

Suggested reading

Listed are synopses of recent books that should be of interest to the readers of the *IBM Systems Journal*. Inquiries should be directed to the publishers cited.

Basic Programming for the IBM Personal Computer with Technical Applications, Vincent Kassab, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1984. 248 pp. (ISBN 0-13-066218-6). This book is more than just another Basic programming text. The reader is brought from the level of an introduction to computers to an understanding of the application of the more complex features of the Basic language. The unique feature of this text is the inclusion of examples based upon technical applications of the language. Through these examples the reader is given illustrations of the capabilities of the language and practical techniques which can be used in writing programs. For example, in the discussion of array manipulation techniques, the author has illustrated his discussion with flowcharts and Basic code for both Bubble and Shell sorts. Specific examples of plotting routines for a variety of mathematical functions are used to illustrate the use of graphics. The chapter on file accessing techniques includes a simple data base creation and retrieval program. This book provides an excellent introduction to the capabilities of the Basic language, with specific, useful examples.

Global Stakes, The Future of High Technology in America, James Botkin, Dan Dimancescu, Ray Stata, with John McClellan, Penguin Books, New York, NY, 1984. 235 pp. (ISBN 0-14-00-7039-7). First published in 1982 and now in paperback format, this book is still current and important. In international markets, the United States is facing strong technologically based trade competition. To improve our national competitive position, we should focus on improved higher education and specifically improved engineering education. Among the industry-university cooperative associations discussed is the Semiconductor Research Cooperative and its chairman, Erich Bloch, IBM Vice President for Technical Personnel Development. The future of high technology is discussed from several points of view: government (by The Honorable James B. Hunt, Governor of the State of North Carolina; and by Jean Saint-Geours, Special Advisor to the Prime Minister of France), universities (by Dr. Paul E. Gray, President, Massachusetts Institute of Technology; by Robert M. Hexter, University of Minnesota; and by Kenneth G. Ryder, President, Northeastern University), and industry-university cooperation (by John A. Young, President, Hewlett-Packard Company; and by Erich Bloch, Vice President, Technical Personnel Development, IBM Corporation). This book also assists the adult reader in discerning educational and industrial roads his technically inclined offspring may follow.

The IBM COBOL Environment, Robert T. Grauer, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1984. 338 pp. (ISBN 0-13-448654-4). Presented here are the things a COBOL programmer must know to write, compile, and execute a program in an OS/MVS environ-

ment. Brought together under main headings is much of what a programmer needs to know about JCL, utilities, VSAM, and Assembler language. Assembler language and Assembler language programming are treated extensively under three headings. Other topics are presented and examples illustrate all points throughout the book. The author succeeds very well in his stated objective of aiding the professional COBOL programmer to interact with the operating system, to debug his or her programs, and to leave well-written programs for those who follow. This book is a good supplement to a course in COBOL programming and a reference book for the experienced programmer.

Information Systems Security, Royal P. Fisher, Prentice-Hall, Inc., Reading, MA, 1984. 240 pp. (ISBN 0-13-464727-0). The safeguarding of an organization's information and data assets in the interactions between people and computers is the theme of this book. (Also included are discussions of protection from damage due to natural causes—storm, earthquake, and so forth.) This book seems to be for readers who want to know what to know and feel the need for an experienced guide through these topics. The methodology consists of concrete procedures, tables, questionnaires, and other ways of identifying and specifying security exposures. The reader is systematically led to focus on control points, to map exposures at control points, to assess risks, to select controls, and to apply cost-effective controls. The treatment of risk assessment is particularly notable. A valuable addition to this book are seven contributed appendices that illustrate aspects of corporate policies related to data security.

Kahn on Codes—Secrets of the New Cryptology, David Kahn, Macmillan Publishing Company, New York, NY, 1983. 343 pp. (ISBN 0-02-560640-9). This collection of articles and other works of the author is interesting reading for those who would like general information about the new cryptology. The use of computers has greatly increased both the complexity of codes used to encrypt information and the ability to break those codes. Encryption is now being used by many organizations outside of government to help ensure the privacy of their communications. Efforts in cryptology have greatly expanded in recent years in the private sector as well as in government, which has led to the Data Encryption Standard and other advances. Culling material from his historical research, the author provides an effective insight into the modern use of cryptology. Although the book is not a presentation of the details of the technology involved, it should be of interest to those working with cryptology as well as those wanting a nontechnical overview of this intriguing subject.

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The Unix Programming Environment, Brian W. Kernighan and Rob Pike, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1984. 357 pp. (ISBN 0-13-937699-2, 0-13-937681-x "PBK"). This book is a well-written introduction to the facilities provided by UNIX for the novice or experienced user. It is written in a tutorial form, taking the reader through each of the functions of the system with hands-on examples. The authors logically take the reader through an introduction to the facilities that have made the UNIX operating system an effective tool for programmers and users. Topics such as the basic facilities of logging on, getting mail, the file system, command interpreter, and filters are all treated in an easy-to-understand, tutorial style. The book also includes a discussion of tools supporting program development, document preparation, and editing. The reader is assumed to be knowledgeable or concurrently learning the C language in those chapters which describe facilities invoked from the C programming language. With the emerging importance, and availability, of UNIX on a variety of systems, this book fills the needs of readers who want to learn to use UNIX, or who just want a better understanding of its capabilities.