles,
basic machine desciptions, and a few related subjects.
A lack of knowledge on the part of the reader is assumed,
and data processing terms are explained in order to make
the material self-explanatory.
     The contents of the publication include an Introduction,
Fundamentals of IBM Accounting, the IBM Card, Coding Data,
Punching and Verifying Data, Principles of IBM Machine
Processing, Sorting Data, The Accounting Machine, The
Control Panel, Accounting Controls, Other Punched Card
Machines, The Use of Prepunched Data, and a Glossary.
     Twenty-five exhibits illustrate the text and include
pictures of machines, card forms, report forms, schematics
of operating features and drawings to explain various
machine functions.

GF20-6088
PLANNING FOR AN IBM DATA PROCESSING SYSTEM
This publication is an excellent guide for answers to many
preinstallation planning problems. It is oriented to
assist in the installation of intermediate and larger data
processing systems, with emphasis on commercial
installations. The subjects covered in separate sections
of this manual include the data processing organization,
selection and education of personnel, planning and progress
control, systems design, program preparation, documentation,
standardization, program testing, conversion, physical
site preparation and operating the installation. There
is also a discussion on the considerations of a scientific
installation. Many planning and operating forms are
illustrated and a brief glossary of data processing terms
is included.

GF20-8052
A UNIQUE COMPUTABLE NAME CODE FOR ALPHABETIC ACCOUNT
NUMBERING
A completely new approach to assigning code numbers is
described. A ten-position code based on the last name,
first name, and middle initial is developed. Five
additional positions are used in this particular system
to describe date of birth, sex, eye color, and height.
These 15 positions result in a unique number. In actual
practice at motor vehicle bureaus, this coding system has
produced less than .025% duplication.
     Tables to permit the assignment of codes are included,
which will make the system advantageous for all customers
who desire to use an alphameric numbering system.
     The technique described in this manual has been
implemented on the IBM 650 and 1401 systems and is
applicable to System/360. For further information contact
your state and local government industry representative.

SF20-8077
AN INTRODUCTION TO ENGINEERING ANALYSIS FOR COMPUTERS
This manual, after giving some historical background to
the subject of computers and describing the basic elements
of the digital computer, presents a variety of subjects
of interest to the engineer. This includes the FORTRAN
language, block diagramming, floating point arithmetic,
errors, recursion formulas, algorithms, principles of
iteration, mathematical models, matrix inversion, eigenvalue
problems, partial differential equations, empirical
relationships, probability, job shop simulation, inventory
control, and linear programming. Most subjects are developed
through examples written in the FORTRAN language.

GF20-8093
CODING METHODS
Specific methods of alphabetic and numerical coding are
discussed--also the way in which they may be developed and
applied. The manual lists and describes the characteristics
that should be included in the construction of adequate
codes.

GF20-8102
DECISION TABLES - A SYSTEMS ANALYSIS AND DOCUMENTATION
TECHNIQUE
The basic concepts of decision tables and a minimum set
of conventions for their use in systems analysis, procedure
design, and documentation are described. The purpose of
such tables is to provide information in a concise format
that is easy to read and understand. The tabular approach
is used to express complex decision logic in a manner that
encourages the analyst to reduce a problem to its simplest
form by arranging and presenting logical alternatives under
various conditions. The resultant tables present a system's
logic in a concise manner that is easy to visualize and
grasp. While the concepts in the test are presented on
a level for comprehension by students in basic computer
courses, the techniques are applicable at all levels of
sophistication by everyone in a data processing environment.

SF20-8135
STUDY ORGANIZATION PLAN: THE APPROACH
This introduction to the Study Organization Plan describes
a total plan of action or a set of guidelines for many
types of system studies.

SF20-8136
STUDY ORGANIZATION PLAN: THE METHOD, PHASE I
This manual is a working guide for conducting business
systems studies through the initial phase of the study
organization plan--understanding the present business.

SF20-8137
STUDY ORGANIZATION PLAN: METHOD, PHASE II
This manual is a working guide for conducting business
systems studies, starting after the present business is
understood and continuing through the establishment of
system requirements specifications.

SF20-8138
STUDY ORGANIZATION PLAN: THE METHOD, PHASE III
This manual is a working guide for conducting business
systems studies through the third phase of the study
organization--creation of the new system.

SF20-8150
IBM STUDY ORGANIZATION PLAN - BASIC SYSTEMS STUDY GUIDE
This manual presents an organized approach to conducting
a system study in a smaller organization; one that cannot
assign more than two or three personnel to the study. The
reader need not have previously participated in a study.
He should however, understand the basic concepts of punched
card and computer equipment. The material presented is
based upon actual systems studies that used the IBM Study
Organization Plan approach.

G320-0924
BIBLIOGRAPHY ON SIMULATION
This bibliography represents a search and annotation of
source material which appeared in over 75 journals and
books, and consists of references to 948 papers, articles,
and books published chiefly during 1960-1964 on the subject
of simulation of a large variety of systems. A new
classification scheme is used to extend the facilities
offered by the basic KWIC indexing program.

G320-1621
IBM MARKETING PUBLICATIONS KWIC INDEX
This reference document contains general information about
publications in the Systems Library. It contains three
sections as follows:
    1)   alphabetic KWIC index by titles
    2)   index by machine type number
    3)   price list in form number sequence (omitting the
         first character of the order number)

G520-2327
SYSTEMS SCIENCE EDUCATION PROMOTIONAL CATALOG
General course description of Basic Programmer Training,
Systems Science Education (Parts I and II) and the
Advanced Systems Science courses.

READER'S COMMENT FORM

Please comment on the usefulness and readability of this publication, suggest additions and deletions, and list specific errors and omissions (give page numbers). All comments and suggestions become the property of IBM. If you wish a reply, be sure to include your name and address.

COMMENTS

fold

fold

fold

fold

● Thank you for your cooperation. No postage necessary if mailed in the U.S.A.
FOLD ON TWO LINES, STAPLE AND MAIL.

GF20-8172-7

YOUR COMMENTS PLEASE...

Your comments on the other side of this form will help us improve future editions of this publication. Each reply will be carefully reviewed by the persons responsible for writing and publishing this material.
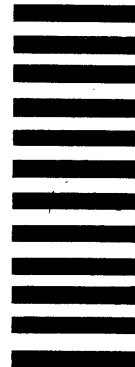
Please note that requests for copies of publications and for assistance in utilizing your IBM system should be directed to your IBM representative or the IBM branch office serving your locality.

fold   fold

fold   fold

IBM®

International Business Machines Corporation
Data Processing Division
1133 Westchester Avenue, White Plains, New York 10604
[U.S.A. only]

IBM World Trade Corporation
821 United Nations Plaza, New York, New York 10017
[International]

Bibliography of Data Processing Techniques Printed in U.S.A. GF20-8172-7

GF20-8172-7

Bibliography of Data Processing Techniques   Printed in U.S.A.   GF20-8172-7