Tutorial 3

Working with Files

At a Glance

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Instructor's Notes

TUTORIAL OVERVIEW

In the first session students learn about the importance and use of ASCII text files. The student creates an ASCII file by redirecting output to a file on disk, uses piping to use the output of one command as the input for another command, combines the pipe operator with the MORE filter, and redirects input by writing the contents of an ASCII file to the monitor. The student uses the SORT and FIND filters to sort the contents of an ASCII file and locate information within an ASCII file. At the end of the session, the student uses the append output redirection operator to add the output of a command to the end of an existing file.

In the second session, students redirect the output of a command to a printer, and then the student performs basic file operations, such as copying, renaming, and deleting individual files and groups of files using wildcards.

Case Scenario

All the tutorials use and build on the same case scenario. The company for the case scenario is SolarWinds Unlimited, a California corporation that harnesses wind power to provide energy to its customers. The lead character is Isabel Navarro, the company's computer systems specialist, who supervises the installation and use of Windows 2000 Professional (or Windows XP Professional) on the computers at SolarWinds' southern California headquarters and who provides training on the use of the command line environment in Windows 2000 (and Windows XP) to her technical support staff. The student is placed in the role of an employee who is developing the technical skills needed to work as an assistant network administrator under Isabel Navarro.

Submitting Assignments

In your course information handouts, and during your course orientation, describe how you want the students to submit their lab assignments. For example, when completing the Review Assignments and Case Problems at the end of a tutorial, do you want the student to:

- Type up and print their responses to questions,
- Print hardcopy of other types of output, where appropriate (such as redirecting a directory listing or directory structure to a file on disk),
- Provide you with a disk that contains the results of completing an assignment (such as reorganizing the folder structure of a disk and copying or moving files to different directories)
- E-mail you their responses to questions and, where appropriate, include file attachments (with output produced during a command operation or a copy of a batch program)
- Or some combination of the above (depending on the tutorial and other exercises you assign)

TUTORIAL OUTLINE

Lecture Topics	Page #	Teaching Suggestions in this Manual
Working with ASCII Text Files	96	See *Lecture Notes,* "Working with ASCII Text Files"
Using Redirection to Create an ASCII Text File	98	See *Lecture Notes,* "Working with ASCII Text Files"
Viewing the Contents of an ASCII Text File	100	See *Lecture Notes,* "Working with ASCII Text Files"
Piping Output to the MORE Filter	102	See *Lecture Notes,* "Working with ASCII Text Files"
Redirecting Input Using an ASCII Text File	104	See *Lecture Notes,* "Working with ASCII Text Files"
Sorting ASCII Text Files	107	See *Lecture Notes,* "Working with ASCII Text Files"
Searching the Contents of an ASCII Text File	109	See *Lecture Notes,* "Working with ASCII Text Files"
Appending Output to an ASCII Text File	111	See *Lecture Notes,* "Working with ASCII Text Files"
Redirecting Output to the Printer	114	See *Lecture Notes,* "Redirecting Output to the Printer"
Copying Files	116	See *Lecture Notes,* "Copying Files"
Renaming Files	117	See *Lecture Notes,* "Renaming Files"
Deleting Files	120	See *Lecture Notes,* "Deleting Files"

WINDOWS VERSIONS

The following table lists commands and features in Windows 2000 and Windows XP and indicates whether these commands and features are found in Windows 98, Windows 95, and Windows NT 4.0. Since Windows ME is an upgrade to Windows 98, we expect that command line operations are similar to those in Windows 98.

Key: A "Y" indicates that the component, feature, operation, or command is available in Windows 98, Windows 95, and/or Windows NT 4.0, and is comparable or identical in the way in which it functions. A "N" or "Not Available" (for emphasis) indicates that the component, feature, operation, or command is not found in a specific version of Windows.

Command or Feature	**Win98**	**Win95**	**WinNT 4.0**
Keys:			
[F3] (to recall a command line)	Y	Y	Y
Commands:			
[*command*] > *filename*	Y	Y	Y
[*command*] > *printer port*	Y	Y	Y
TYPE *filename*	Y	Y	Y
[*command*] | MORE	Y	Y	Y
MORE < *filename*	Y	Y	Y
SORT < *filename*	Y	Y	Y
SORT /R < *filename*	Y	Y	Y
FIND "*string*" *filename*	Y	Y	Y
[*command*] >> *filename*	Y	Y	Y
ECHO. >> *filename*	Y	Y	Y
DIR > PRN	Y	Y	Y
COPY *source* [*destination*]	Y	Y	Y
RENAME [*drive:*][*path*] filename1 filename2	Y	Y	Y
REN [*drive:*][*path*] filename1 filename2	Y	Y	Y
DEL *filename* [/P]	Y	Y	Y
ERASE *filename*	Y	Y	Y

TECHNICAL NOTES

Materials Needed

- Student Data Disk #1.
- Windows 2000 Professional, Windows XP Professional, or Windows XP Home Edition installed on the lab computers.
- Power Users logon account under Windows 2000 Professional or Windows XP (if a member of a domain), or a Computer Administrator logon account (if a member of a workgroup).

Preparing the Student Data Disks

The following information is taken from the Read This Before You Begin section at the beginning of the textbook:

To the Instructor

The files for the Data Disks are available on the Instructor's Resource Kit for this title. Follow the instructions in the Help file on the CD-ROM to install the Data Disk files to your network or standalone computer. For information on creating Data Disks, see the "To the Student" section below.

You are granted a license to copy the Data Files to any computer or computer network used by students who have purchased this book.

The Instructor's Resource Kit and Test Bank have also been updated for Windows XP Professional and Windows XP Home Edition.

To the Student

Data Disks

To complete the Tutorials, Review Assignments, and Case Problems in this book, you need 3 Data Disks. Your instructor will either provide you with the Data Disks or ask you to make your own.

If you are making your own Data Disks, you will need 3 blank, formatted high-density diskettes. You will need to copy a set of folders from a file server or standalone computer or the Web onto your disks. Your instructor will tell you which computer, drive letter, and folders contain the files you need. You can also download the files by going to www.course.com, clicking Data Disk Files, and following the instructions on the screen. If you download the files for the 3 Data Disks from the Course Technology, Inc. Web site, then you will find that there is one executable program file for each Data Disk. Each of these files is a self-extracting image file that contains an exact image of all the files and folders for each Data Disk stored in the order in which they were originally placed on the disk.

To extract the files and folders for each Data Disk, insert a blank, formatted high-density diskette in drive A, and then double-click the image file's icon. In the resulting command-line window, press the letter A (for drive A). The utility then extracts the files and folders to the diskette in drive A. The command-line window will close when the operation is complete. When the operation is complete, close the command-line window if it does not automatically close.

The following list shows you which folders go on each of your disks, so that you will have enough disk space to complete all the tutorials, Review Assignments, and Case Problems:

Data Disk 1

Write this on the disk label: Data Disk 1 – Tutorials 1, 2, 3, 4, 6, 8 & 9

Contents – The self-extracting image file will put 41 files on the disk (no folders).

