Windows XP Command Line

Section #1

Functions of an Operating System

Operating system defined

- The operating system is an indispensable component of your computer.

- You can not use a computer without an OS.

- As you work with software, the OS manages the moment-to-moment operation of your computer in the background.

- Because the OS handles all operations such as disk, drive, directory, file management, the software you are running can do what it was designed to do.

File Management

- The OS manages, or "looks after" the hard disks which contain directories (or folders), subdirectories, and files so it can find the software and documents you need to use.

Memory Management

- When you open a program, the OS looks for that program and allocates memory to the program so it can run.

- The OS will make sure all programs that are open has some memory assigned to it so the program can function.

- If you open to many programs the one time, your computer will slow down.

- Why?

Virtual Storage
Virtual Memory

Paging Process

- A portion of the program is placed in memory

- The remainder is on disk

- Sections on disk will be brought into memory as needed (one page at a time)
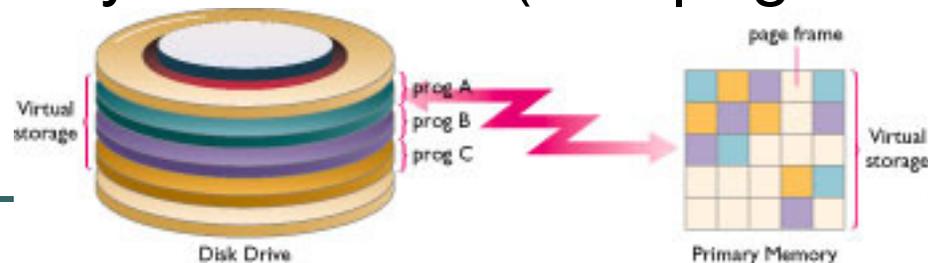
Virtual Storage
Virtual Memory

- ## Problem -- Thrashing
  - Too large a portion of CPU time is spent locating the correct page and bringing it into memory

- ## Solution
 - Run fewer programs concurrently
  - Add memory

Memory Protection

- Keeps one program from straying into another
- Confines each program to certain defined limits in memory
- Why needed
  - Possible for one program to destroy or modify another by transferring to the wrong memory location
  - May cause destruction of data
- Action if assigned memory space is violated
  - Termination of executing program

Process Management

- The OS includes a variety of "utilities", or programs.
- These programs help optimize the performance of your computer.
- An example of one of these programs would be what?

Utility Programs

- Come with System Software
- Handle special needs
- Perform secondary chores
- Do not need to be memory resident
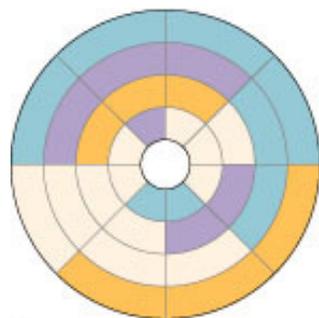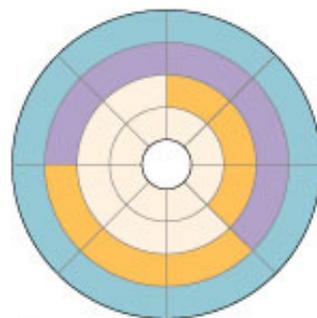
Functions of Utility programs

- **File manager** – provide access to lists of stored files
- Backup and Restore – make duplicate copies of important files and return the copy to the hard drive if needed
- **File compression** – reduces the amount of disk space required by a file
- **Disk defragmenter** – reorganize files so they are stored contiguously on disk providing for faster access
- **Device drivers** – convert operating system instructions into commands that are known to a specific device

Performance Management

- There are now two different types of "modes" or ways a computer can run programs.

- <u>Real Mode</u>: Only one program can run at a time. The program will use all of the RAM the computer has. Single mode operation.

- <u>Protected Mode</u>: Many programs can be used at the same time. The OS will divide the RAM between all the programs so each one will work.

Device Management

- The OS now supports a "utility", or program called Device Manager.

- This program gives you, the user, the ability to work with many parts of the computer directly in one place.

- You can check to see if everything is working or if you have some trouble with a device attached to your pc.

