

# ***Windows XP Command Line***

Section #4  
Pipes, Filters, and  
Redirection

## **Section #4**

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In this chapter you will learn ...

- how to use redirection
- how to use pipes to connect programs
- how to use filters to manipulate data

## Redirection of Standard I/O (Input/Output)

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- Redirection is the process of using devices other than the standard input/output devices
- The input/output process is commonly referred to as I/O
- The operating system gets information from or sends information to the requested positions.
- Example: `A:\> COPY MY.TXT ONE.TXT` (**INPUT FROM USER**)

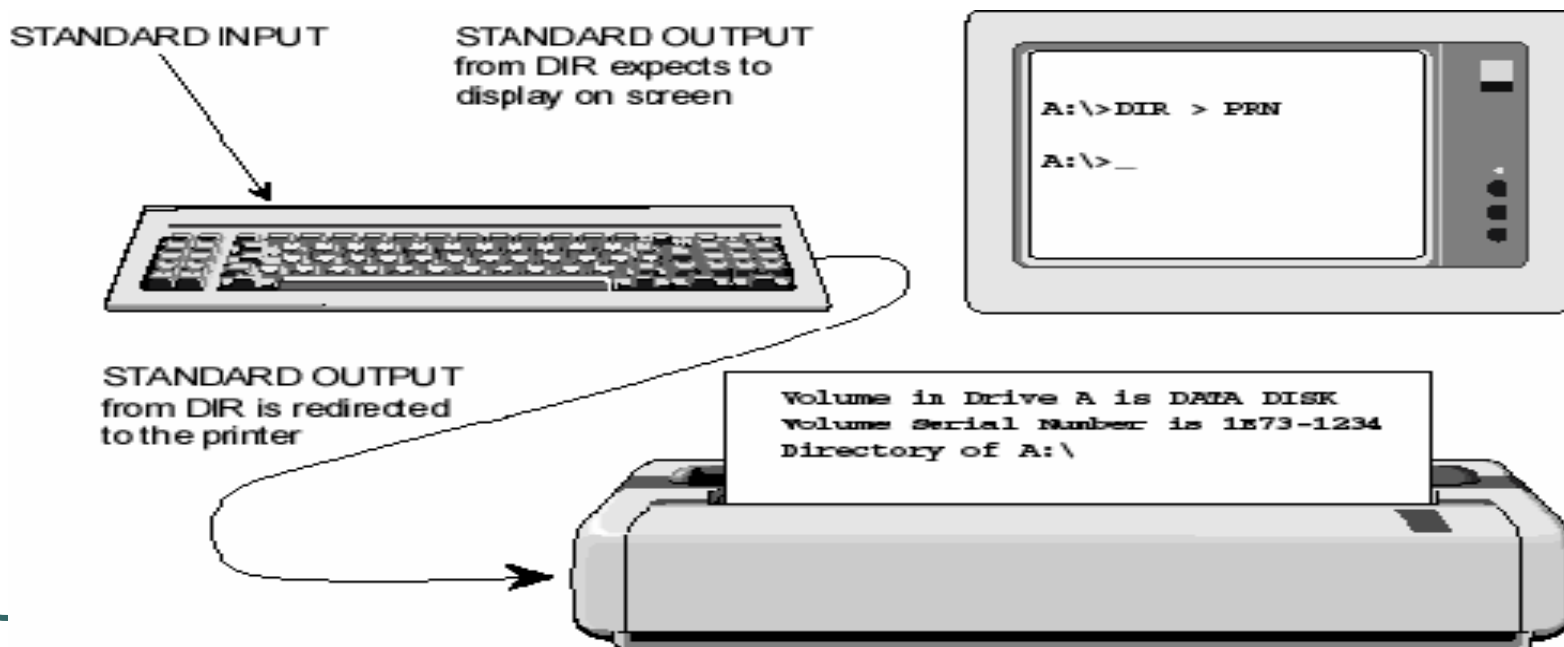
*1 file(s) copied*      (*Output from COPY command*)

A:>\_\_

# Redirection of Standard I/O (Input/Output)

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- Redirecting the output of a command (I/O redirection) ...
  - telling the OS you want information read from or written to a device other than the standard ones.



# Redirection of Standard I/O (Input/Output)

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Three symbols used for redirection:

- > (greater than)
- < (less than)
- >> (double greater than)

**Syntax:** *[command] > filename [or] printer port*

## Output Redirection Operator >

Redirects output to a file, printer, etc...

## Input Redirection Operator <

OS assumes that input will come from a keyboard but you can redirect input from a file instead.

## Append Redirection Operator >>

With the use of this switch, you can append, or add information to an existing file.

## **Redirection of Standard I/O (Input/Output)**

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- Open your book to page 98.
- Follow the steps listed after “*To set up your computer*”.