Data Disk 2

Write this on the disk label: Data Disk 2 – Tutorials 5 & 6

Contents – The self-extracting image file will put these folders on the disk: My Documents (which in turn contains the Company Templates, Designs, Memos, Overhead Transparencies, and Training folders).

Data Disk 3

Write this on the disk label: Data Disk 3 – Tutorials 8 & 10

Contents – The self-extracting image file will put these folders on the disk: SolarWinds (which in turn contains the Graphic Designs, Memos, Presentations, and Templates folders) as well as the Employees.csv file.

When you begin each tutorial, be sure you are using the correct Data Disk. See the inside front or inside back cover of this book for more information on Data Disk files, or ask your instructor or technical support person for assistance.

Appendix

The Appendix at the end of the book will help you complete the tutorials in this book if you are using Windows XP Professional or Windows XP Home Edition. The Appendix contains information on new Windows XP features related to what is covered in the textbook for Windows 2000. The Appendix also contains updates and Help information to assist you with the tutorials. As you step through each tutorial, you can consult the corresponding tutorial in the Appendix for additional topics, updates, and Help. At the end of the Appendix is a supplemental glossary with additional terms covered in the Appendix.

Using Your Own Computer

If you are going to work through this book using your own computer, you need:

- **Computer System** Windows 2000 Professional, Windows XP Professional, or Windows XP Home Edition must be installed on your computer. This book assumes a standard installation of Windows 2000 Professional, Windows XP Professional, and Windows XP Home Edition.
- **Data Disks** You will not be able to complete the tutorials or exercises in this book using your own computer until you have the Data Disks.

Visit Our World Wide Web Site

Additional materials designed especially for you are available on the World Wide Web. Go to http://www.course.com.

LECTURE NOTES

Key Terms

Term	Page	Definition
ANSI	97	(1) American National Standards Institute (ANSI), a character set found in all versions of Windows that supports characters from different languages (the first 128 characters are identical to the first 128 characters in the ASCII character set), (2) An organization that sets computer standards in the United States
append redirection operator (>>)	111	The operator for appending output to the bottom of an ASCII file
ASCII	96	American Standard Code for Information Interchange (ASCII), a seven-bit coding scheme for representing 128 character codes, including the uppercase and lowercase letters of the American alphabet, digits, and a limited set of symbols and control codes
ASCII code, or ASCII value	96	A numerical code for an ASCII character (for example, ASCII 65 is the code for the uppercase letter "A")
ASCII text file	96	A simple file format in which data is stored as text
binary files	106	Files that can contain any kind of data, rather than just ASCII text
control code	96	An ASCII code for the use of the Ctrl (Control) key with another key (for example, ASCII 9 is the control code for Ctrl+I, the Tab key)
destination file, or target file	116	The new file produced during a copy operation
device name	114	A name assigned to a device, or hardware component, in a computer system
end-of-file (EOF) code	96	An ASCII control code, Ctrl+Z, that is the last character in an ASCII file, and that marks the end of the file
extended ASCII code	96	A variation of the ASCII code that has values ranging from zero to 255 and that uses 8 bits to encode characters. The 128 additional codes includes values for foreign-language characters or symbols, graphics characters, and scientific characters
filter	102	A command that modifies the output of another command
initialization files	105	Files with the file extension "ini" that contain settings used by the operating system and other programs
input redirection operator (<)	104	The operator for redirecting input from a file on disk to the monitor or to another command
output redirector operator (>)	98	The operator used to redirect output to a file or device
path	117	The name of the directory (or folder), or set of directories, that identifies the location of a file in the syntax of a command
pipe operator (|)	102	The operator for redirecting the output of one command so that it becomes the input for another command
pipeline	102	The command line for redirecting the output of one command so that it becomes the input for another command
piping	102	The process of redirecting output of one command so that it becomes the input for another command
redirect	98	To change the destination of output, or the source of input
source file	116	The original file that you copy to produce a new file
standard input device	98	The keyboard, the device from which the operating system expects input

Term	Page	Definition
standard output device	98	The display device, the device to which the operating system directs or sends output
Unicode	97	A character set, and file format, that uses 16 bits to encode characters to represent 65,536 characters and symbols, including all the symbols in all written languages in the world

Working with ASCII Text Files

The purpose of this section of the tutorial is to provide:

- an overview of ASCII files,
- the use of the output redirection operator (>), pipe operator (|), input redirection operator (<), and append output redirection operator (>>) with ASCII files, and
- the use and syntax of the MORE, SORT, and FIND filters

Students examine the difference between the standard ASCII code, the extended ASCII code, the ANSI character set, and Unicode. The student then uses redirection to create an ASCII text file, is introduced to the concept of the standard input device and the standard output device, and examines the syntax for redirecting output to a file versus a device. After creating an ASCII text file, the student uses the TYPE command to view the contents of the file. Then, students use the pipe operator (|) to transfer the output of the TYPE command to the MORE filter. Students redirect input from an ASCII file with the input redirection operator (<), use TYPE and MORE to examine the concepts of other types of files (other than ASCII files), redirect input from an ASCII file to the SORT filter, search the contents of an ASCII file for a string using the FIND filter, and append output to the end of an ASCII file with the append output redirection operator (>>).

During the classroom presentation, demonstration, and discussion, students might need help in understanding the following issues:

- The difference between different character sets and file formats – ASCII, extended ASCII, ANSI, and Unicode
- The concept of the standard input device and standard output device
- The difference between the output redirection, pipe, input redirection, and append redirection operators
- The process for combining redirection and pipe operators with the MORE, SORT, and FIND filters

Redirecting Output to the Printer

This section discusses the concept of device names, and illustrates the process for redirecting output to the printer port. Warn students that in some cases, they might not be able to redirect output to a printer port. In the case of an assignment that calls for the student to redirect output to a printer port, the student might need to redirect output to a file, and then print the file with Notepad.

During the classroom presentation, demonstration, and discussion, students might need help in understanding how to specify device names, such as LPT1 (or LPT1:), in command lines.

Copying Files

This section illustrates the use of the COPY command, and the concept of the source file and the

destination file, or target file.

Renaming Files

This section introduces the REN and RENAME commands, and introduces students to the use of the path when specifying the source file. Students rename individual files, and use wildcards to rename groups of files.

During the classroom presentation, demonstration, and discussion, students might need help in understanding why the new name for a file should not include the drive or path for that file.

Deleting Files

Students examine the use of the DEL and ERASE commands, the importance of the Prompt for Verification switch (/P), and the use of the *.* wildcard specification to represent all files.