Accessing the Command Prompt

- Click Start – Programs – Accessories – Command Prompt
- Click Start – Run – type in CMD

Creating a Shortcut

- Right-click the desktop – **New**
- Click **Shortcut**
- The location is **C:\windows\system32\cmd.exe**
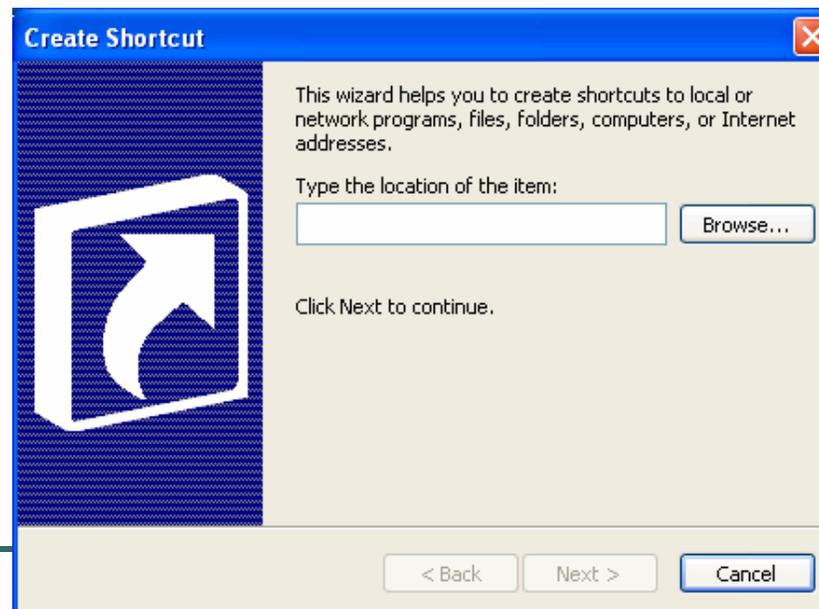
Creating a Shortcut

- Click Next

- Type Command Prompt for the name
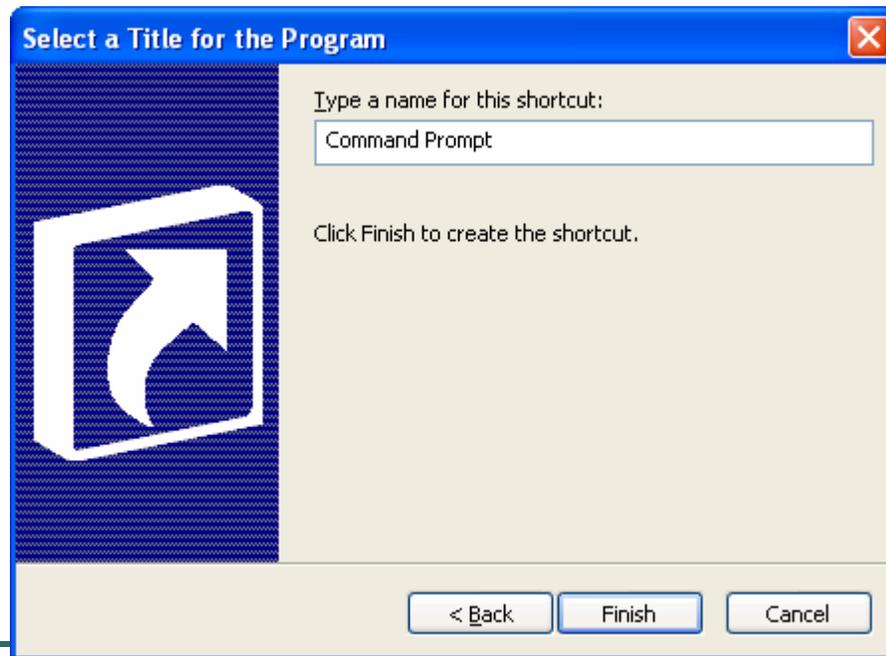
Changing Start Menu

