

COMPUTERS AND INFORMATION SYSTEMS: AN INTRODUCTION

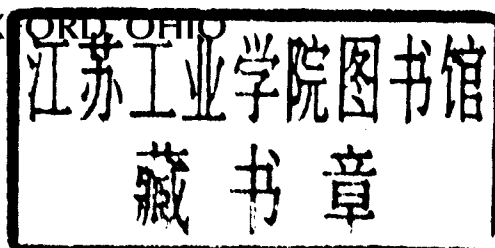
William S. Davis



Computers and Information Systems: An Introduction

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PREFACE

As the title implies, *Computers and Information Systems: An Introduction* is designed to support an introductory course in information systems. It assumes no prior computer experience and no mathematics beyond high school algebra.

FLEXIBILITY

Like most introductory texts, this book covers all the crucial concepts, but what makes it unique is its flexibility. The material is divided into three sections:

Part I: Introduction	A one-chapter overview of basic computer components.
Part II: Components	Chapters 2 through 10. Each chapter focuses on a single component.
Part III: Systems	Chapters 11 through 16. Each chapter shows how two or more components are combined to form a system.

After the student completes Chapter 1, the Part II chapters can be read in any order; they are written to be independent. Relevant material from Part II (clearly identified at the beginning of each chapter) should be read before the related topics in Part III, but a student need not *complete* Part II before beginning Part III. Except for the link to Part II, the chapters in Part III are independent; they too can be read in any order.

The book also contains five brief (six- to ten-page) *Spotlights* on:

- The Internet, following Chapter 1
- Internet Software Tools, following Chapter 7
- Computers and Privacy, following Chapter 9
- Internet Technology, following Chapter 14
- Computer Crime and System Security, following Chapter 15

Like the chapters, the *Spotlights* are independent and can be read in any order. Separating these topics from the chapter narratives allows the instructor to cover Internet concepts and social issues at any time.

THE INTERNET

Given the Internet's increasing importance, many instructors have added Internet activities to the information systems course. The *Spotlight* following Chapter 1 provides a brief introduction to the Internet. Placing this material with Chapter 1 allows the instructor to overview local Internet access procedures early in the term and assign Internet projects throughout the course.

At the end of each chapter is a set of *Internet Projects* keyed to the chapter material. The projects fall into three categories:

- *News and Notes* References to product announcements and relevant issues.
- *Topic Searches* A list of relevant key terms and qualifiers that support Internet searches.
- *Links to Other Sites* A list of relevant World Wide Web sites and USENET newsgroups.

Once students learn the basics of their local search and navigation tools, they should have little difficulty following these pointers to find interesting information. For example, the *Internet Projects* at the end of Chapter 2 tell the student where to find information on computer-related job opportunities.

One problem with Internet-based projects is currency; simply put, technology (particularly the Internet) changes so quickly that today's state-of-the-art is tomorrow's old news. Consequently, West Educational Publishing maintains a World Wide Web home page. Students and instructors are welcome to access this book's entry on the home page, where more current versions of the Internet projects are listed.

Finally, spread throughout the book are numerous in-chapter entries that link various topics to the Internet. Many of these references appear in the primary narrative; for example, see the Information Superhighway in Chapter 1 and Client/Server Computing in Chapter 14. Other references are presented in feature boxes; for example, see the discussions about Java (Chapter 8), the National Information Infrastructure (Chapter 14), and telecommuting (Chapter 16). Also, Appendix B contains a list of interesting USENET and World Wide Web addresses, a convenient starting point for student browsing.

FEATURES

Looking beyond content and organization, *Computers and Information Systems: An Introduction* contains several features designed to make learning easier:

- *Before you start.* Except for Chapter 1, each chapter begins with a list of key concepts the student should understand before he or she starts reading. These references help to ensure that the student has the necessary background.
- *After you finish.* Each chapter begins with a list of learning objectives designed to help the student focus on the key ideas.
- *Advanced Topics.* These boxes are designed to provide a bit more technical depth on selected topics. Examples include pipelining (Chapter 4), the FAT chain (Chapter 6), inheritance (Chapter 8), and bus standards (Chapter 11).
- *Feature boxes.* Spread throughout each chapter are feature boxes that supplement or illustrate specific chapter topics. There are four types of boxes:
 - *Issues.* The social and ethical implications of computers and information systems. These boxes expose the student to less technical

issues and can serve as springboards for class discussion. Examples include downsizing and outsourcing (Chapter 2), software piracy (Chapter 7), and networks and the copyright law (Chapter 14).