EXTRA CASE PROBLEM

Documenting Settings in the Windows Environment at Computers for You! Computers for You! is a San Diego dealership that designs custom computers for its clientele. Maria Alonso, the owner, discusses with each customer, their particular needs, and after a customer has decided on what components they want in their computer system, she and her staff build the system, and then install and configure the operating system and application software for the customer. After the system is built, and before the customer takes it home, Maria and her staff check the computer system. As part of this final system check, they examine the settings in the Windows environment. Maria asks you to view the settings in the Windows environment, and then redirect the output to a file on disk so that you can print a copy that all of the staff can use.

As you complete each step, write down the commands you use, as well as the answer to any questions so that you can submit them to your instructor.

1. Insert your Data Disk into drive A.
2. Open a Command Prompt window, and then change the default drive to the drive containing your Data Disk.
3. Make a duplicate copy of your Data Disk.
4. On the duplicate copy of your Data Disk, display a directory of files with the "txt" file extension and, if necessary, delete all these files.
5. On your Data Disk, use the following command to create an ASCII file with the company name: `ECHO Computers for You! > "Windows Environment.txt"`
6. Use the TYPE command to view the contents of this file and to verify that the ECHO command worked properly. What command did you enter for this operation?
7. Use the `ECHO.` command and the append redirection operator to append two blank lines to the bottom of "Windows Environment.txt." Remember to type a period immediately after the ECHO command. What command did you enter for this operation?
8. Use the ECHO command to append your name, and any other course information you want to include on the final printed copy, to the bottom of "Windows Environment.txt."
9. Use the `ECHO.` command to append a blank line to the bottom of "Windows Environment.txt."
10. Use the SET command to view the contents of the Windows environment. Pipe the output to the MORE filter to produce paged output. What command did you use? View the remainder of the output, and then return to the command prompt.
11. Append the output of the SET command to "Windows Environment.txt." What command did you enter for this operation?
12. Use the MORE filter and the input redirection operator to verify that the last step worked properly. What command did you enter for this operation? View the remainder of the output, and then return to the command prompt.
13. Use the TYPE command with redirection to print a copy of "Windows Environment.txt."
14. Use the EXIT command to close the Command Prompt window.

Solutions

SOLUTIONS TO TUTORIAL

Please see the file "SolarWinds Templates Files.txt" in the Tutorial folder under the Tutorial.03 folder on the Solutions disk.

Page 115, Step 4: The student redirects a directory listing to their printer port. The student's printed copy should be similar to the following:

```
 Volume in drive A has no label.
 Volume Serial Number is F065-B557

 Directory of A:\

11/05/2003  04:22p              24,064 File0000.chk
11/05/2003  02:35p              10,258 ~WRC0070.tmp
09/05/2003  02:25p              13,824 Commission on Sales.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
11/17/2003  04:41p              15,872 Weekly Worklog.xls
10/29/2003  10:30a              74,024 Invoice Form.wk4
05/07/2003  09:48a              15,872 Software Quotes.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
01/23/2003  09:21a              78,848 2002 Sales Summary #2.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
01/08/2003  02:06p              24,064 Break Even Analysis.xls
01/23/2003  08:16a              41,472 2002 Sales Summary #1.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
11/20/2003  08:55a              25,088 Projected Growth Memo.doc
08/08/2003  04:12p              20,480 Proposal.doc
03/27/2003  11:19a              22,028 Sales.wk4
10/31/2003  03:33p              14,848 Savings Plan.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
09/23/2003  01:12p              31,232 Fonts.xls
06/26/2003  10:24a              53,248 Hardware.ppt
06/26/2003  09:30a              52,736 Application Software.ppt
06/26/2003  10:40a              42,496 Software.ppt
06/26/2003  10:55a              41,984 Using the Mouse.ppt
08/08/2003  03:22p              26,624 Formatting Features.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
10/16/2003  10:31a              84,534 Colors of the Rainbow.bmp
10/16/2003  09:52a              84,446 Color Palette.bmp
10/16/2003  10:15a              17,910 Palette #1.bmp
10/16/2003  10:21a              17,910 Palette #2.bmp
01/24/2003  08:45a              18,944 Balance Sheet.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
04/09/2003  02:12p              21,504 Employees.xls
12/11/2003  01:08p               2,736 Templates.txt
12/11/2003  01:23p               1,040 Sales Templates.txt
              43 File(s)      1,251,846 bytes
               0 Dir(s)         203,264 bytes free
```

SOLUTIONS TO REVIEW ASSIGNMENTS

Please see the files "Spreadsheet Solutions.txt", "Spreadsheet Solution Files.txt", and "Backup of Spreadsheet Solution Files.txt" in the Review Assignments folder under the Tutorial.03 folder on the Solutions disk.

Scenario: Another staff member requests a report that lists the files with templates for spreadsheet solutions. Isabel asks you to create an ASCII text file that contains a list of Excel spreadsheets on the templates disk, verify the contents of the file using the TYPE command as well as the MORE, SORT, and FIND filters, and then append a list of Lotus 1-2-3 spreadsheets on the templates disk. She also asks you to provide the file on a separate disk, and keep a copy of the file for later use.

As you complete each step, write down the commands you use, as well as the answer to each question, so that you can submit them to your instructor.

All the Review Assignments steps are listed. Questions are shown in italics, and answers are shown in boldface on a separate line (or lines) from the question.

1. Insert your Data Disk that you used in the tutorial into drive A.

2. Open a Command Prompt window and change the default drive to drive A.

3. Display a directory listing of all the files on your Data Disk that contain the "xls" file extension.

   What command did you enter to perform this operation?

   `dir *.xls`

4. After you have verified that this command selects just files with the "xls" file extension, recall the previous command and redirect the output to a file on disk called "Spreadsheet Solutions.txt".

   What command did you enter to perform this operation?

   `dir *.xls > "Spreadsheet Solutions.txt"`

5. Use the TYPE command to view the contents of this file, and page the output one screen or window at a time with the MORE filter.

   What command did you enter to perform this operation?

   ```
   type "Spreadsheet Solutions.txt" | more
   ```

   What is the name of the first file listed?

   ```
   Commission on Sales.xls
   ```

   ***Note*: If the student uses the Sort Order switch with the DIR command, or specifies the Sort Order switch as the default switch for the DIR command, then the first file will be "2003 Sales Summary #1.xls".**

   View the remainder of the output and return to the command prompt.

6. Redirect input from the "Spreadsheet Solutions.txt" file on disk to the MORE filter.

   What command did you enter to perform this operation?

   ```
   more < "Spreadsheet Solutions.txt"
   ```

   View the remainder of the output and return to the command prompt.

7. Redirect input from the "Spreadsheet Solutions.txt" file on disk to the SORT filter, and page the output one screen or window at a time with the MORE filter.

   What command did you enter to perform this operation?

   ```
   sort < "Spreadsheet Solutions.txt" | more
   ```

   What is the name of the first file in the sorted list?

   ```
   Sales Projections.xls
   ```

   How is the information sorted?

   By date. If the date is the same, then by time. If the date and time are the same, then by file size. If the date, time, and file size are the same, then by filename. (*Note*: All of these actually occur.)

