WITH SOFTWARE LABORATORIES

COMPUTERS

THE USER PERSPECTIVE

Third Edition

HUTCHINSON / SAWYER

WITH SOFTWARE LABORATORIES

COMPUTERS

THE USER PERSPECTIVE

THIRD EDITION

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Dedicated to B.K.W. and
to the memory of Peter Laurence Schmidt
and Henry Jacques Schmidt. — S.C.S.

For Mary and Bob Henderson. — S.E.H.

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WITH SOFTWARE LABORATORIES

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SUPPLEMENTS

FOR THE STUDENT

Laboratory Manual (software laboratories version only)

FOR THE INSTRUCTOR

Instructor's Manual with Transparency Masters and Study Guide Disk
Color Transparencies
Lecture Guide
Test Bank
Computest

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PREFACE

WHY WE WROTE THIS BOOK: THE NEEDS OF THE USERS

Computers: The User Perspective, third edition, is oriented toward future computer *users*, not future computer specialists. Users — also called *end-users* — treat the computer as a tool for working with reports, spreadsheets, databases, and the like. They are not the specialists who will write programs for computers or who will design computer systems.

Too many introductory texts, we believe, try to please both users and specialists and, as a result, fail both. They don't provide enough technical detail for the specialist, but they offer too much detail and not enough practical, business-related information for the user.

WHY WE BELIEVE YOU SHOULD CONSIDER THIS BOOK

We believe that our book offers many of the features desired by today's instructors of the introductory course. We wrote our book to provide instructors and students with:

A User Orientation Our book is directly relevant to the user. It prepares students to use computers in business and to communicate effectively with computer specialists, such as programmers and systems designers. Everything in this book — every topic, illustration, case, and so on — is geared to the user, providing what he or she needs to know to use a computer in a business or a professional career. For example, in Chapter 10, "Systems Development Life Cycle," we explain the phases of the cycle so that students can see where they'll be involved in the process as users and thus be better able to communicate with analysts and programmers to get their needs met.

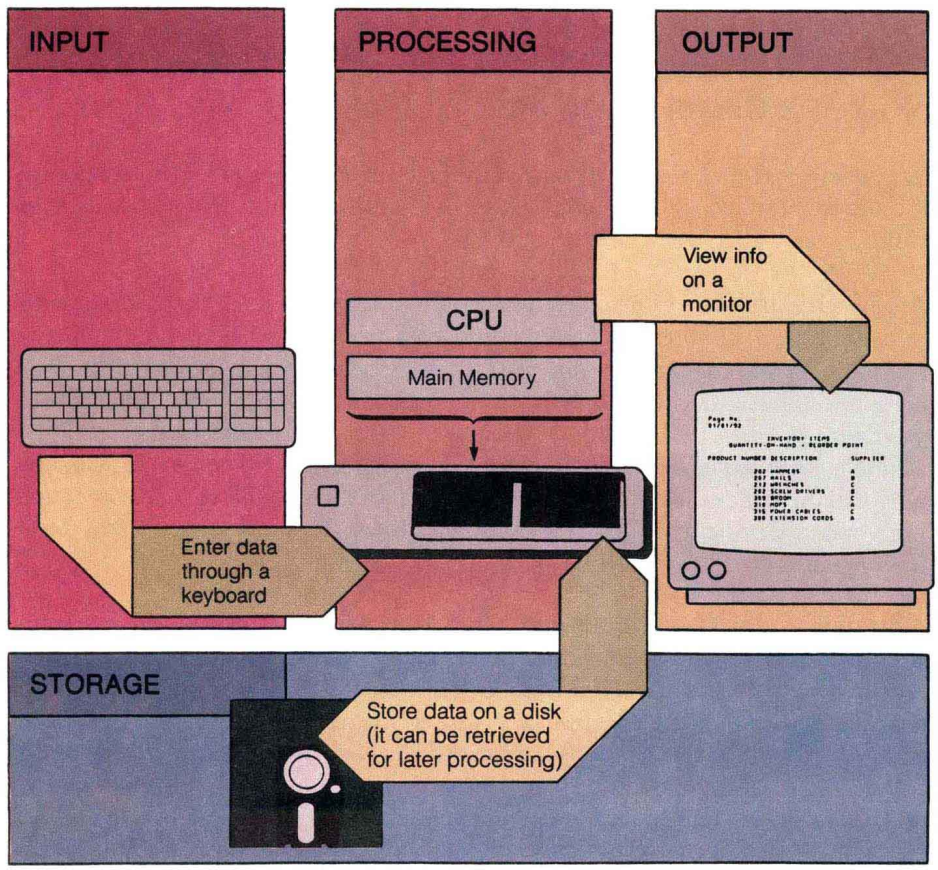
A Straightforward Look and Approach We conducted market research to learn what instructors really want from an introductory book. We learned that many instructors have become disgruntled with the overdone, confusing look and style of typical introductory texts. The instructors are concerned about the numerous boxed features, margin notes, cartoons, crossword puzzles, and the haphazard use of colors. We've taken these concerns to heart and provided solid, meaningful, and practical coverage that is not obscured by margin notes, boxed features, and other elements that compete for students' attention.

