

COMPUTERS & INFORMATION PROCESSING

Silver & Silver

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To the Instructor

SOME KEY REASONS TO ADOPT THIS BOOK

Computers & Information Processing is designed for the introduction to computers course that is offered in almost every college in the country. It is a one-semester course, open to majors and nonmajors alike, without prerequisites. Students with an enormous diversity of backgrounds and from all disciplines—business, liberal arts, science, you name it—enroll in the course.

How do you go about selecting the right text for this course, and for the students who will be taking it? What do you look for? Here are just some of the significant and distinctive features of *Computers & Information Processing* that we believe will make it the clear first choice for your introductory students. The sound and practical reasons why you should adopt it include:

1. *State of the art topical coverage.* The material presented is current and represents state of the art information. Included are discussions of robotics, artificial intelligence, expert computers, decision support systems, local area networks, voice synthesis, and voice recognition output. These are only a few of the topics that will help your students stay on top of this rapidly changing discipline.
2. *Extensive microcomputer coverage.* This book presents two complete chapters devoted exclusively to microcomputer hardware and software. They explain to students the fundamentals of word processing, data base, spread sheet, graphics, and communications software. Microcomputers are also integrated throughout the text. In spite of the microcomputer's significance, many other texts do not give as much space to this material, and some do not include full chapters on it.
3. *Developed with the comments and suggestions of many instructors.* The original manuscript was thoroughly reviewed by dozens of instructors and written comments from hundreds of others were carefully considered in assembling the material for this book. In addition, focus sessions were held with instructors, and their comments and suggestions were also integrated in the developmental process.
4. *Visual and graphic treatment of subject matter.* All photographs, drawings, and figures have been carefully conceived to complement the

text and are integrated into the text discussions, unlike many other books, where often pictures have been added to serve merely a decorative purpose.

5. *A direct, interesting, and easy-to-understand writing style.* As an instructor, you understand the need for a book that is well written and stands on its own. We have written numerous successful textbooks. When you adopt this book you will find that it answers many of the students' questions. This reduces the need to spend precious classroom time going over material that should be learned by simply reading the text.

6. *Information directly from industry and primary research sources.* Since the facts and figures in this book were acquired from leading data research organizations, all tables and statistics are the most current available. You are thus assured of current and accurate information for the classroom.

7. *A most extensive support package.* Many instructors stressed to us the importance of having the complete support package with the text. We have listened! When you adopt this book, you will find that the support package arrives with the book and contains two language supplements, a computerized test bank, an applications software package, full-color transparencies, and an author-written instructor's manual, as well as a useful study guide for the student in both printed and computer interactive form.

ORGANIZATION OF THE TEXT

Part One introduces the computer age, describes the expanding use of computers and their general characteristics, and covers something of their history.

Part Two discusses computer hardware and the technology behind these electronic marvels. The discussion moves from a survey of fundamental concepts in Chapter 3 to principles of data input, the central processing unit, secondary storage, and output.

Part Three explores the rapidly expanding world of microcomputers. Two complete chapters are devoted to microcomputer hardware and software. These treat some of the latest software now on the market and discuss operating systems in a form that is under-

standable to the average student. The rapidly growing technologies of data communications and information systems are discussed in Part Four, with coverage of distributed data processing networks, data communications principles, data base usage, and management information systems.

Part Five presents a systematic discussion of software and program design. It shows the student how programs are planned and designed. The principles of flowcharting and programming logic are covered, with emphasis on structured programming concepts. Chapter 14 reviews the major programming languages, giving examples and comparative information to help the student assess language applications.

Part Six discusses the automated office and systems analysis and design.

Part Seven speaks directly to the student about careers and job opportunities in the computer industry. In the final chapter a balanced view of major social issues is presented to help the student grasp the changes computers are bringing to society. The topics of artificial intelligence, robotics, voice recognition, voice synthesis, CAD/CAM, and color graphics are explained with liberal illustrations.

Appendix A introduces BASIC language programming. It is included for students who will be exposed to BASIC in a computer laboratory. BASIC language statements are explored with examples and illustrations. The appendix is based on Microsoft BASIC, one of the most prevalent versions of the language. Alternate versions of Appendix A in Pascal and in COBOL are available separately.

Appendix B describes data representation and computer arithmetic for students who wish to acquire a grasp of this material.

