

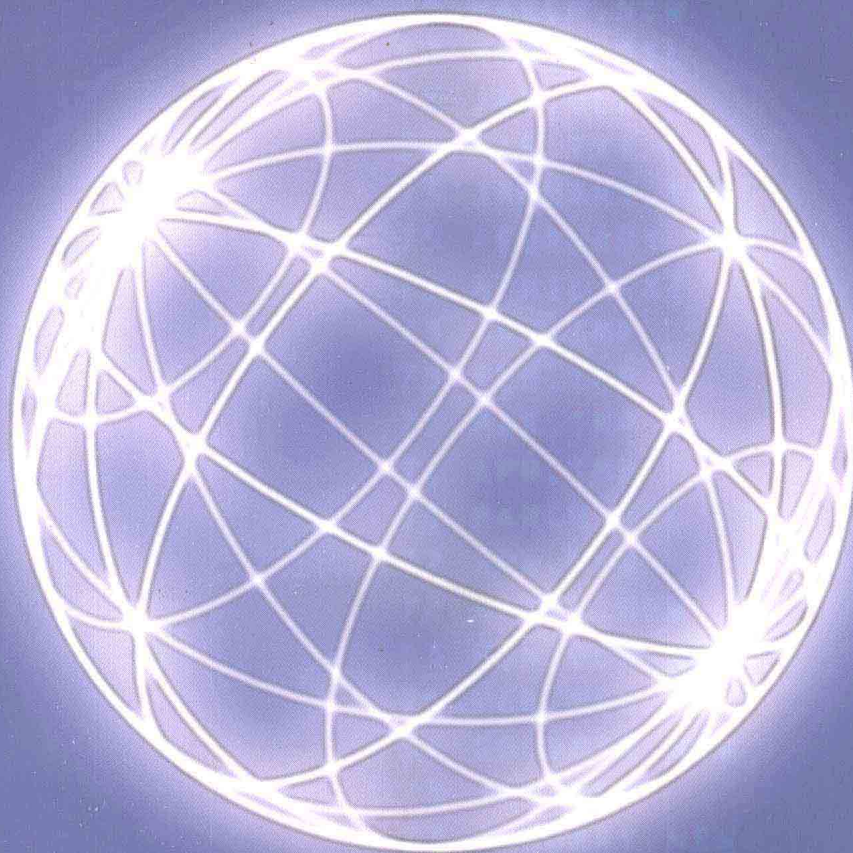
WINDOWS USER'S GUIDE TO DOS:

USING THE COMMAND LINE IN

WINDOWS

2000

Professional



CAROLYN Z. GILLAY & BETTE A. PEAT

FRANKLIN, BEEDLE & ASSOCIATES

WINDOWS USER'S GUIDE TO DOS

USING THE COMMAND LINE IN WINDOWS 2000 PROFESSIONAL

CAROLYN Z. GILLAY
SADDLEBACK COLLEGE

BETTE A. PEAT
SOLANO COMMUNITY COLLEGE

President and Publisher	Jim Leisy (jimleisy@fbeedle.com)
Production	Jeni Lee
	Tom Sumner
	Stephanie Welch
Proofreader	Stephanie Welch
Cover	Ian Shadburne
Marketing	Chris Collier
Order Processing	Krista Hall

Printed in the U.S.A.

Names of all products herein are used for identification purposes only and are trademarks and/or registered trademarks of their respective owners. Franklin, Beedle & Associates, Inc., makes no claim of ownership or corporate association with the products or companies that own them.

©2002 Franklin, Beedle & Associates Incorporated. No part of this book may be reproduced, stored in a retrieval system, transmitted, or transcribed, in any form or by any means—electronic, mechanical, telepathic, photocopying, recording, or otherwise—without prior written permission of the publisher. Requests for permission should be addressed as follows:

Rights and Permissions
 Franklin, Beedle & Associates, Incorporated
 8536 SW St. Helens Drive, Suite D
 Wilsonville, Oregon 97070

Library of Congress Cataloging-in-Publication Data

Gillay, Carolyn Z.

Windows user's guide to DOS : using the command line in Windows 2000 Professional
 / Carolyn Z. Gillay, Bette A. Peat.

p. cm.

ISBN 1-887902-72-4

1. MS-DOS (Computer file) 2. PC-DOS (Computer file) 3. Microsoft Windows (Computer file) 4. Operating systems (Computers) I. Peat, Bette A. II. Title

QA76.76.O63 G564 2002

005.4'469--dc21

2001040684

PREFACE

This textbook introduces the hardware, software, and operating system concepts of today's computer systems. Students gain system-level experience through problem-solving exercises at the command line. It is written for use as the core textbook for a course that focuses exclusively on DOS, for the DOS portion of a network or programming class, as a supplement to a Windows 2000 Professional course, or for a class that follows an introduction to Windows 2000 Professional.

WHY LEARN DOS WHEN IT'S A WINDOWS WORLD?

Students with no computer experience believe DOS is "dead." However, the rise of network computing and the vast number of businesses running legacy DOS applications make knowledge of DOS and the Windows 2000 command line essential. Command syntax, parameters, parsing commands, and troubleshooting are all handled better from the command line interface rather than the graphical user interface.