Also, we use color *meaningfully* to enhance content, not overpower it. We use four specific colors to indicate input, storage, processing, and output. As Figure 1.3 shows, *red* is used for input, *blue/green* for storage, *rust* for processing, and *gold* for output.

Flexibility Our market research has shown that some instructors teach only concepts in this course; others offer exposure to software packages; still others want students to learn packages plus some BASIC programming. In an attempt to keep up-to-date and meet employers' needs, instructors end up frequently changing books.

Thus, we've designed our book to allow you to teach the course the way you want. The first four parts of our book cover fundamentals: introduction, hardware, software, and systems concepts. Part V of the textbook with software laboratories is a "Microcomputer Laboratory." It contains five modules that cover microcomputer operating systems, word processing, spreadsheets, database management, and graphics. The "Introduction to the Modules" gives students detailed information about using a microcomputer keyboard. Each module concludes with a tutorial, "In the Lab," which introduces the student to a popular commercial software package — DOS, WordPerfect, Lotus 1-2-3, and dBASE IV. (dBASE III Plus is offered in

FIGURE 1.3



the Instructor's Manual.) Because each module is self-contained, you can choose the applications you want to cover and teach them in the order you like.

Part V of the nonmodular (concepts) version of the text contains the same introduction as the modular version, with detailed information about using a microcomputer keyboard; however, instead of hands-on tutorials, it offers detailed generic information about the functions of word processing, desktop publishing, database management, spreadsheet, and graphics software packages.

A new appendix provides the student with information about purchasing and maintaining a microcomputer system, and the appendix on BASIC has been updated. This appendix is included to allow users to take that extra step—to try some programming—and thus learn to communicate better with programmers.

A Microcomputer Orientation This book covers all types of computers—supercomputers, mainframes, minicomputers, and microcomputers. When the topic lends itself, particular focus is given to microcomputers. For examples, see the following sections:

Chapter 4	"Direct Access Storage for Microcomputers," pp. 140–152
Chapter 5	"Main Memory (RAM) for Microcomputers," pp. 176–178.
Chapter 7	"Additional Systems Software Information for Microcomputer Users," pp. 282–286.
Sporting Life, Episode 3	"What Are the Guidelines for Buying a Microcomputer?" pp. 386–390.

Microcomputer use is also the theme of Part V. For instructors who prefer a text that focuses *exclusively* on microcomputers, we have prepared the first edition of *Microcomputers: The User Perspective*.

A Continuing Business Case—"Sporting Life" Sporting Life is the name of the sporting goods store featured in our ongoing case. The four episodes are intended to be thought provoking rather than hands-on exercises. Students at this stage need real-life examples to put the concepts they've learned into perspective, but they don't yet have the background to, for example, actually choose the hardware and the software for a company. By putting themselves in the shoes of Sporting Life's owner, they gain insight into the trials and tribulations of computerizing a business.

An Interesting Writing Style Reviewers and users of this book have consistently praised our writing style. Our primary goal is to reach students—to make all the explanations as clear, relevant, and interesting as possible.

Pedagogy We've carefully developed our learning aids to maximize students' comprehension:

- *The User Perspective* opens each chapter, explaining why the user needs to know the material in that chapter.
- *History* is covered as it naturally arises in the discussion of each topic, making it more immediately relevant than if it were isolated within a separate chapter. Also, history is covered in only enough detail to provide a context for the

topic under discussion — the level of historical detail does not overwhelm the currency of the topic.