An extensive glossary of key terms is included. The glossary defines the terms used throughout this book in an accurate, easy-to-understand manner.

SUPPLEMENTS PACKAGE

A full support package of supplements is available. The items include:

- **STUDY GUIDE.** Each chapter of the *Study Guide* lists the chapter

learning objectives, and restates the chapter summary and key terms sections. Student self-tests include matching questions (key terms and their definitions), 15 multiple-choice questions, 20 true-false questions, and 10 completion questions. Answers are given at the end of each chapter. The *Study Guide* was written by the Silvers.

- **STUDY AID.** *Study-Aid* is a fully interactive computerized version of the *Study Guide*. An order card is inserted at the end of this book.
- **INSTRUCTOR'S KIT.** The Instructor's Resource Manual is a hard-back, three-hole-punched folder that can be customized to include, depending on the needs and preference of the instructor, any or all of the following:
 - **INSTRUCTOR'S MANUAL.** In the *Instructor's Manual*, for each chapter there are learning objectives, a chapter overview, lecture guidelines, answers to the chapter-end text exercises with the questions restated, notes on how to use the boxed feature material as lecture launchers, suggested teaching resources, and a list of key terms with definitions from the text glossary. The *Instructor's Manual* was written by the Silvers.
 - **TEST BANK.** The *Test Bank* consists of upwards of 2,500 objective questions in a printed form. It was prepared by Herbert Bomzer and Frank Shu of Fordham University.
 - **OVERHEAD TRANSPARENCIES.** A package of 72 transparencies, 64 in full-color, contains key line illustrations and tables from the text.
 - **COBOL SUPPLEMENT.** The *COBOL Supplement* supplies the COBOL equivalent of the BASIC appendix in the text for those whose language of choice in this course is COBOL. It was prepared by Roger Lamprey of Valdosta State College.
 - **PASCAL SUPPLEMENT.** The *Pascal Supplement* supplies the Pascal equivalent of the BASIC appendix in the text for those whose language of choice is Pascal. It was prepared by Roger Lamprey of Valdosta State College.
- **MICROTEST.** *Microtest* is Harper & Row's computerized testing system. The questions in the test bank are available on floppy disks for use in an IBM PC, IBM XT, and most IBM compatible comput-

ers, or the Apple II family of computers. The Microtest system allows the instructor to add, delete, or alter questions at will, as desired.

- **APPLICATIONS SOFTWARE.** Developed especially for this text, the applications software consists of a survey of the four major families of applications software: word processing, graphics, spreadsheets, and data base management. It, too, is available in Apple or IBM versions.

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Contents in Brief

To the Instructor	xix
PART ONE INTRODUCTION TO THE COMPUTER AGE	
Chapter 1 Computers: An Introduction	2
Chapter 2 The Evolution of Computers	38
PART TWO COMPUTER HARDWARE	
Chapter 3 Fundamental Computer Concepts	68
Chapter 4 Data Input	94
Chapter 5 The Central Processing Unit: Functions and Components	126
Chapter 6 Secondary Storage Systems	156
Chapter 7 Data Output	186
PART THREE MICROCOMPUTER SYSTEMS	
Chapter 8 Microcomputer Hardware and Applications	210
Chapter 9 Microcomputer Software	240
PART FOUR COMMUNICATIONS AND INFORMATION SYSTEMS	
Chapter 10 Networks and Data Communications	266
Chapter 11 Data Base Management Systems	300
PART FIVE SOFTWARE AND PROGRAM DESIGN	
Chapter 12 Program Planning and Development	330
Chapter 13 Program Design and Logic	358
Chapter 14 Programming Languages	386
PART SIX INFORMATION SYSTEMS IN ACTION	
Chapter 15 Automation and the Integrated Office	420
Chapter 16 Systems Analysis and Design	446
PART SEVEN COMPUTERS AND THE FUTURE	
Chapter 17 Your Career in Computers and Information Processing	474
Chapter 18 The Computer in Society: Issues and Opportunities	498
APPENDIX A An Introduction to BASIC Programming	522
APPENDIX B Data Representation and Computer Arithmetic	564
GLOSSARY	573
INDEX	589