The command line interface exists in Windows 95, Windows 98, Windows Me, Windows NT 4.0, Windows NT 4.5, Windows 2000, Windows XP, and Novell. Batch files are useful in all these operating systems. Batch file skills are critical in the networking world, as well as on the stand-alone computer system.

BEGINS WITH THE BASICS AND LEADS TO THE ADVANCED

This text leads students from a basic to a sophisticated use of the command line interface. Each chapter has questions for both novice and advanced students, so it challenges advanced students without sacrificing the needs of beginning students. Furthermore, while this text does teach the various character-based commands, it also stresses the concepts, theory, and understanding of operating systems in general.

The text demonstrates the command line interface and explains when and why one would use it instead of the graphical user interface of Windows 2000. It provides numerous examples to allow students to master operating systems. This text teaches these concepts using the Command Prompt window, referred to as the MS-DOS Prompt window in earlier versions of Windows. Though this text deals primarily with those commands and functions that are available at the command prompt, it also deals with commands and functions necessary to understand, maintain, and troubleshoot a system that are available only in the GUI.

Pipes, filters, and redirection used with batch files are covered in a thorough, step-by-step methodology. Advanced batch files are covered in detail, building on programming logic in a comprehensible way. Students cover all batch file commands and are introduced to DEBUG.

Setting up computer systems, optimizing performance, and troubleshooting require students to have good command line skills. To this end, the student learns how to create an Emergency Repair disk (ERD), boot into Safe Mode, and create a set of floppy disks to boot the system into Windows 2000 Professional.

This text also covers two major forms of connectivity: networking and the Internet. We have found that there is a gap in too many students' knowledge of net-

works. Students often take a Windows and/or DOS class and then, if on a networking career path, jump into a large-systems networking class. This can be an intimidating jump. There are many other students who work in small offices that do not have network administrators; others may work in environments where they only need to access a network or share files, folders, and devices on their own systems at home. These students are not going to follow the networking program. To address the needs of all these students, this text introduces some basic networking concepts and then leads the students into setting up a peer-to-peer network (where possible) and shows them how to share files, folders, and devices. Students also learn general networking techniques, such as mapping drives, which will serve them in good stead if they are on the networking career path.

Another connectivity topic is the Internet. In our textbook, students learn various ways to connect to the Internet and then do some simple activities using Internet Explorer. A brief introduction to TCP/IP concepts is included because, when using the Internet, so many students are lost at the first mention of such terms as “protocol” and “IP address.” This overview gives them an understanding of some of these important terms so that they have a better comprehension of online activities. Students learn how to use simple Internet-related commands that can be run at the command line, such as FTP. In addition, certain troubleshooting commands such as ping and Telnet are covered.

The last two chapters cover a much too neglected topic—troubleshooting. These chapters include backing up a computer system and recovering a damaged system using such tools as Recovery Console and Safe Mode. Recovery Console is a command line repair tool. Safe Mode gives the computer user options to repair a damaged system. In addition, the students learn the purpose, function, and structure of the Registry. They learn advanced troubleshooting concepts, looking at the CMOS setup utility as well as looking at memory and the paging file. They learn about the tools in Windows such as Regedit and RegEdt32. They use Regedit to do simple tasks.

This book takes up where other Windows books leave off. Although no prior knowledge or experience with computers, software, operating systems, or Windows 95/98/2000 is necessary, it helps if the students have completed a basic Windows 95/98/2000 class.

ACTIVITIES DISK WITH SHAREWARE PROGRAMS AND DATA FILES

The esoteric nature of operating systems is one of the biggest obstacles in teaching the command line interface to students. Many students find the material interesting and stimulating. However, there is always a group that asks, “What good is DOS? It doesn’t do anything.” Using discussion and example, this text demonstrates the importance of the command line interface.

Often, when teaching the command line interface, instructors attempt to use a complex application program, such as Word, and it costs them time teaching the application, not the operating system. To resolve this problem, two simple shareware applications are provided for students to work with: a simple database (Home Phone Book) and a simple spreadsheet (Thinker). Students have the opportunity to load an application program and prewritten data files, as well as create simple data files. In doing so, students better understand the differences between data files and program files and are

able to use operating system commands to manipulate both types of files. In addition, the text includes several educationally sound shareware games that reinforce certain DOS concepts in an enjoyable manner.

These shareware files are on the ACTIVITIES disk along with data files students use for the exercises in the book. The ACTIVITIES disk's files are easily installed on a computer system's hard disk or network server. The exercises do not direct students to save files to the hard disk or network server. Early on, students create a DATA disk, and all files are written to the DATA disk. This approach provides real-life experience in working with the hard disk or server without risking damage to either. There are numerous warnings and cautions alerting students to when a possible network conflict could arise.

AN INTEGRATED PRESENTATION OF CONCEPTS AND SKILLS

Each section of the book is presented in a careful, student-oriented, step-by-step approach. Interspersed between the steps in the exercises are the reasons for and results of each action. At the end of each chapter, there are application assignments that allow students to apply their knowledge and prove mastery of the subject area through critical-thinking skills. Each command is presented in a syntactically correct manner so that when the students have finished the course, they will be able to not only use software documentation, but also be comfortable in a network/Internet environment that requires the use of syntax and commands. This also assists the students in their ability to learn how to solve problems using the documentation at hand. This skill also transfers to the use of application packages and other operating system environments. No matter what changes are made to future versions of the operating system, students will be able to use the new commands.