- Right-click Command Prompt icon
- Click Properties
- Change Start in to C:\
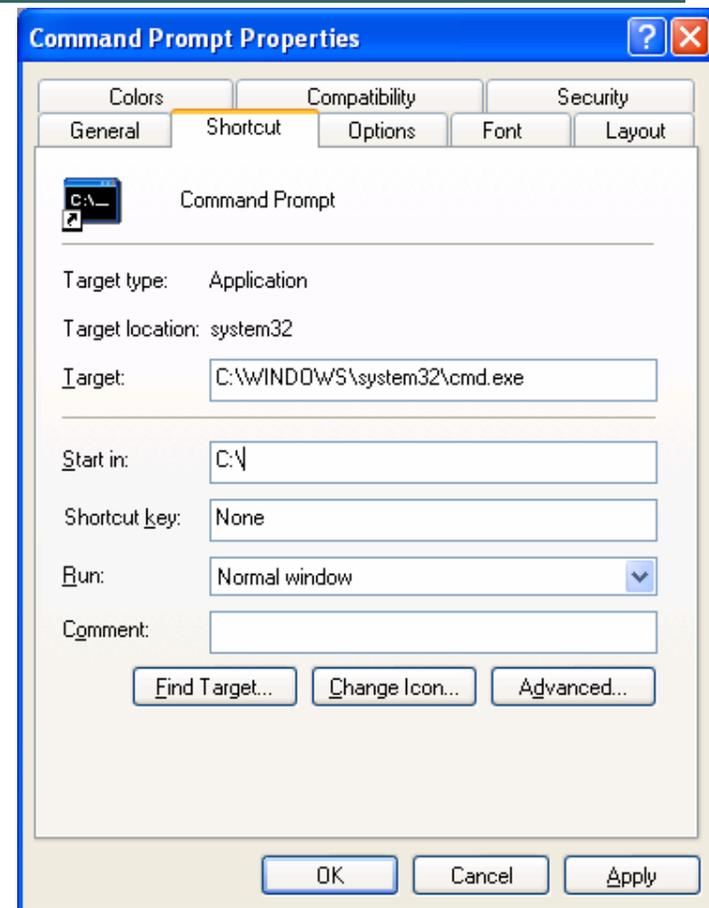
Controlling Window Appearance

- Click icon on top of Command Prompt window
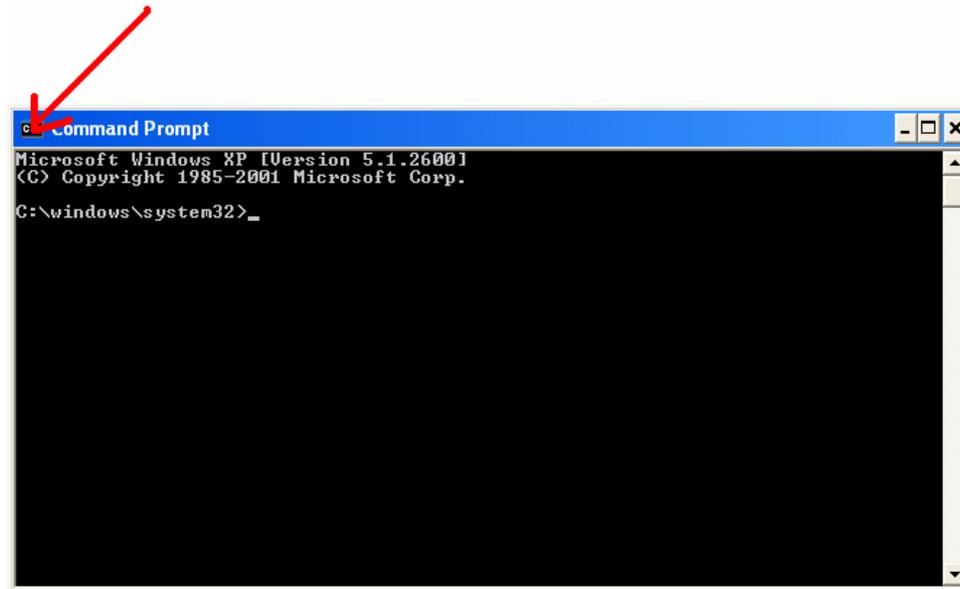
Controlling Window Appearance cont'd