   View the remainder of the output and return to the command prompt.

8. Use the FIND filter to search the "Spreadsheet Solutions.txt" file for files that include the word "Summary" in the filename.

   What command did you enter to perform this operation?

   ```
   find "Summary" "Spreadsheet Solutions.txt"
   ```

   What are the names of the files located by the FIND filter?

   ```
   2003 Sales Summary #1.xls
   2003 Sales Summary #2.xls
   ```

   (*Note*: If the student completes the tutorial, then they change the original filenames 2002 Sales Summary #1.xls and 2002 Sales Summary #2.xls to these new names. Also, the files might be displayed in the reverse order shown above.)

9. Use the ECHO command and the append output redirection operator to add two blank lines to the bottom of the "Spreadsheet Solutions.txt" file.

   What command did you enter to perform this operation?

   ```
   echo. >> "Spreadsheet Solutions.txt"
   ```

10. Display a directory listing of all files with the "wk4" file extension in alphabetical order by filename.

    What command did you enter to perform this operation?

    ```
    dir *.wk4
    ```

    or

    ```
    dir *.wk4 /o
    ```

11. Recall the previous command, and append the output to the bottom of the "Spreadsheet Solutions.txt" file.

    What command did you enter to perform this operation?

    ```
    dir *.wk4 >> "Spreadsheet Solutions.txt"
    ```

    or

    ```
    dir *.wk4 /o >> "Spreadsheet Solutions.txt"
    ```

12. You decide to give your file a more specific name, so you rename it to "Spreadsheet Solution Files.txt".

    What command did you enter to perform this operation?

    ```
    ren "Spreadsheet Solutions.txt" "Spreadsheet Solution Files.txt"
    ```

    (*Note*: Some students might use RENAME instead, and/or they might use an asterisk wildcard for the extension, which does not change.)

13. Create a copy of the "Spreadsheet Solution Files.txt" file, and name it "Backup of Spreadsheet Solution Files.txt".

    What command did you enter to perform this operation?

    ```
    copy "Spreadsheet Solution Files.txt" "Backup of Spreadsheet
      Solution Files.txt"
    ```

    (*Note*: Some students might use an asterisk wildcard for the extension, which does not change.)

14. Delete the Templates.txt and "Sales Templates.txt" files from your Data Disk, using the Prompt for Verification switch to confirm that you are deleting the right file.

    What command(s) did you enter to perform this operation?

    Some students might perform this operation in two steps:

    ```
    del Templates.txt /p
    ```

    ```
    del "Sales Templates.txt" /p
    ```

    Other students might use one step:

    ```
    del *Templates* /p
    ```

15. Close the Command Prompt window, and remove the diskette from the drive.

16. Submit a copy of the "Spreadsheet Solution Files.txt" file and your answers to the above questions, either as a printout, on diskette, or by e-mail, as your instructor requests, along with any other requested documentation.

Here is the printed solution for the "Spreadsheet Solution Files.txt" file and the "Backup of Spreadsheet Solution Files.txt" (both are identical in content):

```
 Volume in drive A has no label.
 Volume Serial Number is F065-B557

 Directory of A:\

09/05/2003  02:25p              13,824 Commission on Sales.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
11/17/2003  04:41p              15,872 Weekly Worklog.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
01/23/2003  09:21a              78,848 2003 Sales Summary #2.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
01/08/2003  02:06p              24,064 Break Even Analysis.xls
01/23/2003  08:16a              41,472 2003 Sales Summary #1.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
```

```
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
10/31/2003  03:33p              14,848 Savings Plan.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
09/23/2003  01:12p              31,232 Fonts.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
01/24/2003  08:45a              18,944 Balance Sheet.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
04/09/2003  02:12p              21,504 Employees.xls
01/15/2003  02:21p              17,408 Five Year Plan Draft.xls
              28 File(s)        694,272 bytes
               0 Dir(s)         202,752 bytes free


 Volume in drive A has no label.
 Volume Serial Number is F065-B557

 Directory of A:\

10/29/2003  10:30a              74,024 Invoice Form.wk4
03/27/2003  11:19a              22,028 Sales.wk4
               2 File(s)         96,052 bytes
               0 Dir(s)         201,216 bytes free
```

***Note*: If the student uses the Sort Order switch with the DIR command, or specifies the Sort Order switch as the default switch for the DIR command, then filenames will be arranged in alphabetical order.**

SOLUTIONS TO CASE PROBLEMS

Case 1 – Preparing a Report Using Redirection at Stratton Graphics

Please see the files "Stratton Graphics.txt" and *"Spreadsheet Files.txt" in the Tutorial.03 folder on the Solutions disk.*

Case Scenario: Eve Stratton, owner of Stratton Graphics, and her staff specialize in the design of 3-D images and company presentations for the Web sites of her business clients. So she can develop new proposals, presentations, and graphics for projects with short turnaround times, she relies on an important set of files. She asks you to prepare and print a report that summarizes the types of files on the disk by file type and file size.

As you complete each step, write down the commands you use as well as the answer to each question so that you can submit them to your instructor.

All the Review Assignments steps are listed. Questions are shown in italics, and answers are shown in boldface on a separate line (or lines) from the question.

1. Open a Command Prompt window.

2. Insert your Data Disk into drive A, and then make that drive the default drive.

3. Display a directory listing of your Data Disk *in alphabetical order by file extension*, and redirect the output to a file on your data disk with the name "Stratton Graphics.txt".

   What command did you enter for this operation?

   dir /oe > "Stratton Graphics.txt"

4. Verify that the operating system created the "Stratton Graphics.txt" file on diskette by redirecting input from the file and displaying the input one screen or window at a time.

   What command did you enter for this operation?

   more < "Stratton Graphics.txt"

   or

   more "Stratton Graphics.txt"

   What is the name of the first file listed in this file?

   Color Palette.bmp

   Note: The first file might be "Colors of the Rainbow.bmp", or in the case of Windows XP, "Palette #1.bmp".

   View the remainder of the input, and return to the command prompt.

5. Append two blank lines to the bottom of the "Stratton Graphics.txt" file.

   What two commands did you enter for these operations?

   Two **echo. >> "Stratton Graphics.txt"** commands

6. Display another directory listing of your Data Disk *in order by file size*, from the largest to the smallest file, and append the output to the "Stratton Graphics.txt" file.

   What command did you enter for this operation?

   dir /o-s >> "Stratton Graphics.txt"

7. Verify that the operating system appended the output to the "Stratton Graphics.txt" file by redirecting input from this file on disk and displaying the input one screen or window at a time.

   What command did you enter for this operation?

   more < "Stratton Graphics.txt"

   or

   more "Stratton Graphics.txt"

   View the remainder of the input, and return to the command prompt.

8. Display a directory listing of all files with the "xls" file extension in alphabetical order, and redirect the output to your printer port.