USES A SELF-MASTERY APPROACH

Each chapter includes a chapter overview, a list of key terms, a chapter summary, discussion questions, true-and-false questions, completion questions, multiple-choice questions, and problems where students are asked to write the commands. Each chapter also includes three sets of application assignments that focus on the skills learned in the chapter. The first two require the use of the computer. The first problem set requires students to complete activities on the computer and write the resulting answers on a Scantron form; the second problem set requires students to use the computer and print out the answers.

For the second problem set, the student results are sent to a batch file provided with the ACTIVITIES disk. The batch file is an easy-to-follow program. The students supply their solutions to the problems, and the batch file formats the answers in a consistent manner and includes the students' names and other instructor-directed identifying information. The printouts typically print on two pages or less.

The last set of application assignments are brief essay questions that encourage students to integrate what they have accomplished in the chapter with their improved understanding of the command line interface of the Windows 2000 operating system. All three types of assignments reinforce critical-thinking skills. These application assignments can be turned in as homework. Where hands-on assignments are not possible,

such as dealing with the Registry, students still have an opportunity to answer brief essay questions that encourage them to explain their understanding of the topic at hand.

SUPPLEMENTARY MATERIAL

This book comes with an instructor's manual that includes teaching suggestions for each chapter as well as the answers for every question and application exercise. A complete PowerPoint presentation for each chapter is included as well. There are additional chapter tests. A midterm and a final are included.

REFERENCE TOOLS

This text is useful as a reference for MS-DOS commands. The first appendix provides instructions to install the subdirectory containing the shareware programs and data files to the hard disk. This feature is particularly useful for students who work at home or in an office. The rest of the appendices include a complete command reference (including DOS commands that are no longer available in Windows), an ANSI table, and FDISK. There is also a glossary.

ACKNOWLEDGMENTS

A project of this scope is difficult to complete successfully without the contributions of many individuals. Thank you to all who contributed. A special thanks to:

- David Robinson (Pioneer Pacific College) for contributing a high-quality test bank to the Instructor's CD.
- Mike Estes, for sharing his time, his extensive computer and network knowledge and his willingness to always go the extra mile for not only me but for the students and faculty at Saddleback College.
- Kathryn Maurdeff for providing questions, answers, and PowerPoint presentations.
- All the authors of the shareware included with this textbook.
- My students at Saddleback College, who make writing worthwhile.
- My colleagues in the Computer Information Management Department at Saddleback College.
- The California Business Education Association and the National Business Education Association for providing forums for professional growth as well as inviting me to make presentations sharing my teaching experiences.
- A big thanks to everyone at Franklin, Beedle & Associates: Christine Collier and Krista Brown, who do a great job of running marketing and distribution; Jeni Lee, who made the first draft of this book possible; Tom Sumner and Stephanie Welch, who somehow make sense of all the pieces of manuscript I send them and produce a coherent whole; Ian Shadburne for an eye-catching cover, and Sue Page for a fine job of overseeing and producing the instructor's materials. Thank you also to Jim Leisy, publisher and friend, who always manages to find more books for me to write.
- To Bette Peat, my wonderful co-author, and now good friend. Your knowledge, patience, and troubleshooting abilities make our writing so much easier.
- And, as always, to Frank Panezich, who travels the world with me and makes not only traveling, but my life, so much fun.

Anyone who wants to offer suggestions or improvements or just share ideas can reach me at czg@bookbiz.com.

—C.Z.G.

My thanks to everyone who helped along the way. Special thanks to:

- My family; Parkers, Peats, and Farneths; for their continuous encouragement and their “you can do it” attitude. They believed when it wasn’t practical to believe, and supported me through some rough roads.
- My friends and colleagues at Solano Community College, especially Jane Thompson, Donna Anderson, and Mary Ann Harris for their unending support and friendship.
- The CIS students at Solano for making me find answers for questions I never thought of, most particularly Jonathan Cerkoney and Janice Larsen.
- The “Covelo connection,” Jean and Manny Macaraeg, for adjusting their schedule to accommodate mine so many times.
- All the crew at Franklin, Beedle & Associates for their patience and flexibility.
- And once again, most of all, to Carolyn—for the opportunity. Thank you, my dear, dear friend.

Anyone who wants to offer suggestions, improvements, or just share ideas can reach me at bpeat@solano.cc.ca.us or wugbook@pacbell.net.

—B.A.P.

We would both like to thank the following instructors, whose contributions, insights, and suggestions were indispensable:

David Robinson	<i>Pioneer Pacific College</i>
Dale Farris	<i>Lamar State College</i>
Glen Johannson	<i>Spokane Community College</i>
Jeff Brown	<i>Montana State University—Great Falls</i>
Joann Luukkonen	<i>Central Lakes College—Brainerd</i>
Ken Conway	<i>Arapahoe Community College</i>
Callie Moore	<i>Bristol Community College</i>
Victor Mendez	<i>San Antonio College</i>
Rodger Wein	<i>San Antonio College</i>
Wendy Bailey	<i>Wilson Technical Community College</i>
Ron West	<i>Umpqua Community College</i>
Vernene Scheurer	<i>Highline Community College</i>
Wayne Hine	<i>College of Southern Idaho</i>

