

COMPUTING

HARDWARE

SOFTWARE

SYSTEMS



TUTORIAL

Stern & Stern Computing

With End-User Applications
and BASIC

★ DOS ★ WordPerfect®
★ Lotus 1-2-3™ ★ dBASE™

Computing



**With End-User
Applications
and BASIC**

NANCY STERN

Hofstra University

ROBERT A. STERN

Nassau Community College



JOHN WILEY AND SONS

New York Chichester Brisbane Toronto Singapore

To Melanie and Lori

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Sponsoring Editor: Joe Dougherty, Wiley

Managing Editors: Susan Nelle, BMR and Raleigh Wilson, BMR

Development Coordination: Elaine Brett

Production Coordination: Jane E. Granoff

Cover and Text Design: Paul Quin

Illustration: Paul Quin and Winston Sin

Copy Edit: Kay Nelson and Susan Defosset

Photo Research: Monica Suder

Page Makeup: Curtis Philips

Index: Susan Coerr

How This Book Differs from the Titles Currently on the Market

Dramatic changes in information processing strategies and technologies have resulted in many different approaches to teaching introductory courses. Where there once was general consensus, there is now fragmentation.

Although no book can be all things to all people, we believe we have developed an approach that is not only unique, but may also help to bring back some of the consensus to the introductory computing market. The major features of this book are:

- ◆ An end-user orientation
- ◆ Tutorials on the major productivity tools
- ◆ Micro-minicomputer-mainframe balance
- ◆ A focus on computing and applications, not hardware
- ◆ An emphasis on database management systems
- ◆ A proven pedagogic approach
- ◆ Functional use of color

An End-User Orientation

The main objective is to teach computing concepts to people who will be end-users, those that need some background in *why* computers are such an integral part of organizations today as well as *how* they can use them. Our approach is to strike a proper balance between the *why* and the *how* of computer use.

We emphasize that there are three levels of end-user involvement in most organizations, depending on the individual's role and level of expertise. On the lowest level, some end-users simply input or edit data; we provide tutorials explaining how this is done using the major productivity tools. At the next level are the computer users and professionals who design applications, providing the formatting that enables data to be entered and accessed efficiently and effectively. At the third level are those managers who use information made available by the applications and their designers for decision-making purposes, and who may not have any expertise in the application software itself.

In order to introduce students to hands-on computer use as early in the course as possible, an overview of the three major productivity tools is provided in Chapter 3. This is an ideal introduction to the tutorials designed to be used in the laboratory.

Tutorials for the Major Productivity Tools

Most end users need to be proficient in the three basic productivity tools—word processing, spreadsheets, and database management systems. Because few introductory texts provide hands-on tutorials, many schools now require two books for their first computer course—one on concepts and one on how to use the three basic packages.

Our book not only combines tutorials with basic concepts, it provides a significant amount of information on how and why these tools are effectively used in organizations. A data disk that is referenced in the tutorials and that can be used for hands-on work and for homework assignments is available from Wiley.

Micro-Minicomputer-Mainframe Balance

Most books are heavily oriented toward either mainframes or microcomputers. We provide a proper balance among the levels of computing. We use the more familiar, easy-to-grasp micro concepts to introduce students to the other levels of computing power. We make it clear that microcomputers, minicomputers, mainframes, and supercomputers are conceptually similar, differing primarily in speed, cost, and capacity.

Moreover, we focus on the ways in which micros, minis, and mainframes can be linked or networked to provide capabilities that far surpass those of any single level of computing and make the type of computing power almost transparent to the user.

A Focus on Computing and Applications, Not Hardware

Application-oriented processing is the focus here; hardware, or devices, is highlighted mainly to illustrate how it can accomplish the tasks at hand. We emphasize throughout that software drives the hardware. That is, the approach to applications design is to first decide what needs to be done, then choose the software most appropriate to accomplish those tasks, and only then focus on the hardware that can be used with the selected software. Several chapters cover some aspect of applications design: Chapter 9 on Software Development Languages and Tools introduces students to the steps used to create a program; Chapter 10 considers similar procedures used at the Systems Analysis level; Chapter 11 on Database Management Systems illustrates systems design at the level of designing databases; and Chapter 12 on Management Information Systems deals with systems design at the highest managerial level.