## Type Command

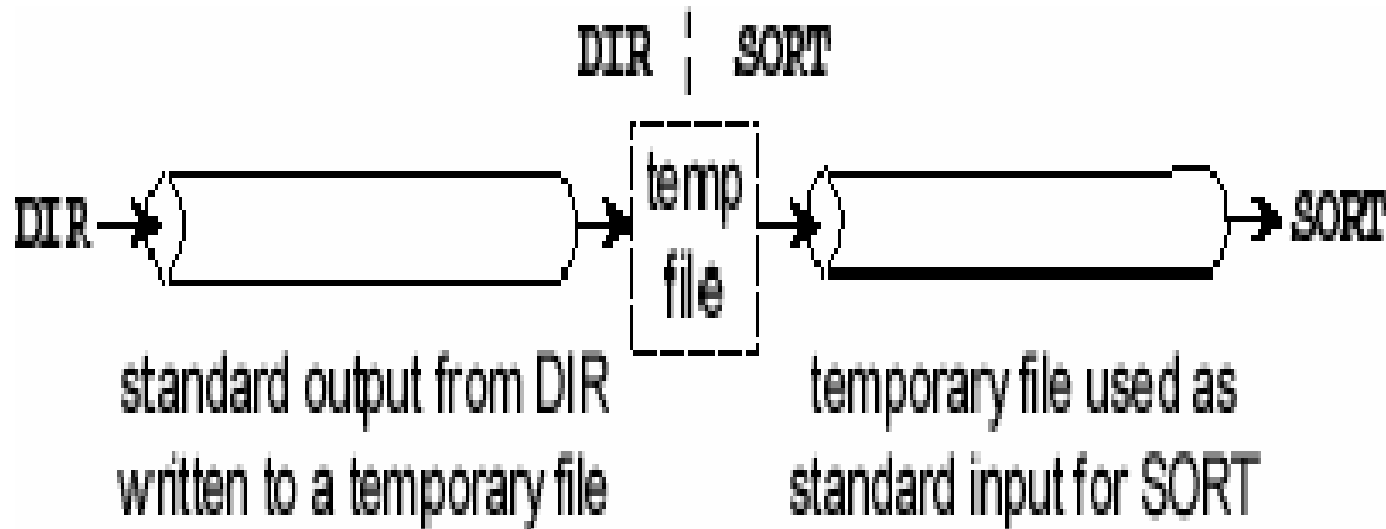
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- Syntax: *TYPE filename*
- The type command can be used to display the contents of any ASCII text file.
- You can not use this on any other type of file such as a MS Word document because the command will not be able to interpret the files formatting and only display symbols or blanks.
- Go to page 100

# Pipes

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- The pipe operator ( | ) redirects the output produced by one command so that the output then becomes the input for another command.
- The pipe symbol is the vertical broken bar | and is used between two commands.





## Pipes continued

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- The pipe symbol | allows you to connect two or more programs and create a flow of data.
- When a pipe symbol is used, there must be a command on both sides of the actual symbol.

Rules when using pipes:

- Filter commands will not work if a disk is write-protected.
- All files must be named - even temporary ones.

# Filters

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Filter commands manipulate information.

The three filter commands:

1. MORE
2. SORT
3. FIND

The operating system creates temporary files while it “filters” data.

## MORE filter

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- Syntax: *[command] | MORE*
- An external command that displays a screen or window of output, then displays a "--MORE--" prompt which allows you to continue when you are ready.
- Example: *TYPE Templates.txt | MORE*
- TYPE produces the output and the OS redirects the output so that it becomes the input for the MORE filter.
- Page 102

## **MORE filter and the Input Redirection Operator**

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- *MORE < filename*
- By using this command, you can redirect the input to the MORE filter directly without using the TYPE command and the pipe operator.
- The < will redirect the input from a file instead of the keyboard.
- Page 104

# The SORT Command

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SORT filter command ...

-- arranges or sorts lines of input (text) and sends them to standard output (screen) unless you redirect it.