   What command did you use to perform this operation?

   dir *.xls /o > prn

   Note: Some students will not be able to complete this command operation, and will have to redirect the results to a text file on disk, and then print the file with Notepad.

   The files included in the student's printed copy will depend on whether the student has already completed the tutorial, the Review Assignments, other case problems, and the Extra Case Problem. However, the student's printed copy will be similar to the following solution:

```
 Volume in drive A has no label.
 Volume Serial Number is F065-B557

 Directory of A:\

01/23/2003  08:16a              41,472 2003 Sales Summary #1.xls
01/23/2003  09:21a              78,848 2003 Sales Summary #2.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
01/24/2003  08:45a              18,944 Balance Sheet.xls
01/08/2003  02:06p              24,064 Break Even Analysis.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
09/05/2003  02:25p              13,824 Commission on Sales.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
04/09/2003  02:12p              21,504 Employees.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/15/2003  02:21p              17,408 Five Year Plan Draft.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
09/23/2003  01:12p              31,232 Fonts.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
10/31/2003  03:33p              14,848 Savings Plan.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
11/17/2003  04:41p              15,872 Weekly Worklog.xls
              28 File(s)        694,272 bytes
               0 Dir(s)         201,728 bytes free
```

9. Submit a copy of the "Stratton Graphics.txt" file, your printed output of all files with the "xls" file extension, and your answers to the above questions, either as a printout, on diskette, or by e-mail, as your instructor requests, along with any other requested documentation.

Here is a printed copy of the Stratton Graphics.txt file:

```
 Volume in drive A has no label.
 Volume Serial Number is F065-B557

 Directory of A:\

10/16/2003  09:52a              84,446 Color Palette.bmp
10/16/2003  10:31a              84,534 Colors of the Rainbow.bmp
10/16/2003  10:21a              17,910 Palette #2.bmp
10/16/2003  10:15a              17,910 Palette #1.bmp
11/20/2003  08:55a              25,088 Projected Growth Memo.doc
08/08/2003  04:12p              20,480 Computer Training Proposal.doc
06/26/2003  10:24a              53,248 Hardware.ppt
06/26/2003  10:55a              41,984 Using the Mouse.ppt
06/26/2003  10:40a              42,496 Software.ppt
06/26/2003  09:30a              52,736 Application Software.ppt
11/05/2003  02:35p              10,258 ~WRC0070.tmp
12/11/2003  02:15p                   0 Stratton Graphics.txt
10/29/2003  10:30a              74,024 Invoice Form.wk4
03/27/2003  11:19a              22,028 Sales.wk4
01/23/2003  09:21a              78,848 2003 Sales Summary #2.xls
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
10/31/2003  03:33p              14,848 Savings Plan.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
09/23/2003  01:12p              31,232 Fonts.xls
01/23/2003  08:16a              41,472 2003 Sales Summary #1.xls
01/08/2003  02:06p              24,064 Break Even Analysis.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
11/17/2003  04:41p              15,872 Weekly Worklog.xls
01/24/2003  08:45a              18,944 Balance Sheet.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
04/09/2003  02:12p              21,504 Employees.xls
01/15/2003  02:21p              17,408 Five Year Plan Draft.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
09/05/2003  02:25p              13,824 Commission on Sales.xls
              42 File(s)      1,241,414 bytes
               0 Dir(s)         206,848 bytes free


 Volume in drive A has no label.
 Volume Serial Number is F065-B557
```

```
 Directory of A:\

10/16/2003  10:31a              84,534 Colors of the Rainbow.bmp
10/16/2003  09:52a              84,446 Color Palette.bmp
01/23/2003  09:21a              78,848 2003 Sales Summary #2.xls
10/29/2003  10:30a              74,024 Invoice Form.wk4
06/26/2003  10:24a              53,248 Hardware.ppt
06/26/2003  09:30a              52,736 Application Software.ppt
07/09/2003  09:42a              49,152 Addressing Cells.xls
06/26/2003  10:40a              42,496 Software.ppt
06/26/2003  10:55a              41,984 Using the Mouse.ppt
01/23/2003  08:16a              41,472 2003 Sales Summary #1.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
09/23/2003  01:12p              31,232 Fonts.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
11/20/2003  08:55a              25,088 Projected Growth Memo.doc
01/08/2003  02:06p              24,064 Break Even Analysis.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
03/28/2003  04:41p              22,528 Product List.xls
03/27/2003  11:19a              22,028 Sales.wk4
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
04/09/2003  02:12p              21,504 Employees.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
08/08/2003  04:12p              20,480 Computer Training Proposal.doc
01/24/2003  08:45a              18,944 Balance Sheet.xls
10/16/2003  10:21a              17,910 Palette #2.bmp
10/16/2003  10:15a              17,910 Palette #1.bmp
01/15/2003  02:21p              17,408 Five Year Plan Draft.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
11/17/2003  04:41p              15,872 Weekly Worklog.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
10/31/2003  03:33p              14,848 Savings Plan.xls
09/05/2003  02:25p              13,824 Commission on Sales.xls
11/05/2003  02:35p              10,258 ~WRC0070.tmp
12/11/2003  02:16p               2,780 Stratton Graphics.txt
              42 File(s)      1,244,194 bytes
               0 Dir(s)         204,800 bytes free
```

The printed copy of the Spreadsheet Files.txt file is shown in Step 9.

Case 2 – Using Filters at Bayview Travel Service

Please see the files "Bayview Travel.txt", "Financial Analyses.txt", and "Spreadsheet Files.txt" in the Case 2 folder under the Tutorial.03 folder on the Solutions disk.

Case Scenario: Bayview Travel Service is a small travel agency that arranges personal, group, and escorted tours for its customers, as well as handling worldwide reservations and tickets. Toby Landucci, the financial analyst at Bayview Travel Service, has developed a set of computer files for use in his job over the last fiscal year. For the upcoming year's budget projection, he wants to first make a copy of the diskette containing his budget files and then to prepare and print a list of files he plans to adapt for the new year. He asks you to document the list of files that he currently uses and then prepare and print a report that lists the files he will use for next year's budget analysis.

As you complete each step, write down the commands you use, as well as the answer to each question, so that you can submit them with to your instructor.

All the Review Assignments steps are listed. Questions are shown in italics, and answers are shown in boldface on a separate line (or lines) from the question.

1. Insert your Data Disk into drive A.

2. Open a Command Prompt window.

3. Change the default drive to the drive containing your Data Disk.

4. Display a directory listing of your Data Disk in alphabetical order by filename, and redirect the output to a file on your Data Disk with the name "Bayview Travel.txt".

   What command did you enter for this operation?

   `dir /o > "Bayview Travel.txt"`

   Note: The student will produce the same output if he or she uses this variation of the above command:

`dir /on > "Bayview Travel.txt"`

5. Verify that the operating system created the "Bayview Travel.txt" file on disk by redirecting input from the file and displaying it one screen or window at a time.