An Emphasis on Database Management Systems

Database management systems are likely to be the most important decision-making tool for managers. Accordingly, we provide consistent and focused coverage of DBMSs throughout the text as well as in selected chapters. Students are introduced to database concepts early in the book—Chapter 3 is an overview of the basic productivity tools: word processing, spreadsheets, and database management systems. Basic database terms and data hierarchy concepts are introduced in Chapter 6 on Storage, and Chapter 11 on Database Management Systems reinforces this earlier information and

provides in-depth coverage of DBMSs, using illustrations from dBASE IV. There is full tutorial coverage of dBASE IV as well.

Proven Pedagogic Approach

We have retained our well-known pedagogic approach, which has gained a reputation for reinforcing computing concepts and increasing student comprehension. The easy-to-read pedagogical style is augmented by:

- ◆ Chapter opening outlines
- ◆ Chapter objectives
- ◆ Self-quizzes with solutions within each chapter
- ◆ "In a Nutshell" boxes that provide brief summaries of terminology or concepts
- ◆ "Looking Ahead" boxes that provide a glimpse of future applications
- ◆ Chapter summaries
- ◆ Chapter quizzes with solutions
- ◆ Review questions
- ◆ Key terms
- ◆ Problem-solving applications

Functional Use of Color

Color is used in this book as both a design tool and as a study aid. Each module has its own unique color scheme, and color is used on headings to emphasize each chapter's structure.

Within each module's illustration program, a particular color is used to identify each of the following elements in information systems: input, processing, output, hardware, operating systems, and users; and three different colors are used to identify the three levels of users.

Color tabs along the top of the book identify the modules, and colored tabs along the side of the book identifies the tutorials.

How This Book Is Organized

Computing with End-User Applications and BASIC is actually three books in one. The first book contains four modules: Computing, Hardware, Software, and Systems. These four modules cover the principles of computing and information processing. The second book contains six step-by-step tutorials on DOS 3.3, WordPerfect 5.0, Lotus 1-2-3, Lotus 1-2-3 graphics, Lotus 1-2-3 macros, and dBASE IV. The third book is a full appendix on "Structured BASIC Programming for the PC."

Each chapter was carefully crafted to provide an easy-to-read narrative reinforced with numerous photographs and illustrations. Technological concepts and terms are consistently illustrated with familiar, everyday examples to make it easy for students to learn and retain the information.

Each chapter has the following organization: a chapter outline to highlight the order of concepts, a list of behaviorally stated chapter objectives,

text that has a clear structure emphasized with headings in color, self-quizzes at appropriate intervals, and a chapter summary. This is followed by end-of-chapter pedagogy: a list of key terms, a chapter test, a series of review questions keyed to the chapter objectives, and problem-solving applications that require students to use the three productivity tools.

Each tutorial begins with the hardware and software requirements for that software package, an outline of the keystrokes and concepts that will be covered, and a brief introduction to the package. The emphasis is not only on *how* to use these tools, but *why* they are so effective for decision making. The tutorial is divided into several lessons, each designed to fit one laboratory session. Each lesson ends with exercises that the student can use to reinforce what was learned in that lab session.

The main body of the tutorial consists of hands-on, step-by-step instructions designed to help the student master specific procedures. Color is used for specifying the procedures covered, as well as for keystrokes that the student will type. There are numerous screens illustrating what happens at each step, so that students know what their screens should look like.

For each productivity tool, templates and command summaries are provided, as well as brief highlights of how versions of each package differ.

Supplements

Student Activities Workbook (0-471-51930-8)

This student supplement features industry and software case studies and the all new visual course guide. The former provide students with engaging hands-on software exercises and real-world problems, while the latter presents scaled down, annotated transparencies which students can further annotate for use as a study and learning aid. The Student Activities Workbook also includes such traditional student review material as detailed study tips and chapter-by-chapter learning guides which feature chapter overviews, outlines, key terms (with definitions and text page references), and self-tests (20 short answer, 10 matching, and 40 multiple choice questions) complete with solutions.