- *Great Expectations* sections briefly discuss what the future may hold for the areas covered in each chapter from Chapter 3 through Chapter 12.
- *Computers and Careers* boxes — a new feature — discuss the uses of computers in many different professions and businesses, from casting actors in films to running a restaurant or caring for zoo animals. This feature appears in Chapters 3 through 12.
- *Summary* sections that students can use for review conclude each chapter.
- *Key Terms* sections list all the important terms covered in the chapter and the number of the page where each term is defined. All key terms are also listed and defined in the glossary in the back of the book.
- *Exercises* — matching, multiple choice, short answer, and projects — test students' comprehension and encourage them to learn more about computers on their own.

What's New in This Edition

In addition to the career boxes, the third edition includes many additions and changes. First, at the request of users and reviewers of the second edition, we have prepared *two* versions of the third edition. The *modular version* (with software laboratories) contains the hands-on "In the Lab" tutorials in the modules in Part V, with fairly detailed sections on generic software functions in Chapter 7. The *nonmodular (concepts) version* does not include hands-on tutorials; instead, in this version, Part V consists of two new chapters, Chapters 13 and 14, which provide detailed coverage of the generic functions of commonly used software packages — word processing, database management, spreadsheet, desktop publishing, and graphics. Correspondingly, Chapter 7 in the nonmodular (concepts) version of the text includes less detailed coverage of software package functions than does Chapter 7 in the modular version. The appendix on buying and maintaining a microcomputer system — including how to install software — appears after Chapter 7 in the nonmodular version and at the back of the book in the modular version.

Second, because the topic of communications has become so important, the chapter on connectivity is now Chapter 9 instead of Chapter 12. Also, the database chapter now precedes the MIS chapter, so Part IV now consists of systems design and development (Chapter 10), database (Chapter 11), and management information systems (Chapter 12).

Of course, all hardware and software coverage has been updated, and more material has been added on the topic of the ethics of computer use. (The Instructor's Manual also includes a special expanded section on workplace issues, security, and ethics that can be used as the topic of an entire class session or copied and distributed to the students to read on their own.) The coverage of software utilities, public information services, and fax has been expanded, and new material on ISDN, hypertext, and multimedia has been added. Database terminology has been updated, and new trends in information management are discussed.

SUPPLEMENTS

Our market research showed that it's not important how *many* supplements a book has; what's important is what they are, how useful they are, and whether they're of high quality. We offer a number of supplements that we believe you'll find especially beneficial. You'll also find them to be of high quality; to ensure that they're truly useful and accurate, we've had them reviewed by instructors teaching this course.

INSTRUCTOR'S MANUAL WITH TRANSPARENCY MASTERS

This supplement contains:

- Student profile sheet.
- Course planning guidelines.
- Chapter/module outlines.
- Teaching tips.
- Suggestions for using the transparency masters and full-color overhead transparencies.
- Suggestions for using the Lab Manual and the Study Guide.
- 73 transparency masters.

COLOR TRANSPARENCIES

Seventy-five full-color transparencies of key illustrations and tables are available to qualified adopters.

TEST BANK

For each chapter/module, this supplement contains:

- True/false, multiple choice, and fill-in-the-blank questions, graded in difficulty and tied to the preview objectives that begin each chapter of text.
- Two forms of a reading quiz to test students' comprehension of the material.
- Sample final exam of the entire text.
- All answers.

COMPUTEST

This computer-based test bank is available to qualified adopters.

LABORATORY MANUAL (software laboratories version only)

This manual includes additional software lessons that go beyond the "In the Lab" sections in the modular version of the text. These lessons center on the Sporting Life sporting goods store presented in the running case episodes of the text.

STUDY GUIDE

This supplement, stored on disk, is included with the Instructor's Manual and contains, for each chapter and module:

An outline.

A summary of why coverage is important to the user.

Study tips.

Self-test questions (fill-in-the-blank, true/false, matching, and multiple choice) with answers.

LECTURE GUIDE

This guide outlines every chapter of the text and provides synopses of all main sections. It also provides guidelines for using the color transparencies and the transparency masters.

QUALITY

We are pleased to publish the third edition of this book with Irwin. Their developmental model helped ensure that we have published a book to meet your needs.

ACQUISITION AND DEVELOPMENTAL EDITORS

Our acquisition and developmental editors served in an invaluable on-line, quality control capacity to guarantee that the Hutchinson-Sawyer texts approach, as closely as possible, the ideal textbooks of potential adopters. These editors worked on a weekly, and often daily, basis with us. Few, if any, publishers offer this high degree of editorial assistance and attention to detail.