- *Notes.* Comments and real-world examples, such as how to read the codes on a check (Chapter 3), surge protection (Chapter 4), caring for your diskettes (Chapter 5), and file backup (Chapter 9). These notes help the student relate the chapter material to the real world.
- *People.* Brief sketches of some of the people who helped to shape modern information technology, including Mauchly and Eckert, the creators of the first electronic digital computer (Chapter 1); Bill Gates and Paul Allen, the founders of Microsoft (Chapter 6); Grace Hopper, the driving force behind the COBOL language (Chapter 8); Steven Jobs and Steve Wozniak, the founders of Apple Corporation (Chapter 11); and computer science pioneer Alan Turing (Chapter 16).
- *The Future.* Where is information technology going? These boxes are designed to give students a sense of how evolving technology will affect them in the near future. Examples include information haves and have-nots (Chapter 2), the Java programming language (Chapter 8), mobile communication (Chapter 13), and the National Information Infrastructure (Chapter 14).
- *Chapter summaries, key term lists, and concepts questions.* These three features are designed to provide the student with a thorough review of the chapter material. Note that the concepts questions parallel the chapter learning objectives.
- *Projects.* Suggestions for hands-on and research-oriented activities. Many of the projects are designed to encourage the student to discover that people really do use the technology described in the chapter.
- *Internet Projects.* A set of projects that invite the student to access the Internet for information that supports or expands upon the chapter material. More current Internet activities can be found by accessing West Educational Publishing's World Wide Web site; see the *Spotlight* on The Internet following Chapter 1 for detailed instructions.

SUPPLEMENTS

Additionally, numerous supplements accompany the book, including:

- An *instructor's manual* written by the textbook author and Patricia Roy of Manatee Community College. Both printed and electronic copies are available.
- A *test bank* prepared by the textbook author and Patricia Roy of Manatee Community College. Both printed and electronic copies are available.
- *WESTEST* test-preparation software.
- *Internet updates* available on the World Wide Web at <http://www.westpub.com/Educate>

- A *student study guide* written by Jonathan Trower of Baylor University. The study guide includes a chapter outline, chapter summary, true/false and multiple-choice questions, vocabulary drills, and essay questions. Many students will find the study guide an invaluable aid when preparing for exams.
- A *set of transparency masters* for the book's figures.
- A *PowerPoint presentation* prepared by Anita Steinbacher of Indiana Vocational Technical College. Instructors will find the PowerPoint slides a useful lecture supplement and an additional source of transparency masters.
- *West's Information Systems for Managers Video Series*. Video #1 features a Business Profile on First Bank System's information systems and ten-minute features on Boeing's computer services and American Greeting's information processing control center. Video #2 features four-minute profiles on thirteen Blue Chip companies. Video #3 contains Business Profiles on the information systems of the Minnesota Twins, PriceCosto, and IBAX.
- *Insights: Readings in Information Systems*, a readings book for instructors who wish to supplement text assignments with readings from such sources as *Business Week*, *FORBES*, *FORTUNE*, *BYTE*, and *The Wall Street Journal*.

Contact your West campus representative for additional details.

MICROCOMPUTER APPLICATIONS

Many schools teach microcomputer skills in the context of the introductory information systems course. West's *Understanding and Using Microcomputers* series includes low-cost application manuals that cover the most popular software and Internet tools. Custom versions are available through West's Microcomputer Custom Editions Program. The program offers instructors the flexibility to choose tutorials (available in up to three different module lengths) for a wide range of packages, including Netscape Navigator 3.0, the Internet, Microsoft Windows 95, Microsoft Office for Windows 95, Microsoft Excel for Windows 95, and WordPerfect for Windows. The selected materials are spiral-bound to create an easy-to-use lab manual. See your West campus representative or check West's World Wide Web home page for additional details.