Getting Started with VP-Planner Plus (0-471-51920-0)

Getting Started with dBASE III Plus (0-471-51921-9)

These brief, hands-on tutorials emulate the text tutorials in their step-by-step coverage of VP-Planner and dBASE III Plus commands and functions. Each of the two manuals comes complete with an educational version of the appropriate software and can be bundled with either of the Stern & Stern texts for little or no extra cost to students.

Instructor's Manual (0-471-51157-9)

This carefully crafted instruction ancillary includes the following chapter-by-chapter elements:

- ◆ chapter overview
- ◆ chapter objectives

- ◆ chapter outline
- ◆ chapter highlights/lecture notes (annotated with transparency master references)
- ◆ key chapter terms defined (with text page references)
- ◆ solutions to all end-of-chapter exercises (enlarged so that these can be used as transparency masters)
- ◆ classroom discussion topics
- ◆ individual and group assignments
- ◆ recommended long-term projects
- ◆ Additional hands-on exercises to accompany text tutorials

Other key Instructor's Manual elements include sections containing sample course syllabi, teaching tips, and suggestions for the use of the Supplementary Video Program and Student Activities Workbook. The Instructor's Manual is also available on disk.

Test Bank (0-471-51156-0)

This instructor ancillary features approximately 2,000 true/false and multiple choice questions. References to text pages on which question topics are discussed (i.e. answered) are included, and all questions are graded for level of difficulty. The Text Bank is also available on disk.

Transparency Master (0-471-51158-7)

Over 200 transparency masters featuring both art and text are included in this instructor ancillary. Key figures/topics from the text and Instructor's Manual are included, as well as all new material designed to supplement the lecture process.

Selected Transparency Acetates (0-471-51931-6)

Approximately 40 of the most critical transparency masters are available in acetate form and may be used with the Student Activities Workbook to facilitate more active student involvement in class lectures.

Supplementary Video Program

A variety of stimulating videos—such as thorough introductions to the personal computer and individual application—will be made available to adopters of either of the Stern & Stern texts.

Data Disk

Available for use with tutorials included in the Stern & Stern texts, this data disk contains WordPerfect, Lotus, dBASE, and ASCII files and may be duplicated for use by students. Note: This data disk must be used when working with the tutorials.

How to Obtain Supplements

To obtain any of the supplements described above, contact your local Wiley representative or write to the following address:

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Reviewers

Doug Bock
Southern Illinois University at Edwardsville

Joyce Capen
Central Michigan University

Marilyn Meyer
Fresno City College

Judith Ernst
South Florida Community College

Prof. Bob Young
Los Angeles City College

Sandra Stalker
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Ron Thorn
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Clatsop Community College

Katherine Sundahl
University of Missouri, Columbia

Lindsay Graves
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Liang Wee
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Bangren Tsay
California State University, Chico

Dr. Ruth Malmstrom
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Samual Gale
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Jim Payne
University of Tulsa

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Pat Boyd
Umpqua Community College

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David Hawkins
Georgia College

Dr. Barbara Mason
Wichita State University

Floyd Johnson
Kearney State College

Virgil Brewer
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Jeanne Ross
University of Lowell

Ron Thorn
Northeast Louisiana University

Donald Labudde
Northeastern Illinois University

Robert Otto
Western Kentucky University

Vic Broquard
Illinois Central College

Vivek Shah
Southwest Texas State University

Ruth Robbins
University of Houston, Downtown

James Kelley
University of the Virgin Islands

Bonnie Bailey
Moorehead State University

Paul Chase
Becker Junior College

Judith Ernst
South Florida Community College

Linda Lujan
Arapahoe Community College

Marilyn Meyer
Fresno City College

Judy Read Smith
Portland Community College

Raymond Marves
Florida Community College at Jacksonville

Richard Manthei
Joliet Junior College

Lindsay Graves
Pima Community College

Karen Watterson
Shoreline Community College

Raymond Vogel
Schenectady County Community College

Sandra Stalker
North Shore Community College

Marilyn Popyk
Henry Ford Community College

Dr. Ruth Malmstrom
Raritan Valley Community College

About the Authors

Dr. Nancy Stern is currently a Professor in the Business Computer Information Systems Department at Hofstra University in Hempstead, New York. She holds an A.B. degree from Barnard College, an M.S. from New York University, and a Ph.D. from the State University of New York at Stony Brook. She is the coauthor of several other information processing texts including *Structured COBOL Programming*, 4th ed., *370/360 Assembler Language Programming*, *RPPII and RPG III Programming*, *Microsoft QuickBASIC*, and *TurboBASIC*. Dr. Stern is advisory editor of the Wiley Series on Information Processing Systems, as well. One of her major interests is the history of computing; she has written numerous articles and books on computing history and is on the Editorial Board of the *Annals of the History of Computing*.