   What command did you enter for this operation?

   `more < "Bayview Travel.txt"`

   or

   `more "Bayview Travel.txt"`

   What is the name of the second file listed?

   `2003 Sales Summary #1.xls` (assuming the student completed the tutorial)

   View the remainder of the input, and return to the command prompt.

6. Use the FIND filter to search "Bayview Travel.txt" for "xls" in the filename, and page the output one screen at a time.

   What command did you enter for this operation?

   `find "xls" "Bayview Travel.txt" | more`

   What is the first file in this selection?

   `2003 Sales Summary #1.xls` (assuming the student completed the tutorial)

7. After you test the FIND filter and verify that it is selecting the files you need, use the FIND filter to select the same listings, but this time redirect the output to a file on disk with the name, "Financial Analyses.txt".

   What command did you enter for this operation?

   `find "xls" "Bayview Travel.txt" > "Financial Analyses.txt"`

8. Redirect input using the "Financial Analyses.txt" file on disk to the SORT filter, and display the output one full window at a time.

   What command did you enter for this operation?

   `sort < "Financial Analyses.txt" | more`

   or

   `sort "Financial Analyses.txt" | more`

   What is the name of the first file displayed in the sorted listing?

   `Sales Projections.xls`

   View the remainder of the input, and return to the command prompt.

9. Display a directory listing of all files with the "xls" file extension in alphabetical order, and redirect the output to your printer port.

   ***Note*: Some students will not be able to complete this command operation, and will have to redirect the results to a text file on disk, and then print the file with Notepad.**

   The files included in the student's printed copy will depend on whether the student has already completed the tutorial, the Review Assignments, other case problems, and the Extra Case Problem. However, the student's printed copy will be similar to the following solution:

```
 Volume in drive A has no label.
 Volume Serial Number is F065-B557

 Directory of A:\

09/05/2003  02:25p              13,824 Commission on Sales.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
11/17/2003  04:41p              15,872 Weekly Worklog.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
01/23/2003  09:21a              78,848 2003 Sales Summary #2.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
01/08/2003  02:06p              24,064 Break Even Analysis.xls
01/23/2003  08:16a              41,472 2003 Sales Summary #1.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
10/31/2003  03:33p              14,848 Savings Plan.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
09/23/2003  01:12p              31,232 Fonts.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
01/24/2003  08:45a              18,944 Balance Sheet.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
04/09/2003  02:12p              21,504 Employees.xls
01/15/2003  02:21p              17,408 Five Year Plan Draft.xls
              28 File(s)        694,272 bytes
               0 Dir(s)         202,240 bytes free
```

10. Submit a copy of the "Bayview Travel.txt" and "Financial Analysis.txt" files, your printed output of all files with the "xls" file extension, and your answers to the above questions, either as a printout, on diskette, or by e-mail, as your instructor requests, along with any other requested documentation.

Here is a printed copy of the Bayview Travel.txt file:

```
 Volume in drive A has no label.
 Volume Serial Number is F065-B557

 Directory of A:\

11/05/2003  02:35p              10,258 ~WRC0070.tmp
01/23/2003  08:16a              41,472 2003 Sales Summary #1.xls
01/23/2003  09:21a              78,848 2003 Sales Summary #2.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
06/26/2003  09:30a              52,736 Application Software.ppt
01/24/2003  08:45a              18,944 Balance Sheet.xls
12/11/2003  02:19p                   0 Bayview Travel.txt
01/08/2003  02:06p              24,064 Break Even Analysis.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
10/16/2003  09:52a              84,446 Color Palette.bmp
10/16/2003  10:31a              84,534 Colors of the Rainbow.bmp
09/05/2003  02:25p              13,824 Commission on Sales.xls
08/08/2003  04:12p              20,480 Computer Training Proposal.doc
07/01/2003  08:31p              15,360 Daily Sales.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
04/09/2003  02:12p              21,504 Employees.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/15/2003  02:21p              17,408 Five Year Plan Draft.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
09/23/2003  01:12p              31,232 Fonts.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
06/26/2003  10:24a              53,248 Hardware.ppt
10/29/2003  10:30a              74,024 Invoice Form.wk4
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
10/16/2003  10:15a              17,910 Palette #1.bmp
10/16/2003  10:21a              17,910 Palette #2.bmp
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
11/20/2003  08:55a              25,088 Projected Growth Memo.doc
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
03/27/2003  11:19a              22,028 Sales.wk4
10/31/2003  03:33p              14,848 Savings Plan.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
06/26/2003  10:40a              42,496 Software.ppt
06/26/2003  10:55a              41,984 Using the Mouse.ppt
11/17/2003  04:41p              15,872 Weekly Worklog.xls
              42 File(s)      1,241,414 bytes
               0 Dir(s)         206,848 bytes free
```

Here is a printed copy of the Financial Analysis.txt file:

```
---------- BAYVIEW TRAVEL.TXT
01/23/2003  08:16a              41,472 2003 Sales Summary #1.xls
01/23/2003  09:21a              78,848 2003 Sales Summary #2.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
01/24/2003  08:45a              18,944 Balance Sheet.xls
01/08/2003  02:06p              24,064 Break Even Analysis.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
09/05/2003  02:25p              13,824 Commission on Sales.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
04/09/2003  02:12p              21,504 Employees.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/15/2003  02:21p              17,408 Five Year Plan Draft.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
09/23/2003  01:12p              31,232 Fonts.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
10/31/2003  03:33p              14,848 Savings Plan.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
11/17/2003  04:41p              15,872 Weekly Worklog.xls
```

The printed copy of the Spreadsheet Files.txt file is shown in Step 10.

Case 3 – Copying Presentations at HiPerform Enterprises

Please see the file "Spreadsheet Files.txt" in the Case 3 folder under the Tutorial.03 folder on the Solutions disk.

Case Scenario: After experiencing an unprecedented increase in customers over the last year, James Everett, the owner and manager of HiPerform Enterprises, decides to apply for a business loan to expand his business. He asks you to make a copy of his templates disk, and then assemble copies of the documents that he will need to develop a business plan, which he then can include with his application for a business loan.

As you complete each step, write down the commands you use, as well as the answer to each question, so that you can submit them to your instructor.

All the Review Assignments steps are listed. Questions are shown in italics, and answers are shown in boldface on a separate line (or lines) from the question.

1. Insert your Data Disk into drive A.

2. Open a Command Prompt window.

3. Make a copy of your Data Disk.

   What command did you enter to perform this operation?

   `diskcopy a: a:`

4. Change the default drive to the drive containing your Data Disk.

5. On the duplicate of your Data Disk that you just made, free up storage space on your diskette for the new files, by deleting all the files with the file extension "txt", "bmp", "chk", and "tmp".

   What commands did you enter for these operations?

   `del *.txt`

   `del *.bmp`

   `del *.chk`

   `del *.tmp`

6. Produce a directory listing of the current drive that displays alphabetically all files whose filenames start with the word "Five Year" and which contain the "xls" file extension.