CONTENTS

PREFACE	xii
---------------	-----

REVIEW CHAPTER

MICROCOMPUTER SYSTEMS: HARDWARE, SOFTWARE, AND THE OPERATING SYSTEM	1
R.1 AN INTRODUCTION TO COMPUTERS	2
R.2 CATEGORIES OF COMPUTERS	2
R.3 COMPUTER COMPONENTS	3
R.4 MICROCOMPUTER HARDWARE COMPONENTS	3
R.5 THE SYSTEM UNIT	4
R.6 CENTRAL PROCESSING UNIT	7
R.7 INPUT/OUTPUT (I/O) BUSES	7
R.8 RANDOM ACCESS MEMORY	9
R.9 CACHE MEMORY	9
R.10 CONTROLLERS	9
R.11 CONNECTORS	10
R.12 PERIPHERALS—INPUT DEVICES	10
R.13 PERIPHERALS—OUTPUT DEVICES	11
R.14 OUTPUT DEVICES—MONITORS	11
R.15 OUTPUT DEVICES—PRINTERS	12
R.16 MODEMS	12
R.17 CAPACITY MEASUREMENT—BITS AND BYTES	13
R.18 DISKS	14
R.19 FLOPPY DISKS	14
R.20 CD-ROMS	15
R.21 REMOVABLE DISKS	15
R.22 HARD DISKS	15
R.23 DIVIDING A DISK	16
R.24 DISK DRIVES	17
R.25 DEVICE NAMES	17
R.26 SOFTWARE	18
R.27 OPERATING SYSTEM FUNDAMENTALS	20
R.28 WHY WINDOWS 2000 PROFESSIONAL?	21
R.29 HARDWARE REQUIREMENTS FOR WINDOWS 2000 PROFESSIONAL	22
R.30 NETWORKS	23
CHAPTER SUMMARY	23
DISCUSSION QUESTIONS	25
TRUE/FALSE QUESTIONS	26
COMPLETION QUESTIONS	26
MATCHING QUESTIONS	26
MULTIPLE CHOICE QUESTIONS	27
APPLICATION ASSIGNMENT—BRIEF ESSAY	27

CHAPTER 1

GETTING STARTED WITH THE OPERATING SYSTEM	28
1.1 WHAT IS AN OPERATING SYSTEM?	29
1.2 VERSIONS OF THE OPERATING SYSTEM (OS)	29
1.3 OVERVIEW OF FILES AND DISKS	30
1.4 FILE NAMES, FILE TYPES, AND FOLDERS	31
1.5 IDENTIFYING YOUR SYSTEM CONFIGURATION	33
1.6 COMPUTER CONFIGURATION GUIDE	33
1.7 BOOTING THE SYSTEM	34
1.8 ACTIVITY: BOOTING THE SYSTEM	34
1.9 SHUTTING DOWN THE SYSTEM	36
1.10 ACTIVITY: THE WINDOWS SHUT-DOWN PROCEDURE	36
1.11 WHY DOS?	37
1.12 ACCESSING THE COMMAND LINE PROMPT	39
1.13 ACTIVITY: THE COMMAND LINE PROMPT	39
1.14 CONTROLLING THE APPEARANCE OF THE COMMAND LINE WINDOW	43
1.15 ACTIVITY: ALTERING THE COMMAND LINE WINDOW	44
1.16 THE DEFAULT DRIVE AND DEFAULT DIRECTORY	46
1.17 ACTIVITY: CHANGING THE DEFAULT DRIVE	46
1.18 UNDERSTANDING COMMANDS	47
1.19 ACTIVITY: USING THE DIR COMMAND	48
1.20 SOFTWARE VERSIONS	50
1.21 ACTIVITY: USING THE VER COMMAND	50
1.22 THE KEYBOARD	50
1.23 THE BACKSPACE KEY	51
1.24 ACTIVITY: CORRECTING ERRORS USING THE BACKSPACE KEY	52
1.25 THE ESCAPE KEY	52
1.26 ACTIVITY: USING THE ESCAPE KEY	52
1.27 THE SHIFT KEY	52
1.28 ACTIVITY: USING THE SHIFT KEY	52
1.29 THE PRINT SCREEN KEY	53
1.30 ACTIVITY: USING THE PRINT SCREEN KEY IN WINDOWS	53
1.31 FREEZING THE DISPLAY AND CANCELING A COMMAND	55
1.32 ACTIVITY: USING THE PAUSE, CONTROL, AND BREAK KEYS	55
1.33 THE CLS COMMAND	57
1.34 ACTIVITY: USING THE CLS COMMAND	58
1.35 THE DATE AND TIME COMMANDS	58
1.36 ACTIVITY: USING DATE/TIME COMMANDS AT THE COMMAND LINE	58
1.37 ACTIVITY: CHANGING THE DATE AND TIME USING THE TASKBAR	61
1.38 MEDIA OBJECTS: THEIR PROPERTIES AND VALUES	62
1.39 ACTIVITY: EXAMINING DISK PROPERTIES AND VALUES	62
1.40 ETHICAL CONSIDERATIONS IN COPYING DISKS	64
1.41 MAKING A COPY OF THE ACTIVITIES DISK: DISKCOPY	64
1.42 ACTIVITY: USING DISKCOPY	64
1.43 HOW TO END THE WORK SESSION	67
1.44 ACTIVITY: ENDING THE WORK SESSION	67
CHAPTER SUMMARY	68
DISCUSSION QUESTIONS	69

