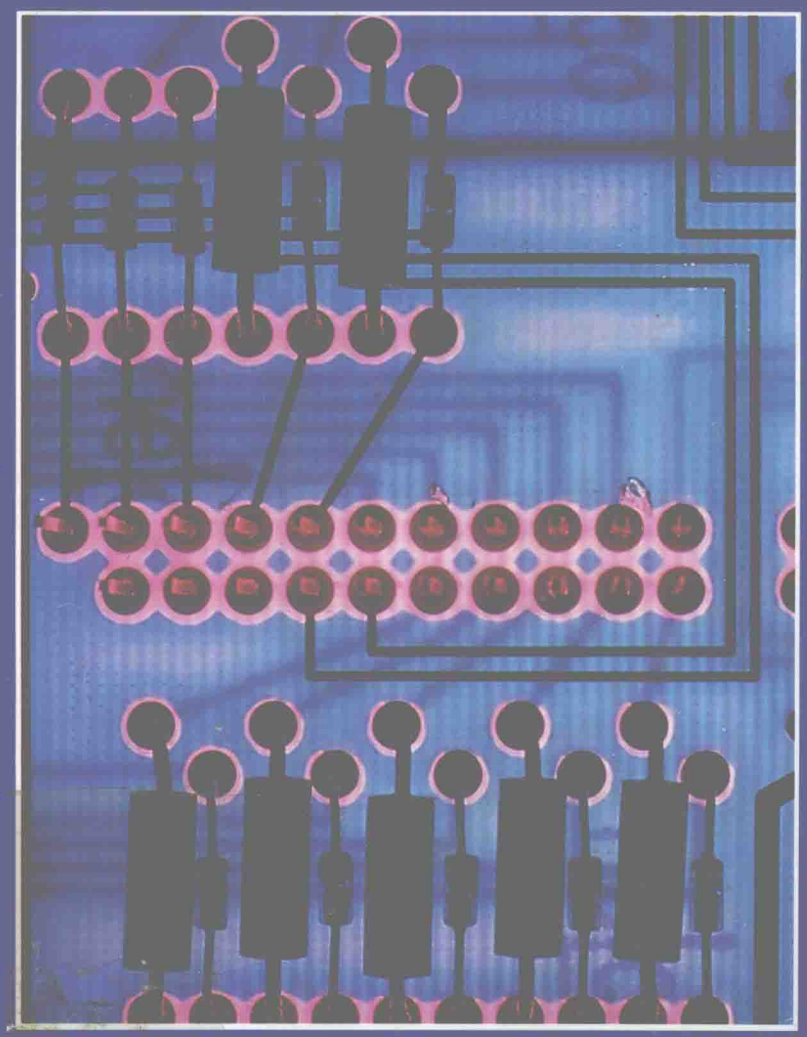
COBOL for Today

Third Edition



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Third Edition

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To Jan, Pat, and Cari
(Congratulations to each of you on *your* accomplishments)
J.W.S.

To Eileen, Laura, and Raeld
(Your accomplishments are greater)
J.C.W.

Preface to the Instructor

COBOL for Today has been designed with you in mind. The text is divided into four parts: (1) *Introductory Concepts* that explain the basic nucleus of COBOL, (2) *More Advanced COBOL Concepts* that explain the student's understanding and build on the basic nucleus, (3) *Fundamental File Processing Concepts* that introduce the student to sequential, indexed, relative, and virtual files (as well as other support for file operations including report writer and the sort verb), and (4) *Special Usage COBOL Concepts* that describes features of COBOL that are useful but not frequently used.

This text has been organized to provide both flexibility for classroom use (since most chapters are independent of each other) and increasing levels of rigor. The text begins with relatively simple concepts and gradually increases the level of difficulty to provide a more realistic picture of how COBOL is used in a commercial environment. Because of its breadth of content and level, this text could easily be used in an introductory, advanced, (or single accelerated) course in COBOL.

All of the materials presented in this text have been classroom tested, from the general discussion of each concept, the illustrations presented in each chapter, and the problems presented at the end of many of the chapters. Beyond explaining the basic concepts and syntax of COBOL, this text also presents descriptions and illustrations of coding style and embellishes on this style through sections labeled *Notes on Programming Style*.

To supplement the text, additional support materials are available. The first element of this support material is an *Instructor's Manual*. This manual describes the objectives, concepts, and answers to questions for each chapter, and it acts as a key to the other support materials. Second, over 200 *Transparency Masters* are available that illustrate basic to advanced statements and concepts. Third, *Program Support* is available. This feature includes a tested copy of each program identified in the text, whether a figure or a problem. Thus, you may customize the programs to your installation or make your own transparency masters illustrating particular programming statements or concepts. In addition, this feature also includes a sample data set and a copy of the printed results of each program. This feature also includes a *Test Bank* of approximately 1000 items. These materials are available to qualified adoptors on 5¼ inch or 3½ inch diskettes, or in printed form.

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The authors view this text and its support materials as living documents. Although the authors have used this material in a classroom environment and continually strive to improve the presentation of it, your *suggestions and comments for improving this work are always welcome.*

Thank you for considering this text and we hope you find its presentation useful for both you and your students.

J. Wayne Spence
University of North Texas

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Preface to the Student

You are about to embark upon an area of study in computing that is the lifeblood of the commercial applications programmer. The COBOL programming language is a vital part of most business data-processing environments. Nationwide, as much as 80 percent of all new applications are written in COBOL. Thus, a knowledge of COBOL and a skill in writing programs are the single most important talents to those seeking an entry-level position in commercial processing.

COBOL is *not* the easiest language to learn. However, if it were easy, there would be no reason for a company to want to pay you handsomely for your programming talents and skills. Although you may find yourself frustrated at times, perseverance generally pays off in the long run. Of course, you will make mistakes. Even the "expert" programmer makes them, but what separates the "expert" from the "also rans" is that the expert doesn't usually make the same mistake twice. Thus, you should try to learn something from each mistake. Next, you should allow yourself plenty of time to complete each assignment. Many students find it difficult to complete assignments when they wait until the last minute. While you might be able to construct a solution to a problem on a short-term basis, you will frequently find that there is "one more error" to fix. So, allow yourself time to fix that "one more error." Finally, you should plan what you do. Not only should you plan the time you spend working on a solution to an assignment, but you should also plan the solution as well! Unless you are already an "expert" programmer, this "up front" time is usually well worth the effort and frequently reduces the amount of time spent coding and correcting errors.

We encourage you not only to learn COBOL, but to learn it well. Not only will you find your efforts immediately rewarding, but you will find that it pays off in terms of a successful career in data processing as well. We wish you success in this endeavor and good luck with your future.

J. Wayne Spence

John C. Windsor

Acknowledgments

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