   What command did you enter for this operation?

   `dir "Five Year*.xls"`

   What are the names of the files that meet these criteria?

   `Five Year Growth Plan.xls`

   `Five Year Plan Template.xls`

   `Five Year Plan Draft.xls` (assuming the student completed the tutorial)

7. Copy the "Five Year Growth Plan.xls" file, and create a new file with the name "Five Year Sales Projection.xls".

   What command did you enter for this operation?

   `copy "Five Year Growth Plan.xls" "Five Year Sales Projection.xls"`

8. Recall the previous Directory command, and verify that Windows 2000 (or Windows XP) created a new file by making a copy of an existing file.

9. Using a similar approach, make a new copy of the file "Balance Sheet.xls" with the name "Company Balance Sheet.xls", and a new copy of the file "Loan Payment Analysis.xls" with the name "Loan Analysis.xls".

   What commands did you enter for these operations?

   `copy "Balance Sheet.xls" "Company Balance Sheet.xls"`

   `copy "Loan Payment Analysis.xls" "Loan Analysis.xls"`

10. Change the name of the "Loan Analysis.xls" file to "Bank Loan Analysis.xls".

    What command did you enter for this operation?

    `ren "Loan Analysis.xls" "Bank Loan Analysis.xls"`

11. Display a directory listing of all files on this diskette with the "xls" file extension in alphabetical order by filename, and redirect the output to your printer port.

    What command did you enter for this operation?

    `dir *.xls /o > prn` (*Note*: Some students might use LPT1 instead of PRN.)

    Note: The student will produce the same output if he or she uses this variation of the above command:

    `dir *.xls /on > prn` (*Note*: Some students might use LPT1 instead of PRN.)

    ***Note*: Also, some students will not be able to complete this command operation, and will have to redirect the results to a text file on disk, and then print the file with Notepad.**

    The student's printed copy should include the following files:

    ```
    Bank Loan Analysis.xls

    Company Balance Sheet.xls

    Five Year Sales Projection.xls
    ```

    The other files included in the student's printed copy will depend on whether the student has already completed the tutorial, the Review Assignments, other case problems, and the Extra Case Problem. However, the student's printed copy will be similar to the following solution:

```
 Volume in drive A has no label.
 Volume Serial Number is DC89-7778

 Directory of A:\

01/23/2003  08:16a              41,472 2003 Sales Summary #1.xls
01/23/2003  09:21a              78,848 2003 Sales Summary #2.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
01/24/2003  08:45a              18,944 Balance Sheet.xls
09/23/2003  01:12p              14,848 Bank Loan Analysis.xls
01/08/2003  02:06p              24,064 Break Even Analysis.xls
03/21/2003  08:08a              15,872 Client Invoices.xls
09/05/2003  02:25p              13,824 Commission on Sales.xls
01/24/2003  08:45a              18,944 Company Balance Sheet.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
04/09/2003  02:12p              21,504 Employees.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/15/2003  02:21p              17,408 Five Year Plan Draft.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
01/16/2003  10:46a              20,992 Five Year Sales Projection.xls
09/23/2003  01:12p              31,232 Fonts.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
10/31/2003  03:33p              14,848 Savings Plan.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
11/17/2003  04:41p              15,872 Weekly Worklog.xls
              31 File(s)        749,056 bytes
               0 Dir(s)         375,808 bytes free
```

12. Submit your printed output of all files with the "xls" file extension, and your answers to the above questions, either as a printout, on diskette, or by e-mail, as your instructor requests, along with any other requested documentation.

    The printed copy of the Spreadsheet Files.txt file is shown in Step 11.

Case 4 – Managing Files at Turing Enterprises

Please see the file "Spreadsheet Files.txt" in the Case 4 folder under the Tutorial.03 folder on the Solutions disk.

Case Scenario: Each year Melissa Turing, owner of Turing Enterprises, creates a copy of the diskette that contains her business files, and then updates the files for the upcoming year. She asks you to make a copy of her diskette, remove files she no longer needs, rename files to reflect the current year, and then make copies of files that she can adapt for new ventures this next year.

As you complete each step, write down the commands you use, as well as the answer to each question, so that you can submit them to your instructor.

All the Review Assignments steps are listed. Questions are shown in italics, and answers are shown in boldface on a separate line (or lines) from the question.

1. Insert your Data Disk into drive A.

2. Open a Command Prompt window.

3. Make a duplicate copy of your Data Disk.

4. Change the default drive to the drive containing your Data Disk.

5. On the duplicate copy, delete all the files with the "bmp", "chk", "doc", "tmp", "txt", and "wk4" file extensions.

   What commands did you enter to perform these operations?

   ```
   del *.bmp
   del *.doc
   del *.chk
   del *.tmp
   del *.txt
   del *.wk4
   ```

6. Change the name of "Balance Sheet.xls" to "Turing Balance Sheet.xls", "Client Invoices.xls" to "Turing Client Invoices.xls", and "Weekly Worklog.xls" to "Turing Weekly Worklog.xls".

   What commands did you enter for these operations?

   ```
   ren "Balance Sheet.xls" "Turing Balance Sheet.xls"
   ren "Client Invoices.xls" "Turing Client Invoices.xls"
   ren "Weekly Worklog.xls" "Turing Weekly Worklog.xls"
   ```

7. Change the names of the files "2003 Sales Summary #1.xls" and "2003 Sales Summary #2.xls" to "2003 Trips Summary #1.xls" and "2003 Trips Summary #2.xls" using one command in one step.

   What command did you enter to perform this operation?

   `ren "2003 Sales Summary #?.xls" "2003 Trips Summary #?.xls"`

8. Copy "Data Systems Budget.xls" to "Turing Budget Projection.xls", and copy "Software.ppt" to "Mediterranean Excursions.ppt".

   What commands did you enter for these operations?

   `copy "Data Systems Budget.xls" "Turing Budget Projection.xls"`

   `copy Software.ppt "Mediterranean Excursions.ppt"`

9. Display a directory of all files on this diskette with the "xls" file extension in alphabetical order by filename, and redirect the output to your printer port.

   What command did you enter for this operation?

   `dir *.xls /o > prn` (*Note*: Some students might use LPT1 instead of PRN.)

   The student will produce the same output if he or she uses this variation of the above command:

   `dir *.xls /on > prn` (*Note*: Some students might use LPT1 instead of PRN.)