Contents in Detail

TO THE INSTRUCTOR

xix

1

PART ONE INTRODUCTION TO THE COMPUTER AGE

CHAPTER 1 COMPUTERS: AN INTRODUCTION	2
Learning Objectives	2
Chapter Outline	2
Expanded Use of Computers	5
What Is a Computer?	5
Size of Computer Systems	7
Digital and Analog Computers	11
Characteristics of Computers	12
Self-Direction	13
High Speed	14
High Accuracy	16
Reliability	16
Low Cost per Unit of Data Processed	16
What the Computer Can Do	17
Definition of Data Processing	18
Methods of Processing Data	19
The Data Processing Cycle	19
Manual Information System	21
Unit Record Information System	22
Computer Information System	24
How Computers Meet Business Needs	24
<i>Producing a Report Against a Deadline: Past, Present, and Future</i>	25
Time Factor	26
Cost Factor	26
Accuracy Factor	26
Better Control of Data	27
Better Utilization of Resources	28
Improved Service	28
Mechanization	28
How Computers Are Used in Business	28
Sales and Marketing	29
Accounting	29
<i>Personal Computers Must Be Managed</i>	30
Order Point Calculations	31
Word Processing	31
Personnel Management	33
Manufacturing Information Control	33

Banking and Credit	34
Modeling and Planning	34
Design	34
Summary and Key Terms	35
Exercises	36
 CHAPTER 2 THE EVOLUTION OF COMPUTERS	 38
Learning Objectives	38
Chapter Outline	38
The Manual Era	39
Early Hardware	42
Nineteenth-Century Hardware	45
<i>Pioneering People: Charles Babbage and Ada, Countess of Lovelace</i>	48
The Unit Record Era	49
The Electronic Data Processing Era	52
The Stored Program	52
First Generation Computers	55
First Generation Software	56
<i>Pioneering People: William Shockley</i>	57
Second Generation Computers	58
Second Generation Software	58
Third Generation Computers	58
Third Generation Software	59
Fourth Generation Computers	60
Fourth Generation Software	62
<i>Abacus Finds New Popularity as Latest Craze in Japan</i>	63
Summary and Key Terms	63
Exercises	64



PART TWO COMPUTER HARDWARE

 CHAPTER 3 FUNDAMENTAL COMPUTER CONCEPTS	 68
Learning Objectives	68
Chapter Outline	68
Definition of a System	69
The Computer System	70
<i>The Making of an Integrated Circuit Chip</i>	72
Computer Subsystems	74
Input System	74
Central Processing Unit	75
Secondary Storage System	80

Output System	82
Remote Terminals	84
Telecommunications System	85
Classes of Modern Computer Systems	85
<i>How to Turn On a Computer</i>	87
Microcomputers	88
Minicomputers	88
Small Computers	89
Medium Computers	89
Large Computers	90
Summary and Key Terms	91
Exercises	92
 CHAPTER 4 DATA INPUT	 94
Learning Objectives	94
Chapter Outline	94
Data Input Fundamentals	95
Input Modes	97
Transaction-Oriented Processing	97
Batch Processing	98
Data Input Requirements	99
Accuracy	100
<i>Goodbye to QWERTY</i>	101
Cost	102
Speed	102
Online Data Input Devices	102
Dumb Terminals	102
Intelligent Terminals	103
Voice Recognition Devices	104
Touchtone Terminals	105
Mice, Digitizers, and Other Devices	107
Source Data Input	109
Point-of-Sale (POS) Terminals	109
Laser Beam Scanners	110
Optical Sense Readers	111
<i>Putting Data Behind Bars</i>	112
Optical Character Readers	115
Magnetic Ink Character Readers	116
Offline Data Input	118
Key-to-Disk System	118
Key-to-Tape System	118

Key-to-Punched Card	120
Units of Input—From Bit to Data Base	122
Summary and Key Terms	123
Exercises	125
 CHAPTER 5 THE CENTRAL PROCESSING UNIT: FUNCTIONS AND COMPONENTS	126
Learning Objectives	126
Chapter Outline	126
Primary Memory Capacity	129
<i>Pioneering People: Jack S. Kilby</i>	130
Virtual Storage	131
Memory Access Systems	132
Random Access Memory (RAM)	133
Read Only Memory (ROM)	133
Programmable Read Only Memory (PROM)	133
Erasable Programmable Read Only Memory (EPROM)	133
Primary Memory Hardware	134
Semiconductor Memory	134
Bubble Memory	136
Josephson Junction System	137
Ferrite Core Memory	138
Memory Addresses	138
Storage Locations	138
Use of Addresses in Programs	141
Arithmetic and Logic Unit	141
Registers	142
<i>The Superchip</i>	144
Gates	145
Control Unit	147
Cycle Clock	147
Counters	147
Decoders	149
How Computers Process Instructions	149
Programming Instructions	150
Machine Cycles	150
Program Illustration	151
Summary and Key Terms	153
Exercises	154
 CHAPTER 6 SECONDARY STORAGE SYSTEMS	156
Learning Objectives	156