Robert A. Stern is an attorney and a Professor of Mathematics and Computer Processing at Nassau Community College in Garden City, New York. He holds a B.S. in Industrial Engineering and a B.S. in Business Administration, both from Lehigh University, an M.S. in Operations Research from New York University, and a J.D. from St. John's University School of Law. He is the coauthor of the texts mentioned above. Mr. Stern has had diverse business experience as a systems analyst, an industrial engineer, and an attorney.

Brief Contents

PART I

Page 1

END-USER COMPUTING

- Chapter 1 Computing Today 3
 Chapter 2 Computing in Business 27
 Chapter 3 Productivity Tools: Word Processing, Spreadsheets,
 and Database Management 49

PART II

Page 77

HARDWARE

- Chapter 4 Processing Data 79
 Chapter 5 Input and Output 103
 Chapter 6 Storage and Files 133
 Chapter 7 Using Data Communications and Networks 155

PART III

Page 183

SOFTWARE

- Chapter 8 System Software and Specialized Application Packages 185
 Chapter 9 Software Development Languages and Tools 215

PART IV

Page 249

SYSTEMS

- Chapter 10 Systems Analysis and Design 251
 Chapter 11 Database Management Systems 285
 Chapter 12 Management Information Systems 319
 Chapter 13 Social Issues and Technological Trends 347

PART V

Page 373

TUTORIALS

- Using DOS DOS-1
 Using WordPerfect WP-1
 Using Lotus 1-2-3 SS-1
 Developing Graphs with Lotus 1-2-3 GR-1
 Creating and Using Macros In Lotus 1-2-3 MAC-1
 Using dBASE IV DB-1

APPENDICES

- A Glossary / B Command Summaries / C Lotus 1-2-3 New Features Summary
 D Structured BASIC Programming for the PC / E BASIC Command Summary

Preface xvii

Part I Page 1

END-USER COMPUTING

Chapter 1 Page 3

The Computer System and How It Processes Data 5

- Input Devices for Reading Incoming Data 6
- The Central Processing Unit (CPU) 7
- Output Devices for Producing Outgoing Information 8
- Auxiliary Storage for Storing Programs and Data 8

The Stored-Program Concept 8

- Operating System Software 9
- Application Programs for End-Users 10

Designing Information Systems 11

- The Systems Analyst's Role 12
- The User's Role 12

From Micros to Mainframes 13

- Microcomputer Hardware 13
- Micros Come in Different Forms 17
- The Intermediate Range: Minicomputers 18
- Mainframes and Mainframe Families 20
- Supercomputers for Number Crunching 20

Using Computers in Organizations 21

- The Benefits of Using Computer Systems 21
- Practical Steps for Ensuring a System's Usefulness 22

Chapter 2 Page 27

Productivity Tools 29

- Word Processing 29
- Spreadsheet and Graphic Analysis Programs 30
- Accessing Databases 31
- Communicating via Electronic Mail 32

How Business Computer Systems Are Organized 33

- Traditional Business Computer Systems 35
- Top-Down Management Information Systems (MIS) 36