   ***Note*: Some students will not be able to complete this command operation, and will have to redirect the results to a text file on disk, and then print the file with Notepad.**

   The student's printed copy should include the following files:

   2003 Trips Summary #1.xls

   2003 Trips Summary #2.xls

   Turing Balance Sheet.xls

   Turing Budget Projection.xls

   Turing Client Invoices.xls

   Turing Weekly Worklog.xls

   The other files included in the student's printed copy will depend on whether the student has already completed the tutorial, the Review Assignments, other case problems, and the Extra Case Problem. However, the student's printed copy will be similar to the following solution:

```
 Volume in drive A has no label.
 Volume Serial Number is E043-C5E6

 Directory of A:\

01/23/2003  08:16a              41,472 2003 Trips Summary #1.xls
01/23/2003  09:21a              78,848 2003 Trips Summary #2.xls
02/27/2002  08:53p              34,304 3 Year Sales Projection.xls
07/09/2003  09:42a              49,152 Addressing Cells.xls
04/18/2003  01:33p              16,896 Advertising Income.xls
05/30/2003  11:22a              22,016 Andre's Employee Payroll.xls
01/08/2003  02:06p              24,064 Break Even Analysis.xls
09/05/2003  02:25p              13,824 Commission on Sales.xls
07/01/2003  08:31p              15,360 Daily Sales.xls
01/10/2003  10:54a              22,016 Data Systems Budget.xls
04/09/2003  02:12p              21,504 Employees.xls
01/15/2003  02:21p              17,408 Five Year Draft Plan.xls
01/16/2003  10:46a              20,992 Five Year Growth Plan.xls
01/15/2003  02:21p              17,408 Five Year Plan Template.xls
09/23/2003  01:12p              31,232 Fonts.xls
07/22/2003  01:32p              20,992 Format Code Colors.xls
08/08/2003  03:22p              26,624 Formatting Features.xls
09/23/2003  01:12p              14,848 Loan Payment Analysis.xls
03/28/2003  04:41p              22,528 Product List.xls
01/03/2003  12:02p              27,648 Product Sales Projection.xls
10/22/2003  01:52p              23,040 Regional Sales Projections.xls
12/10/2003  11:30a              24,064 Sales Projection Models.xls
01/02/2003  03:43p              26,624 Sales Projections.xls
10/31/2003  03:33p              14,848 Savings Plan.xls
05/07/2003  09:48a              15,872 Software Quotes.xls
01/24/2003  08:45a              18,944 Turing Balance Sheet.xls
01/10/2003  10:54a              22,016 Turing Budget Projection.xls
03/21/2003  08:08a              15,872 Turing Client Invoices.xls
11/17/2003  04:41p              15,872 Turing Weekly Worklog.xls
              29 File(s)        716,288 bytes
               0 Dir(s)         508,416 bytes free
```

10. Submit your printed output of all files with the "xls" file extension, and your answers to the above questions, either as a printout, on diskette, or by e-mail, as your instructor requests, along with any other requested documentation.

    The printed copy of the Spreadsheet Files.txt file is shown in Step 9.

SOLUTION TO EXTRA CASE PROBLEM

Documenting Settings in the Windows Environment at Computers for You!

Please see the file "Windows Environment.txt" in the Extra Case folder under the Tutorial.03 folder on the Solutions disk.

Case Scenario: Computers for You! is a San Diego dealership that designs custom computers for its clientele. Maria Alonso, the owner, discusses with each customer, their particular needs, and after a customer has decided on what components they want in their computer system, she and her staff build the system, and then install and configure the operating system and application software for the customer. After the system is built, and before the customer takes it home, Maria and her staff check the computer system. As part of this final system check, they examine the settings in the Windows environment. Maria asks you to view the settings in the Windows environment, and then redirect the output to a file on disk so that you can print a copy that all of the staff can use.

As you complete each step, write down the commands you use, as well as the answer to any questions so that you can submit them to your instructor.

All the Review Assignments steps are listed. Questions are shown in italics, and answers are shown in boldface on a separate line (or lines) from the question.

1. Insert your Data Disk into drive A.

2. Open a Command Prompt window, and then change the default drive to the drive containing your Data Disk.

3. Make a duplicate copy of your Data Disk.

4. On the duplicate copy of your Data Disk, display a directory of files with the "txt" file extension and, if necessary, delete all these files.

5. On your Data Disk, use the following command to create an ASCII file with the company name: `ECHO Computers for You! > "Windows Environment.txt"`

6. Use the TYPE command to view the contents of this file and to verify that the ECHO command worked properly.

   What command did you enter for this operation?

   `type "Windows Environment.txt"`

7. Use the `ECHO.` command and the append redirection operator to append two blank lines to the bottom of "Windows Environment.txt." Remember to type a period immediately after the ECHO command.

   What command did you enter for this operation?

   `echo. >> "Windows Environment.txt"`

8. Use the ECHO command to append your name, and any other course information you want to include on the final printed copy, to the bottom of "Windows Environment.txt."

9. Use the `ECHO.` command to append a blank line to the bottom of "Windows Environment.txt."

10. Use the SET command to view the contents of the Windows environment. Pipe the output to the MORE filter to produce paged output.

    What command did you use?

    ```
    set | more
    ```

    View the remainder of the output, and then return to the command prompt.

11. Append the output of the SET command to "Windows Environment.txt."

    What command did you enter for this operation?

    ```
    set >> "Windows Environment.txt"
    ```

12. Use the MORE filter and the input redirection operator to verify that the last step worked properly.

    What command did you enter for this operation?

    ```
    more < "Windows Environment.txt"
    ```

    or

    ```
    more "Windows Environment.txt"
    ```

    View the remainder of the output, and then return to the command prompt.

13. *Use the TYPE command with redirection to print a copy of "Windows Environment.txt."*

    The student's printed copy should include the company name and settings from the Windows environment. That printed copy should be similar to the following solution:

```
Computers for You!


[Your Name]
[Course]
[Tutorial 3, Extra Case Problem]
[Date]

ALLUSERSPROFILE=C:\Documents and Settings\All Users
APPDATA=C:\Documents and Settings\Isabel\Application Data
CommonProgramFiles=C:\Program Files\Common Files
COMPUTERNAME=MICRONPC
ComSpec=C:\WINNT\system32\cmd.exe
HOMEDRIVE=C:
HOMEPATH=\
LOGONSERVER=\\MICRONPC
NUMBER_OF_PROCESSORS=1
OS=Windows_NT
Os2LibPath=C:\WINNT\system32\os2\dll;
Path=C:\WINNT\system32;C:\WINNT;C:\WINNT\System32\Wbem
PATHEXT=.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH
PROCESSOR_ARCHITECTURE=x86
PROCESSOR_IDENTIFIER=x86 Family 6 Model 7 Stepping 3, GenuineIntel
PROCESSOR_LEVEL=6
PROCESSOR_REVISION=0703
ProgramFiles=C:\Program Files
PROMPT=$P$G
SystemDrive=C:
SystemRoot=C:\WINNT
TEMP=C:\DOCUME~1\Isabel\LOCALS~1\Temp
TMP=C:\DOCUME~1\Isabel\LOCALS~1\Temp
USERDOMAIN=MICRONPC
USERNAME=Isabel
USERPROFILE=C:\Documents and Settings\Isabel
windir=C:\WINNT
```

14. Use the EXIT command to close the Command Prompt window.