REVISION PROCESS

The first edition of the text was created as the result of extensive market research, a word-by-word developmental edit of three drafts of the manuscript, reviews by 58 instructors and 13 computer specialists, and class testing.

The second edition was developed with the assistance of diary reviewers. These instructors submitted detailed chapter comments as they taught from the book. In addition, we solicited comments from other instructors. To ensure quality and

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accuracy, specialists were enlisted to review in the seven areas of programming, systems, database, management information systems, communications, trends, and BASIC. Once the first draft of the second edition was completed, we again had the manuscript reviewed for currency, accuracy, organization, level of detail, user orientation, microcomputer coverage, writing style, and pedagogical effectiveness.

Both versions of the third edition — modular and nonmodular — were developed on the basis of diary reviewers' comments as well as reviews from instructors who have not used the book.

PHOTO AND ILLUSTRATION RESEARCH

Professional photo researchers, illustrators, and photographers have worked closely with us and our editors to craft the illustration program for the third edition. This art program, highly praised by first and second edition adopters and reviewers, continues to directly reinforce the text and remains a visually distinctive feature of our book.

DEVELOPMENT OF THE SUPPLEMENTS PACKAGE

As with the text itself, the supplements package was thoroughly reviewed. The Laboratory Manual, Study Guide, Instructor's Manual, and overhead transparencies were prepared by Sarah Hutchinson. The test bank was prepared by Patricia L. Wermers of North Shore Community College. Much attention has been given to the development of these supplements to provide features that have been requested by the marketplace.

ACKNOWLEDGMENTS

We wish to thank the reviewers, who contributed greatly to the content, organization, and focus of this book and its supplements.

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The complexities and difficulties of preparing and producing a textbook like this one can be overwhelming at times — and insurmountable without the help of good people and organizations such as those whose names are listed on the copyright page. These people — highly talented professionals — have all helped establish this book's high level of quality, and we are very grateful for their help. Special appreciation goes to Larry Alexander and Rebecca Johnson for editorial assistance above and beyond the call of duty and excellent reasons to visit Chicago, Boston, and Maine, to Laurel Anderson for her diligent photo research, and to Gladys True for her excellent work and for surviving the production schedules and harassments of *two* editions!

Finally, we need to know: Was this book truly *useful* to students? We'd like to hear from you about any misstatements we might correct or improvements we could make. Write to us in care of our publisher, Richard D. Irwin.

Sarah E. Hutchinson
Stacey C. Sawyer

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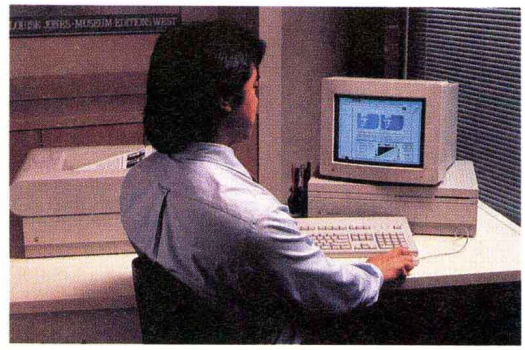

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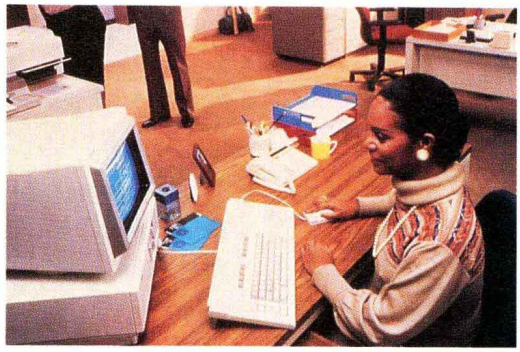

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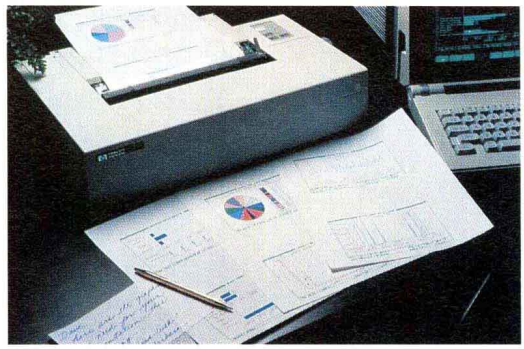

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