COMPUTING HARDWARE SOFTWARE SYSTEMS TUTORIAL

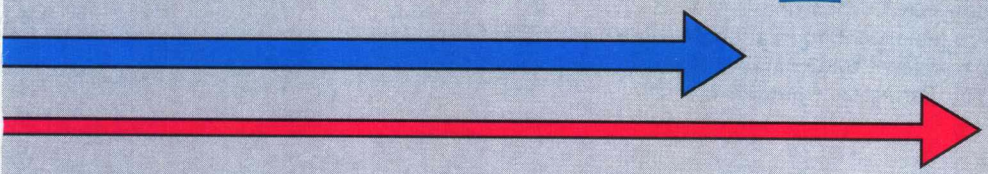
Stern & Stern

# Computing

## With End-User Applications and BASIC

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

# Computing



## With End-User Applications and BASIC

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## To Melanie and Lori

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# 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:

**Stern End User**
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### Author Access

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To a team committed to excellence and quality.

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The team included editors, managers, and marketing personnel, who participated in an initial brainstorming session; the Wiley sales representatives, who contributed their insight and marketing knowledge about the changing introductory course; the more than 200 instructors who responded to our survey, and who were hand-picked for their expertise and experience with information processing and with teaching tutorials in the lab environment; more than 30 reviewers, who painstakingly read, annotated, and reviewed each chapter and tutorial. We wish to acknowledge and thank writers Ric Williams, Ken Knecht, Jim Schuman, Greg Harvey, and Richard Pitter, who helped to develop and write this book.

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COMPUTING HARDWARE SOFTWARE SYSTEMS TUTORIALS

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