TRUE/FALSE QUESTIONS	70
COMPLETION QUESTIONS	70
MULTIPLE CHOICE QUESTIONS	70
APPLICATION ASSIGNMENTS	71

CHAPTER 2

COMMAND SYNTAX: USING THE DIR COMMAND WITH PARAMETERS AND WILDCARDS

74

2.1 COMMAND SYNTAX	75
2.2 WHAT ARE PARAMETERS?	75
2.3 READING A SYNTAX DIAGRAM	76
2.4 USING FIXED PARAMETERS WITH THE DIR COMMAND	76
2.5 ACTIVITY: USING FIXED PARAMETERS WITH THE DIR COMMAND	77
2.6 USING FILE NAMES AS VARIABLE PARAMETERS	82
2.7 ACTIVITY: USING A FILE NAME AS A VARIABLE PARAMETER	83
2.8 COMMAND LINE EDITING	87
2.9 ACTIVITY: USING COMMAND EDITING	88
2.10 DRIVES AS DEVICE NAMES	92
2.11 DEFAULTS	92
2.12 ACTIVITY: WORKING WITH DEFAULTS	93
2.13 A BRIEF INTRODUCTION TO SUBDIRECTORIES—THE PATH	97
2.14 ACTIVITY: USING PATH WITH THE DIR COMMAND	99
2.15 CHANGING DEFAULTS	101
2.16 ACTIVITY: CHANGING THE DEFAULT DRIVE	101
2.17 CHANGING DIRECTORIES	104
2.18 ACTIVITY: CHANGING DIRECTORIES	104
2.19 GLOBAL FILE SPECIFICATIONS: WILDCARDS, THE ?, AND THE *	106
2.20 ACTIVITY: DIR AND WILDCARDS	107
2.21 REDIRECTION	113
2.22 ACTIVITY: REDIRECTING OUTPUT TO A FILE	113
2.23 REDIRECTING OUTPUT TO THE PRINTER	115
2.24 ACTIVITY: REDIRECTING THE OUTPUT TO THE PRINTER	115
2.25 GETTING HELP	117
2.26 ACTIVITY: GETTING HELP WITH A COMMAND	117
CHAPTER SUMMARY	122
DISCUSSION QUESTIONS	123
TRUE/FALSE QUESTIONS	124
COMPLETION QUESTIONS	124
MULTIPLE CHOICE QUESTIONS	125
WRITING COMMANDS	125

CHAPTER 3

DISKS AND FORMATTING

134

3.1 WHY FORMAT A DISK?	135
3.2 PARTITIONING AND FORMATTING DISKS	135
3.3 CLARIFYING PROCEDURES	146
3.4 ACTIVITY: FORMATTING A FLOPPY DISK	146
3.5 FORMATTING A DISK WITH A VOLUME LABEL	150

3.6 ACTIVITY: USING THE /V OPTION	152
3.7 THE LABEL COMMAND	155
3.8 ACTIVITY: USING THE LABEL COMMAND	155
3.9 FORMATTING A DISK USING THE /Q PARAMETER	157
3.10 ACTIVITY: USING THE /Q PARAMETER	157
3.11 MAKING A DATA DISK	158
3.12 ACTIVITY: SHUTTING DOWN WINDOWS	159
3.13 HIGH-DENSITY DISKS AND DISK DRIVES	160
CHAPTER SUMMARY	161
DISCUSSION QUESTIONS	162
TRUE/FALSE QUESTIONS	163
COMPLETION QUESTIONS	163
MULTIPLE CHOICE QUESTIONS	164
WRITING COMMANDS	164
APPLICATION ASSIGNMENTS	165

CHAPTER 4

PROGRAM FILES, DATA FILES, AND SUBDIRECTORIES	167
4.1 WHY USE THE COMMAND PROMPT SCREEN?	168
4.2 PROGRAM FILES, DATA FILES, AND THE OPERATING SYSTEM	169
4.3 SHAREWARE	170
4.4 ACTIVITY: USING DIR TO LOCATE THE HPB PROGRAM	171
4.5 USING APPLICATION PROGRAMS AND DATA FILES	172
4.6 ACTIVITY: USING APPLICATION PROGRAMS AND DATA FILES	173
4.7 MANAGING PROGRAM AND DATA FILES AT THE COMMAND PROMPT	178
4.8 HIERARCHICAL FILING SYSTEMS OR TREE-STRUCTURED DIRECTORIES	178
4.9 CREATING SUBDIRECTORIES	183
4.10 ACTIVITY: HOW TO CREATE SUBDIRECTORIES	183
4.11 THE CURRENT DIRECTORY	189
4.12 ACTIVITY: USING THE CD COMMAND	189
4.13 RELATIVE AND ABSOLUTE PATHS	191
4.14 ACTIVITY: CREATING MORE SUBDIRECTORIES	192
4.15 KNOWING THE DEFAULT DIRECTORY	196
4.16 THE PROMPT COMMAND	197
4.17 ACTIVITY: CHANGING THE PROMPT	198
4.18 SUBDIRECTORY MARKERS	199
4.19 ACTIVITY: USING SUBDIRECTORY MARKERS	200
4.20 CHANGING THE NAMES OF DIRECTORIES	204
4.21 ACTIVITY: USING MOVE TO RENAME A DIRECTORY	204
4.22 REMOVING DIRECTORIES	205
4.23 ACTIVITY: USING THE RD COMMAND	206
4.24 DELETING A DIRECTORY AND ITS SUBDIRECTORIES	208
4.25 ACTIVITY: USING RD WITH THE /S PARAMETER	208
4.26 USING MULTIPLE PARAMETERS WITH MD AND RD	210
4.27 ACTIVITY: USING MULTIPLE PARAMETERS WITH MD AND RD	210
4.28 UNDERSTANDING THE PATH COMMAND	212
4.29 ACTIVITY: USING THE PATH COMMAND	214
CHAPTER SUMMARY	218