Chapter Outline	156
Advantages and Limitations of Secondary Storage	158
Access Time	159
Access Methods	160
Sequential Access	161
Direct Access	161
Indexed File Access	161
<i>Putting Fiction on a Floppy</i>	162
Data Transmission Codes	162
American Standard Code for Information Interchange (ASCII)	163
Extended Binary Coded Decimal Interchange Code (EBCDIC)	163
Parity Check	164
Magnetic Tape Storage	165
Tape Reels	167
Recording Data	168
File Organization	169
File Identification	169
Processing Tape Files	171
Magnetic Tape Cassette	172
Magnetic Disk Storage	173
Rigid Disks	173
Recording and Accessing Data	174
Processing Disk Files	175
Winchester Disks	176
Flexible (Floppy) Disks	177
<i>Diskettes Make a Fashion Statement</i>	179
Mass Storage	179
Cellular Mass Storage	180
Magnetic Bubble Storage	180
Laser Beam Storage	181
Comparison of Storage Media	181
Summary and Key Terms	184
Exercises	185
 CHAPTER 7 DATA OUTPUT	 186
Learning Objectives	186
Chapter Outline	186
<i>Crossword Puzzle on Hardware</i>	189
Hard Copy Devices	190
Character Output Sequence	190

Impact Printers	190
Thermal Printers	195
Ink Jet Printers	196
Laser Printers	197
Photographic Printers	198
Computer Output Microform (COM)	198
Punched Output	199
Plotter Output	199
<i>Laser Printers for Computers May Dominate Industry</i>	200
Soft Copy Devices	202
Video Display Terminals (VDT)	202
Liquid Crystal Display (LCD)	205
Audio Response Units	205
<i>Speech Synthesizers Bring Simple Machines to Life</i>	206
Summary and Key Terms	207
Exercises	208



PART THREE MICROCOMPUTER SYSTEMS

CHAPTER 8 MICROCOMPUTER HARDWARE AND APPLICATIONS	210
Learning Objectives	210
Chapter Outline	210
The Advent of Microelectronics	211
Types of Small Systems	213
Microprocessor	213
Microcomputer	214
Minicomputer	215
Limitations of Small Systems	216
Microcomputer Hardware	217
Popular Models on the Market	217
<i>Would Computer Standardization Help or Hurt U.S. Firms?</i>	220
CPU Chips	224
Expanded Systems	224
Personal and Business Applications	225
Home Use	225
Business Use	229
Computer Stores	231
How to Shop for a Home Computer System	233
<i>Family Computer: The Byte That Failed</i>	234
Summary and Key Terms	236
Exercises	238

CHAPTER 9 MICROCOMPUTER SOFTWARE	240
Learning Objectives	240
Chapter Outline	240
Applications and System Software	241
Operating Systems	243
<i>Sizing Up the Software Avalanche</i>	244
Function of Operating Systems	245
Resident Storage Devices	246
Structure of Operating Systems	247
Types of System Programs	248
Control Programs	248
Service Programs	249
Types of Operating Systems	251
Batch Operating Systems	252
Multiuser Operating Systems	252
Real Time Operating Systems	253
Applications Software	254
Spread Sheet Programs	255
Word Processing Programs	257
Data Base Management System Programs	260
Graphics Programs	260
Communications Programs	261
Combination Packages	262
Summary and Key Terms	263
Exercises	264

4

PART FOUR COMMUNICATIONS AND INFORMATION SYSTEMS

CHAPTER 10 NETWORKS AND DATA COMMUNICATIONS	266
Learning Objectives	266
Chapter Outline	266
What Is Telecommunications?	267
Evolution of Telecommunications	269
Distributed Data Processing	271
Advantages and Limitations	271
Data Communications Applications	274
Electronic Banking	274
Information Retrieval Systems	274
Electronic Word Processing	274