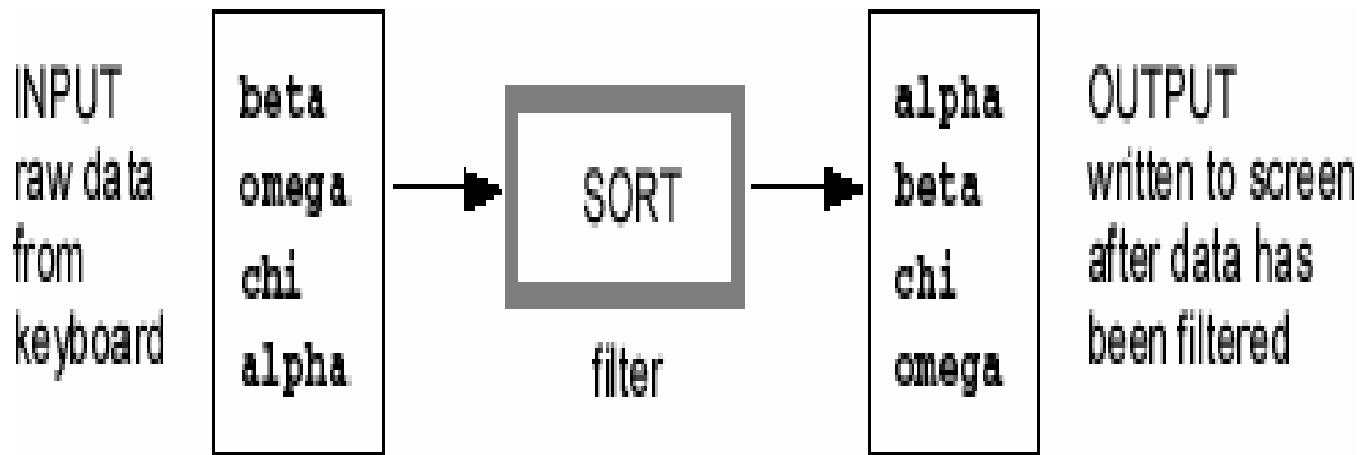
SORT syntax:

```
SORT [/R] [/+n] [[drive1:] [path1]filename1] [> [drive2:]  
[path2] filename2] [command |]
```

```
SORT [/R] [/+n] [> [drive2:] [path2] filename2]
```

# The SORT Command

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# The **SORT** Command

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ASCII sort sequence order is ...

- ↘ punctuation marks  
(including the space)
- ↘ numbers
- ↘ uppercase letters
- ↘ lowercase letters

# The SORT Command

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- SORT < *filename*
- *What does the above command do?*
  
- SORT /R < *filename*
- *What does the above command do?*



# The FIND Filter

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FIND filter command ...

allows you to search a file for a specific character string by enclosing them in quotation marks.

FIND syntax:

```
FIND [/V] [/C] [/N] [/I] "string"  
[[drive:] [path] filename[ ...]]
```

## Remember the Append Redirection Operator?

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- *[command] >> filename*
- Here you “append” or add output to the end of a file.
- You should note that if you only use one `>`, this will overwrite the existing file!
- To insert blank lines into the file before you add the new data, use “ECHO”.
- *ECHO. >> filename*

## **Append Redirection Operator**

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- The ECHO command will display messages or blank lines in a window or on the screen.
- If you follow the ECHO command with a period, without any spaces between ECHO and the period, and use the append operator, the OS will add a blank line to the bottom of the file.
- Page 111

## Redirecting output to a printer

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- Syntax: *command > prn*
- Page 115 has a table with all reserved device names listed.
- Page 115

# Review of Copy, Rename, Deleting, Move, Creating and Removing files and directories

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- *COPY source [destination]*
- COPY allows you to quickly copy the contents of an existing file into a new file on the same disk.
- *COPY "Stuff.txt" "MyStuff.txt"*
  
- *XCOPY source [destination] /S*
- XCOPY, similar to COPY, but XCOPY can copy the contents of more than one directory at a time including the directory structure.
- *XCOPY Solarwinds A: /S (or) XCOPY A: \Solarwinds /S*
- *(See page 205)*

## Renaming Files

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- *RENAME [drive:][path]filename1 filename2*
- *REN [drive:][path]filename1 filename2*
- When you specify *filename1* you must include the drive and path if the file is on another drive or in another directory
- You never specify a drive or path for *filename2*, if you do, you will receive an error message because it thinks you are trying to move the file.
- *REN Proposal.doc "Computer Training Proposal.doc"*
- *REN Proposal.doc "Computer Training Proposal.\*"*
- *REN Proposal.\* "Computer Training Proposal.\*"*

## Renaming / Removing Directories

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- *REN [directory name] “[new directory name]”*
- Just as renaming file's, you can rename directories as well.
- *REN meeting “Overhead”*
- *(See page 182)*
- You can also remove directories as well.
- *RD “[directory name]”*
- *(See page 183)*

## Deleting Files

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- *DEL filename (or) ERASE filename*
- Does what you expect, deletes the file you name.
- But remember, the file does not get placed in the recycle bin! You will also never be asked if you really want to do this, the file will be gone the instant you press the enter key.
- The only time you will be asked is if you use this command "*DEL \*.\**" The system will then ask if you really want to delete all the files in the directory.



## Deleting Files

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- You can use the */P* switch as a precaution when deleting files.
- *DEL "Stuff.txt" /P*
- What does the */P* do?

# Move

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- *MOVE [drive:] [path] filename1 [...] destination*
- MOVE command:
  - ➔ Move group of files or subdirectories - cannot change names
  - ➔ Move individual file/subdirectory - can change name of moved file or subdirectory
  - ➔ Move files/directories from one directory to another, from one drive to another
- Syntax to rename and move a directory:
  - ➔ *MOVE [drive:] [path] dirname1 dirname2*
- *MOVE Cashflow.xls Business*
- *MOVE \*.cls Business*
- *MOVE Cashflow.xls A:*
- (see page 141)

## **Another section done!!!!!!**

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- Next up.....

Batch Files