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CONTENTS IN BRIEF

Part I Introduction	1
1. WHAT IS A COMPUTER?	3
Part II Components	31
2. PERSONNEL AND CAREERS	33
3. INPUT AND OUTPUT	53
4. INSIDE THE COMPUTER: MEMORY AND THE PROCESSOR	77
5. SECONDARY STORAGE	101
6. SYSTEM SOFTWARE	121
7. APPLICATION SOFTWARE	143
8. SOFTWARE DEVELOPMENT	173
9. DATA MANAGEMENT	197
10. DATABASES	221
Part III Systems	243
11. ARCHITECTURES	245
12. MULTITASKING	267
13. DATA COMMUNICATION	287
14. NETWORKS	305
15. SYSTEM DEVELOPMENT	327
16. APPLICATIONS	359

CONTENTS

Part I Introduction	1	Spotlight: The Internet	22
1. WHAT IS A COMPUTER?	3	Today's Internet	22
The Information Age	4	Internet Access	22
Data and Information	4	Internet Addresses	22
Note: Evidence and Proof	5	Electronic Mail	24
Computers	6	USENET	25
The User	6	The World Wide Web	26
Hardware	6	Key Terms	28
Peripherals	6	Concepts	28
Issues: Ergonomics	7	Projects	28
Inside the Computer	7	Internet Projects	28
People: John W. Mauchly and J. Presper Eckert	9		
Software	9	Part II Components	31
Data	10	2. PERSONNEL AND CAREERS	33
The Input/Process/Output Cycle	12	The Job Market	34
Long-Term Storage	12	Issues: Computers and Employment	34
Computer Systems	13	Personnel	36
Classifying Computers	14	Creating Commercial Hardware and Software	36
Note: Your First Computer	16	Sales and Distribution	38
Networks	17	Note: On-Line Job Listings	39
The Internet	17	Developing Information Systems	39
The Information Superhighway	18	Operating and Maintaining an Information System	40
What Next?	18	Technical Management	42
The Future: Electronic Textbooks	19	People: Ross Perot	43
Summary	19	Consulting	44
Key Terms	20	Computer-Related Academic Programs	44
Concepts	21	Computer Engineering	44
Projects	21		

Computer Science	45
Management Information Systems	45
Computer Information Systems	45
None of the Above	46
Opportunity and Preparation	46
The Future: Information Haves and Have-Nots	46
Issues: Downsizing and Outsourcing	47
Ethics	48
Summary	49
Key Terms	50
Concepts	50
Projects	50
Internet Projects	51

3. INPUT AND OUTPUT 53

Data and Information	54
Source Data	54
Reports	54
Documents, Images, and Multimedia	55
Note: GIGO	55
Personal Computer I/O	56
Keyboards (Input)	56
Display Screens (Output)	57
Resolution	58
The Cursor	59
Note: Resolution and Appearance	59
Controlling the Cursor's Position	60
Using a Pointing Device for Input	60
Printers (Output)	60
Impact Printers	61
Nonimpact Printers	62
High-Speed Printers	62
Print Quality	62
Other I/O Media and Devices	63
Magnetic Media	63
Note: How to Read the Codes on a Check	64
Optical Media	65

Graphic Input and Output	66
Advanced Topics: Characters and Bit-Maps	67
Pen-Based Computers	67
Terminals	68
Sound and Voice	68
Note: Punched Cards	70
Linking People and Computers	71
Summary	72
Key Terms	73
Concepts	73
Projects	74
Internet Projects	74

4. INSIDE THE COMPUTER: MEMORY AND THE PROCESSOR 77

Main Memory	78
Bits, Bytes, and Words	78
Memory Capacity	78
Note: The Meaning of "K"	79
Memory Contents	79
Number Systems	79
Binary Numbers	80
Numeric Data	80
String Data	81
Advanced Topics: Parity	82
Addressing Memory	82
Reading and Writing Memory	82
Memory Types	83
Random Access Memory (RAM)	83
Read-Only Memory (ROM)	83
Note: Memory Cost	84
Changing the Contents of RAM	84
Other Types of Memory	84
Cache Memory	85
Advanced Topics: Cache Operation	86
How the Processor Works	86
Instructions	86
Operation Codes and Operands	86