Computing Today

**Computing in
Business**

Expert Systems 38

How Business Computer Systems Are Designed 38

Types of Computer Configurations 39

Centralized Systems: The Traditional Use for Mainframes 40

Decentralized Systems: Using Micros and Minis 41

Integrating Micros, Minis, and Mainframes in a Distributed Environment 41

The Organization of Computing Departments 43

Types of Computer Specialists 43

Common Organizational Structures 45

Chapter 3 Page 49

Using Productivity Tools 51

Microcomputer Basics 51

The Keyboard 51

The Screen and the Cursor 52

Accessing Software 53

Common Features of Application Packages 54

Word Processing Packages 56

Level 1: Keyboarding 57

Level 2: Editing 57

Level 3: Formatting 60

Level 4: The Manager's Use of Word Processing 62

Spreadsheet Packages 63

Level 1: Keyboarding 64

Level 2: Editing 65

Level 3: Formatting 66

Level 4: The Manager's Use of Spreadsheets 68

Database Management Systems 69

Designing the Database 70

Level 1: Keyboarding 71

Level 2: Editing 71

Level 3: Formatting 71

Level 4: The Manager's Use of Databases 72

Integrated Packages 73

Other Productivity Tools 74

Productivity Tools: Word Processing, Spreadsheets, and Database Management

HARDWARE

The Components of the CPU 81

- The Control Unit 81
- The Arithmetic-Logic Unit (ALU) 82
- Primary Storage 82
- How Data Flows Through the CPU 83

How Data Is Stored 84

- Secondary Storage 84
- Integrated Circuits and Silicon Chips 84
- RAM 86
- ROM 86
- Other Types of Memory 87

How Data Is Represented 90

- Numbering Systems 90
- Bits and Bytes 91
- Coding Systems 91
- Error-Checking with the Parity Bit 93

Methods of Processing Data 94

- Batch Processing 94
- Interactive Processing 95

Evaluating the Processing Capacity of Computer Systems 96

- Chip Technologies 97
- Clock Speed 97
- Processing Speed 98
- Word Size 98
- Bus Technology 98
- Parallel Processing 98

What the Future Holds 99

Inputting Data 105

- Keyboards and Other Human Input Devices 107
- Devices for Reading Machine Code 112
- Detecting Data Entry Errors 115

Outputting Information 117

- Types of Output Information 118

Processing Data

Input and Output

- Screen Displays 120
- Printers 123
- Other Forms of Output 127

Chapter 6 Page 133

How Data Is Organized and Retrieved 135

- The Hierarchy of Data 135
- Types of Data Fields 136

How Files Are Organized 137

- Sequential Files 137
- Indexed Files 137
- Direct-Access Files 138

Primary and Secondary Storage 138

A Brief History of Secondary Storage 139

Storage on Disks 140

- How Microcomputer Disks Store Data 140
- How Disk Drives Access Data 143
- Types of Disk Drives for Microcomputers 143
- Disk Drives for Minicomputers and Mainframes 145

Storing Data on Tape 148

- How Data Is Represented on Tape 149
- How Tape Drives Read and Write Tape 149

Backup Procedures for Disks and Tape 150

Maintaining Disks and Tapes 151

Chapter 7 Page 155

Hardware for Data Communications 157

Data Communications Applications 158

- Distributed Computer Systems 158
- Time-Sharing 162
- Electronic Mail 163
- Subscriber Services 164
- Banking Services 166
- Telecommuting 167

Linking a Data Communications System 167

- Hardwired Links 168
- Using a Telephone for Data Communications 169
- Popular Communications Software 170
- Other Communications Links 171
- Transmitting Data 173

Storage and Files

Using Data Communications and Networks

Data Communications Networks 175

Common Network Configurations 176

Building a Complex Network 177

Three Kinds of Network Software 179

Part III Page 183

SOFTWARE

Chapter 8 Page 185

Common Operating System Features 187

Multiprogramming and Multitasking 188

Multiprocessing 189

Virtual Memory 189

"Virtual Machine" Concept 190

Microcomputer Operating Systems 190

PC-DOS and MS-DOS 190

OS/2 191

Macintosh Operating System 192

UNIX—An Operating System for All Levels 193

IBM Mainframe Operating Systems 195

DOS/VS and DOS/VSE 196

MVS 196

VM 196

Specialized Application Packages 197

Desktop Publishing 197

Graphics 201

Accounting Software 205

Project Management Software 206

Desktop Organizers and Personal Information Managers 208

Statistical Packages 208

Communications Software 209

Vertical Packages 210

Purchasing Applications Software 210

Chapter 9 Page 215

Packaged Software vs. Customized Software 217

The Software Development Cycle 219

Developing the Program Specifications 219

Designing a Solution 221

Software Development Languages and Tools