DISCUSSION QUESTIONS	219
TRUE/FALSE QUESTIONS	220
COMPLETION QUESTIONS	221
MULTIPLE CHOICE QUESTIONS	221
WRITING COMMANDS	222
APPLICATION ASSIGNMENTS	222

CHAPTER 5

INTERNAL COMMANDS: COPY AND TYPE 230

5.1 WHY LEARN COMMAND LINE COMMANDS?	231
5.2 THE COPY COMMAND	232
5.3 REVIEW OF FILE-NAMING RULES	233
5.4 ACTIVITY: MAKING COPIES OF FILES	234
5.5 USING LONG FILE NAMES	238
5.6 ACTIVITY: COPYING FILES WITH LONG FILE NAMES	239
5.7 USING WILDCARDS WITH THE COPY COMMAND	240
5.8 ACTIVITY: USING WILDCARDS WITH THE COPY COMMAND	240
5.9 THE TYPE COMMAND	241
5.10 ACTIVITY: DISPLAYING FILES USING THE TYPE COMMAND	242
5.11 DUMMY FILES	245
5.12 ACTIVITY: USING THE COPY AND TYPE COMMANDS	246
5.13 MAKING ADDITIONAL FILES ON THE SAME DISK	249
5.14 ACTIVITY: USING THE COPY COMMAND	249
5.15 USING WILDCARDS WITH THE COPY COMMAND	253
5.16 ACTIVITY: USING WILDCARDS WITH THE COPY COMMAND	254
5.17 USING COPY AND DIR WITH SUBDIRECTORIES	255
5.18 ACTIVITY: USING COPY WITH SUBDIRECTORIES	256
5.19 USING SUBDIRECTORY MARKERS WITH THE COPY COMMAND	262
5.20 ACTIVITY: USING SHORTCUTS: THE SUBDIRECTORY MARKERS	263
5.21 OVERWRITING FILES WITH THE COPY COMMAND	264
5.22 ACTIVITY: OVERWRITING FILES USING THE COPY COMMAND	265
5.23 COMBINING TEXT FILES WITH THE COPY COMMAND	268
5.24 ACTIVITY: COMBINING FILES USING THE COPY COMMAND	269
5.25 PRINTING FILES	275
5.26 ACTIVITY: PRINTING FILES	276
CHAPTER SUMMARY	278
DISCUSSION QUESTIONS	280
TRUE/FALSE QUESTIONS	280
COMPLETION QUESTIONS	281
MULTIPLE CHOICE QUESTIONS	281
WRITING COMMANDS	282
APPLICATION ASSIGNMENTS	282

CHAPTER 6

USING DEL, REN, MOVE, AND RD /S 292

6.1 ELIMINATING FILES WITH THE DEL COMMAND	293
6.2 ACTIVITY: USING THE DEL COMMAND	294
6.3 DELETING MULTIPLE FILES	296

6.4 ACTIVITY: USING DEL WITH MULTIPLE PARAMETERS	297
6.5 DELETING FILES ON OTHER DRIVES AND DIRECTORIES	298
6.6 ACTIVITY: USING THE DEL COMMAND WITH INDIVIDUAL FILES	298
6.7 USING WILDCARDS WITH THE DEL COMMAND	303
6.8 ACTIVITY: USING THE DEL COMMAND	303
6.9 THE /P AND /S PARAMETERS WITH THE DEL COMMAND	306
6.10 ACTIVITY: USING /P AND /S WITH THE DEL COMMAND	306
6.11 CHANGING FILE NAMES	310
6.12 ACTIVITY: USING THE REN COMMAND TO RENAME FILES	311
6.13 CHANGING THE NAMES OF SUBDIRECTORIES	315
6.14 ACTIVITY: USING THE REN COMMAND TO RENAME SUBDIRECTORIES	315
6.15 USING REN WITH WILDCARDS	318
6.16 ACTIVITY: USING REN WITH WILDCARDS	318
6.17 USING RENAME ON DIFFERENT DRIVES AND DIRECTORIES	321
6.18 ACTIVITY: USING RENAME ON DIFFERENT DRIVES	321
6.19 MOVING FILES AND RENAMING DIRECTORIES	326
6.20 ACTIVITY: MOVING FILES AND RENAMING DIRECTORIES	327
6.21 RD /S REVISITED	335
6.22 ACTIVITY: USING RD AND RD /S	335
6.23 BACKING UP YOUR DATA DISK	337
6.24 ACTIVITY: BACKING UP WITH THE DISKCOPY COMMAND	338
6.25 BACKING UP FILES WITH THE COPY COMMAND	341
CHAPTER SUMMARY	343
DISCUSSION QUESTIONS	344
TRUE/FALSE QUESTIONS	345
COMPLETION QUESTIONS	345
MULTIPLE CHOICE QUESTIONS	345
WRITING COMMANDS	346
APPLICATION ASSIGNMENTS	347