Processor Components	87	Physical Disk Access	109
Machine Cycles	87	Access Time	111
Processor Speed	88	The Future: Nonvolatile RAM	111
Note: Surge Protection	88	Disk Cache	112
People: John von Neumann	89	The Directory	112
Benchmarks	89	Note: Long and Short File Names	113
Machine Cycles: An Example	90	The Root Directory and the FAT	113
Advanced Topics: Pipelining	92	Partitioning	113
Processor Hardware	93	Protecting Your Data	114
Note: The Intel x86 Family	94	Write Protection and Locking	114
The Instruction Set	94	Backup	114
Complex and Reduced Instruction Set Computers	94	Note: Caring for Your Diskettes	115
Boolean Logic	94	Note: Make Backup a Habit	115
Machine Language and Microcode	94	Summary	116
Multiple Processor Configurations	95	Key Terms	117
Computer Systems	96	Concepts	117
Summary	96	Projects	118
Key Terms	97	Internet Projects	118
Concepts	98		
Projects	99		
Internet Projects	99		
5. SECONDARY STORAGE	101	6. SYSTEM SOFTWARE	121
Why Secondary Storage?	102	The Operating System	122
Secondary Storage Media	103	Operating System Functions	122
Diskette and Hard Disk	103	Communicating with the Operating System	123
Magnetic Tape	104	People: Bill Gates, Paul Allen, and MS-DOS	124
CD-ROM	105	The Command Language	124
RAID	106	The Shell	125
Disk Access	106	File Management	126
Disk Addresses: Tracks and Sectors	106	Files and File Names	126
The Formatting Process	106	Formatting a Disk	127
Storage Capacity	107	Directories	127
Disk Drives	107	Directory Trees	128
Head Clearance	108	Disk Space Management	129
Advanced Topics: Bit Density and Head Clearance	108	Advanced Topics: The FAT Chain	129
Disk Timing	109	People: Ken Thompson, Dennis Ritchie, and UNIX	130
		Hardware Management	130
		The Input/Output Control System	130
		Open and Close	131

Primitive Commands	131
Protocols	131
Device Drivers	132
Memory Management	132
The Kernel	132
Loading the Operating System	133
The Boot	133
Advanced Topics: AUTOEXEC.BAT	133
Initial Program Load (IPL)	134
Utilities	134
Microcomputer Operating Systems	135
Version Numbers	135
Disk Operating System (DOS)	135
Advanced Topics: Memory Levels	136
Windows and Windows 95	136
Summary	137
Key Terms	139
Concepts	139
Projects	140
Internet Projects	140

7. APPLICATION SOFTWARE 143

What Is Application Software?	144
The User Interface	144
Commercial Software	146
Issues: Software Piracy	146
Games and Entertainment	147
Word Processing	148
Creating and Editing Documents	149
Note: Version Numbers	149
Formatting Documents	150
Printing Documents	151
Note: GIGO	152
Document Management	152
Mail Merge	152
Desktop Publishing	153
Spreadsheets	153
Spreadsheet Applications	154

Spreadsheet Features	154
Spreadsheet Design	155
People: VisiCalc and Lotus 1-2-3	156
Database Software	156
Database Creation	157
Issues: Reverse Engineering	158
Indexes and Relationships	158
Graphics Software	160
Other Software	161
Suites and Integrated Software	162
OLE and DDE	162
Customizing Commercial Software	163
Macros	163
Bridges	163
Public Domain Software and Shareware	164
Summary	164
Key Terms	166
Concepts	167
Projects	167
Internet Projects	168

Spotlight: Internet Software Tools 169

Gophers and Browsers	169
Hypertext and Hypermedia	170
Key Terms	171
Concepts	171
Project	171

8. SOFTWARE DEVELOPMENT 173

Programming Languages	174
Machine Language	174
Assembly Language	174
Symbolic Addressing	174
Macro Instructions	175
Source Code and Object Code	175
People: Grace Hopper	176
Compilers	176
Interpreters	177

Fourth-Generation Languages	177	Ensuring Data Accuracy	200
Program Generators	178	Error Detection Software	200
The Evolution of Programming Languages	178	Verification	201
The Program Development Process	178	Data Structures	201
The Future: Java	179	Note: Manual Data Entry and Accuracy	202
Planning the Program	179	Fields, Records, and Files	202
Planning the Logic	180	Lists and Arrays	202
Coding	180	Objects	203
Sequence, Selection, and Iteration	181	Data Maintenance	204
Debugging and Testing	182	File Types	204
Issues: Programming and Gender	184	Add, Delete, and Update	205
Beta Testing	185	Data Integrity	206
Documentation	186	Security	206
Structured Programming	186	Note: Why Back Up?	207
Cohesion and Coupling	187	Backup and Recovery	207
The Control Structure	187	Accessing Files	207
Top-Down Testing	188	Directories	207
Object-Oriented Software	188	Open and Close	207
Objects and Methods	189	Accessing Records	208
Signals and Operations	189	Sequential Access	208
Note: BLOBs	190	The Key Field	209
Advantages	190	Direct Access	209
Encapsulation	190	Indexing	209
Object Classes	190	Indexed Sequential Files	210
Advanced Topics: Inheritance	192	Logical and Physical I/O	210
Summary	192	The Relative Record Concept	210
Key Terms	193	Advanced Topics: Hashing	212
Concepts	194	Blocks and Spanned Records	212
Projects	194	Summary	213
Internet Projects	195	Key Terms	214
		Concepts	214
		Project	215
		Internet Projects	215
9. DATA MANAGEMENT	197	Spotlight: Computers and Privacy	216
Why Data Management?	198	Privacy in the Information Age	216
Source Data	199	Data Access	216
Data Capture and Data Entry	199	Ensuring Data Integrity	217
Batch Data Entry	199	Privacy Laws	217
Source Data Automation	199		
Note: Turnaround Time	200		

Privacy and Free Speech on the Internet	218	People: <i>C. Wayne Ratliff</i>	236
E-mail and Privacy	218	The Data Control Language	238
Censorship on the Internet	218	Summary	238
Key Term	218	Key Terms	240
Concepts	219	Concepts	240
Projects	219	Project	241
		Internet Projects	241
 10. DATABASES	 221		
Traditional Data Management	222	 Part III Systems	 243
Data Redundancy	222		
Note: <i>Maintaining Independent Files</i>	222	 11. ARCHITECTURES	 245
Note: <i>The Year 2000</i>	224	The Hardware Components	246
Data Dependency	224	Chips and Boards	246
The Database Approach	224	Inside a Computer	246
Entities, Occurrences, and Attributes	225	The Power Supply	246
Keys and Relationships	225	People: <i>The Microcomputer Revolution</i>	248
Planning a Database	227	Serial and Parallel Lines	248
The Data Dictionary	227	Linking the Components	248
Entity-Relationship Diagrams	228	Open and Closed Architectures	249
Advanced Topics: <i>Cardinality</i>	229	Buses	249
Data Normalization	229	Note: <i>Miniaturization</i>	250
The Database Management System	229	Word Size	250
Physical and Logical Records	230	Processing Speed and Word Size	251
Schemas and Subschemas	230	Memory Capacity	251
Maintaining Database Integrity	231	Precision	251
Database Models	232	Single-Bus Architecture	251
Flat-File Databases	233	The Motherboard	252
Hierarchical Databases	233	Expansion Slots	252
Root, Parent, and Child Records	233	Advanced Topics: <i>Bus Standards</i>	253
Network Databases	233	Interface Boards	254
Owners and Members	234	Advanced Topics: <i>How a PC's Keyboard Works</i>	255
Relational Databases	234	PCMCIA Cards	255
Relations, Tuples, Attributes, and Domains	235	Buffers	256
Relational Operators	235	Ports and Connectors	256
Object-Oriented Databases	236	Loading and Executing a Program	257
Database Software	236	Multiple-Bus Architecture	258
The Data Definition Language	236	Channels	258
The Data Manipulation Language	236		