CHAPTER 7

USING ATTRIB, SUBST, XCOPY, DOSKEY, AND THE TEXT EDITOR

357

7.1 FILE ATTRIBUTES AND THE ATTRIB COMMAND	358
7.2 ACTIVITY: USING ATTRIB TO MAKE FILES READ-ONLY	359
7.3 USING THE HIDDEN AND ARCHIVE ATTRIBUTES WITH ATTRIB	365
7.4 ACTIVITY: USING THE H AND THE A ATTRIBUTES	365
7.5 THE SUBST COMMAND	371
7.6 ACTIVITY: USING SUBST	372
7.7 THE XCOPY COMMAND	374
7.8 ACTIVITY: USING THE XCOPY COMMAND	375
7.9 MULTIPLE XCOPY PARAMETERS	385
7.10 ACTIVITY: USING MULTIPLE XCOPY PARAMETERS	385
7.11 DOSKEY	390
7.12 ACTIVITY: USING DOSKEY	392
7.13 THE COMMAND PROMPT TEXT EDITOR	395
7.14 ACTIVITY: USING THE DOS TEXT EDITOR	397
CHAPTER SUMMARY	404

DISCUSSION QUESTIONS	405
TRUE/FALSE QUESTIONS	405
COMPLETION QUESTIONS	406
MULTIPLE CHOICE QUESTIONS	406
WRITING COMMANDS	406
APPLICATION ASSIGNMENTS	407

CHAPTER 8

ORGANIZING AND MANAGING YOUR HARD DISK 419

8.1 WHY ORGANIZE A HARD DISK?	419
8.2 METHODS OF ORGANIZING A HARD DISK	423
8.3 ORGANIZING A DISK	427
8.4 ACTIVITY: MAKING A COPY OF THE DATA DISK	427
8.5 VIEWING THE DISK STRUCTURE WITH THE TREE COMMAND	429
8.6 ORGANIZING THE DATA DISK	431
8.7 ACTIVITY: SETTING UP THE PROG SUBDIRECTORY	431
8.8 THE MOVE COMMAND REVISITED	434
8.9 ACTIVITY: USING MOVE TO ORGANIZE YOUR DISK	435
8.10 A UTILITY PROGRAM—RNS.EXE	437
8.11 ACTIVITY: USING RNS, A SUBDIRECTORY RENAMING UTILITY	437
8.12 CHECKING A DISK	439
8.13 ACTIVITY: USING CHKDSK ON HARD AND FLOPPY DRIVES	441
8.14 THE VERBOSE PARAMETER WITH THE CHKDSK COMMAND	445
8.15 ACTIVITY: USING THE /V PARAMETER AND USING DIR PARAMETERS	446
8.16 USING CHKDSK TO REPAIR DISK PROBLEMS	450
8.17 ACTIVITY: USING CHKDSK TO REPAIR DISK PROBLEMS	452
8.18 CHECKING DISKS WITH SYSTEM TOOLS	455
8.19 ACTIVITY: CHECKING DISKS WITH SYSTEM TOOLS	455
8.20 CONTIGUOUS AND NONCONTIGUOUS FILES	458
8.21 ACTIVITY: USING CHKDSK TO SEE IF FILES ARE CONTIGUOUS	461
8.22 DEFRAGMENTING YOUR HARD DISK	463
8.23 ACTIVITY: USING DISK DEFRAGMENTER	464
CHAPTER SUMMARY	465
DISCUSSION QUESTIONS	467
TRUE/FALSE QUESTIONS	468
COMPLETION QUESTIONS	468
MULTIPLE CHOICE QUESTIONS	468
WRITING COMMANDS	469
APPLICATION ASSIGNMENTS	469

CHAPTER 9

PIPES, FILTERS, AND REDIRECTION 477

9.1 REDIRECTION OF STANDARD I/O (INPUT/OUTPUT)	478
9.2 ACTIVITY: USING > TO REDIRECT STANDARD OUTPUT	479
9.3 ACTIVITY: USING < TO REDIRECT STANDARD INPUT	480
9.4 ACTIVITY: USING >> TO ADD REDIRECTED OUTPUT TO A FILE	483
9.5 FILTERS	484
9.6 THE SORT COMMAND	484

9.7 ACTIVITY: USING SORT	485
9.8 FILTERS AND REDIRECTION	487
9.9 ACTIVITY: USING THE SORT COMMAND WITH REDIRECTION	488
9.10 THE FIND FILTER	491
9.11 ACTIVITY: USING THE FIND FILTER	492
9.12 PIPES	494
9.13 THE MORE FILTER	495
9.14 ACTIVITY: USING THE MORE FILTER	496
9.15 OTHER FEATURES OF MORE	503
9.16 ACTIVITY: USING THE EXTENDED FEATURES OF MORE	504
9.17 COMBINING COMMANDS WITH PIPES AND FILTERS	508
9.18 ACTIVITY: COMBINING COMMANDS	508
CHAPTER SUMMARY	511
KEY TERMS	512
DISCUSSION QUESTIONS	512
TRUE/FALSE QUESTIONS	513
COMPLETION QUESTIONS	513
MULTIPLE CHOICE QUESTIONS	513
WRITING COMMANDS	514
APPLICATION ASSIGNMENTS	515

CHAPTER 10

INTRODUCTION TO BATCH FILES

521

10.1 CONCEPTS OF BATCH AND INTERACTIVE PROCESSING	522
10.2 HOW BATCH FILES WORK	523
10.3 USING EDIT TO WRITE BATCH FILES	524
10.4 ACTIVITY: WRITING AND EXECUTING A BATCH FILE	525
10.5 WRITING AND EXECUTING A BATCH FILE TO SAVE KEYSTROKES	528
10.6 ACTIVITY: WRITING AND EXECUTING A ONE-LETTER BATCH FILE	529
10.7 USING BATCH FILES TO LOAD APPLICATION SOFTWARE	532
10.8 ACTIVITY: USING THE HPB APPLICATION PACKAGE	532
10.9 WRITING A BATCH FILE TO LOAD AN APPLICATION PROGRAM	537
10.10 ACTIVITY: WRITING A BATCH FILE TO EXECUTE HPB	537
10.11 CREATING SHORTCUTS FOR BATCH FILES ON THE DESKTOP	539
10.12 ACTIVITY: CREATING A SHORTCUT ON THE DESKTOP	540
10.13 BATCH FILES TO RUN WINDOWS PROGRAMS	543
10.14 ACTIVITY: CREATING A BATCH FILE TO RUN NOTEPAD	543
10.15 SPECIAL BATCH FILE COMMANDS	548
10.16 THE REM COMMAND	549
10.17 ACTIVITY: USING REM	549
10.18 THE ECHO COMMAND	550
10.19 ACTIVITY: USING ECHO	551
10.20 THE PAUSE COMMAND	553
10.21 ACTIVITY: USING PAUSE	553
10.22 STOPPING A BATCH FILE FROM EXECUTING	555
10.23 ACTIVITY: QUITTING A BATCH FILE	555
10.24 REPLACEABLE PARAMETERS IN BATCH FILES	557
10.25 ACTIVITY: USING REPLACEABLE PARAMETERS	558

10.26 MULTIPLE REPLACEABLE PARAMETERS IN BATCH FILES	563
10.27 ACTIVITY: USING MULTIPLE REPLACEABLE PARAMETERS	563
10.28 CREATING USEFUL BATCH FILES	568
10.29 ACTIVITY: WRITING USEFUL BATCH FILES	569
CHAPTER SUMMARY	572
DISCUSSION QUESTIONS	573
TRUE/FALSE QUESTIONS	573
COMPLETION QUESTIONS	574
MULTIPLE CHOICE QUESTIONS	574
WRITING COMMANDS	575
APPLICATION ASSIGNMENTS	575

CHAPTER 11

ADVANCED BATCH FILES

582

11.1 BATCH FILE COMMANDS	583
11.2 A REVIEW OF THE REM, PAUSE, AND ECHO COMMANDS	584
11.3 ADVANCED FEATURES OF ECHO AND REM	585
11.4 ACTIVITY: USING ECHO AND NUL	585
11.5 THE GOTO COMMAND	587
11.6 ACTIVITY: USING THE GOTO COMMAND	587
11.7 THE SHIFT COMMAND	589
11.8 ACTIVITY: USING THE SHIFT COMMAND	590
11.9 THE IF COMMAND	597
11.10 THE IF COMMAND USING STRINGS	597
11.11 ACTIVITY: USING THE IF COMMAND WITH STRINGS	598
11.12 TESTING FOR NULL VALUES	600
11.13 ACTIVITY: USING NULL VALUES	601
11.14 THE IF EXIST/IF NOT EXIST COMMAND	604
11.15 ACTIVITY: USING IF EXIST TO TEST FOR A FILE	604
11.16 THE IF ERRORLEVEL COMMAND TESTING	609
11.17 ACTIVITY: USING IF ERRORLEVEL WITH COPY	610
11.18 WRITING PROGRAMS TO TEST FOR KEY CODES	611
11.19 ACTIVITY: WRITING A SCRIPT FILE	613
11.20 THE ENVIRONMENT	616
11.21 ACTIVITY: USING SET AND THE ENVIRONMENTAL VARIABLES	617
11.22 USING SET AND THE ENVIRONMENT IN BATCH FILES	622
11.23 ACTIVITY: USING SET AND THE ENVIRONMENT IN BATCH FILES	622
11.24 THE DIRCMD ENVIRONMENTAL VARIABLE	627
11.25 ACTIVITY: USING DIRCMD	627
11.26 THE FOR...IN...DO COMMAND	630
11.27 ACTIVITY: USING THE FOR...IN...DO COMMAND	631
11.28 NEW FEATURES OF THE FOR...IN...DO COMMAND	638
11.29 ACTIVITY: USING THE NEW FEATURES OF THE FOR...IN...DO COMMAND	638
11.30 THE CALL COMMAND	648
11.31 ACTIVITY: USING CALL	648
CHAPTER SUMMARY	655
DISCUSSION QUESTIONS	656
TRUE/FALSE QUESTIONS	657