I/O Control Units	258
Multiple Buses	259
Multiprocessing	260
People: <i>Seymour Cray</i>	261
Parallel Processing	261
Symmetrical and Asymmetrical Multiprocessing	262
Fault-Tolerant Computers	262
Summary	262
Key Terms	263
Concepts	263
Projects	264
Internet Projects	264

12. MULTITASKING **267**

Concurrency	268
Note: <i>Multitasking in Windows 95</i>	268
Multiprogramming	269
Multiprogramming Operating Systems	269
Managing the Processor's Time	270
People: <i>Frederick P. Brooks, Jr.</i>	270
The Dispatcher	271
Interrupts	271
The Dispatching Process	271
Dispatching Priority	274
Advanced Topics: <i>Stacks and Queues</i>	274
Memory Management	274
Fixed and Dynamic Memory Management	274
Foreground and Background	275
Memory Protection	275
Overlay Structures	275
Virtual Memory	276
Advanced Topics: <i>Memory Levels</i>	278
Allocating Peripherals	278
Scheduling	278
Spooling	278
Time-Sharing	279
Time-Slicing	280
Roll-In and Roll-Out	281

Virtual Machines	282
Multiprocessing	282
Summary	282
Key Terms	283
Concepts	283
Project	284
Internet Projects	284

13. DATA COMMUNICATION **287**

Communication	288
Transmitters and Receivers	288
Hardware	288
Software	288
Communication Media	289
Physical Links	289
The Future: <i>Global Satellite Communications</i>	291
Transmission Speed	291
Common Carriers	292
Local and Remote	292
Dedicated and Switched Lines	292
The Future: <i>Mobile Communication</i>	292
Line Utilization	293
Line Speed as a Bottleneck	295
Compression	295
Messages and Signals	295
Signal Degradation and Noise	296
Analog Data	296
Carrier Signals	296
Advanced Topics: <i>Baseband and Broadband</i>	297
Modulation and Demodulation	297
Digital Data	298
Note: <i>Radio Signals</i>	298
Note: <i>Analog Lines</i>	299
Protocols	300
Transmission Modes	300
Error Sensing	300
Summary	301
Key Terms	302

Concepts	302	Internet Projects	321
Projects	303		
Internet Projects	303	Spotlight: Internet Technology	323
		The Internet's Protocols	323
		TCP/IP	323
		Telnet	324
		File Transfer Protocol (FTP)	324
		Hypertext Transport Protocol (http)	324
		Key Terms	325
		Concepts	325
		Projects	325
14. NETWORKS	305		
Why Networks?	306		
Software Sharing	306		
Data Sharing	306		
Issues: Networks and the Copyright Law	307		
Hardware Sharing	307		
Backup and Workload Sharing	307		
On-Line Services	307		
Groupware	308		
Electronic Data Interchange	308		
Note: The Turnpike Effect	309		
Client/Server Computing	309		
Network Structures	310		
Local Area Networks	310		
Wide Area Networks	311		
Advanced Topics: Private Branch Exchanges	311		
Network Topology	312		
Bridges and Gateways	314		
Network Management	314		
Network Software	314		
Nodes	315		
Issues: The Global Marketplace	316		
Security	316		
Protocols	317		
Network Standards	318		
ISO/OSI	318		
The Future: The National Information Infrastructure	319		
ISDN	319		
Summary	319		
Key Terms	320		
Concepts	320		
Projects	321		
		15. SYSTEM DEVELOPMENT	327
		Information Systems	328
		The Systems Analyst	328
		The System Development Life Cycle	328
		Note: Pick Any Two	328
		Problem Definition	330
		The Feasibility Study	330
		The Steering Committee	331
		Analysis	332
		Data, Processes, and Boundaries	332
		Logical Models	333
		Data Flow Diagrams	333
		Note: The Existing System	335
		Data Models	335
		Computer-Aided Software Engineering	337
		Advanced Topics: The CASE Workbench	338
		Prototyping	338
		The Requirements Specification	339
		Design	339
		Alternatives	339
		The System Environment	339
		Designing the Interfaces	340
		Data Design	341
		User Interface Design	341
		Component Design	342