- Choose the properties option to change the properties
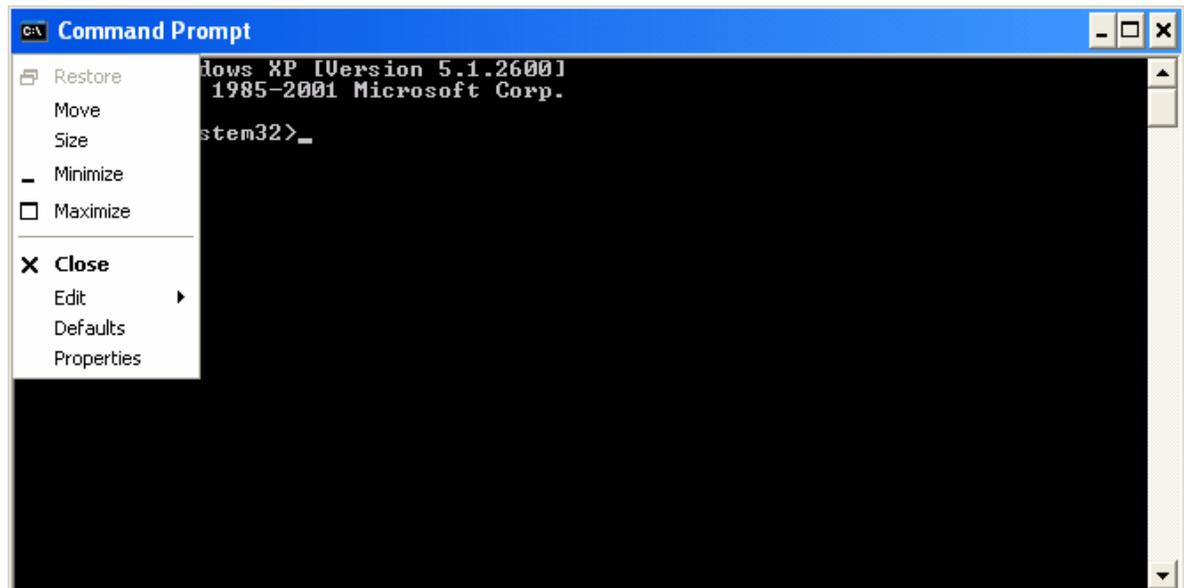
Command Prompt Structure

- C:\Windows\System32>

- Current Drive is C:

- Current Directory (folder) is Windows\System32

- To change the current drive enter
  C:\Windows\System32> A:

- Prompt changes to   A:>

Viewing Directory Contents

- The **DIR** command is used to view a listing of the files and subdirectories in a folder.
    - **C:> DIR**

Determining DOS version

- The VER command is used to determine the DOS version
- C:> VER

```
Command Prompt

C:\>ver

Microsoft Windows XP [Version 5.1.2600]

C:\>
```

Clearing the Screen

- The CLS command is used to clear the information in the command window.
- C:> DIR (to fill the window)
- C:> CLS

Changing Date and Time

- The DATE command will give a listing of the current date on the computer
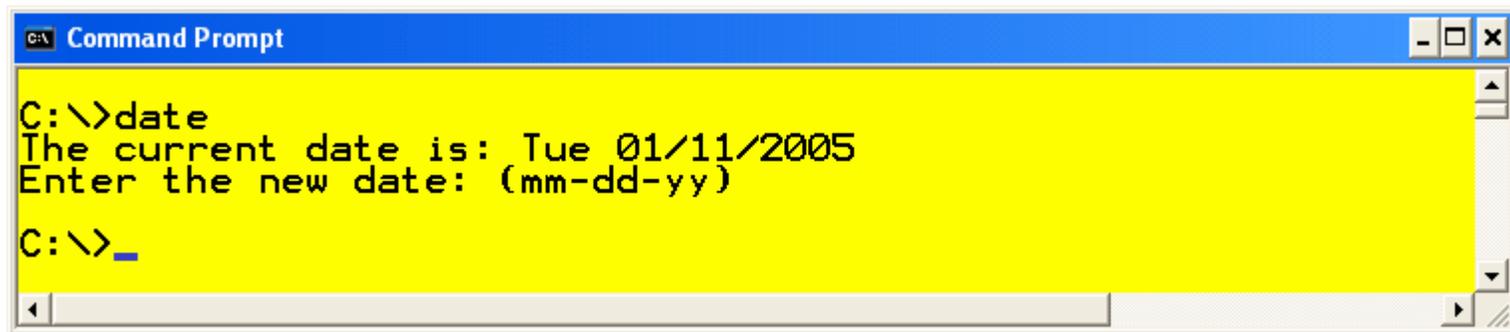

```
C:\>date
The current date is: Tue 01/11/2005
Enter the new date: (mm-dd-yy)

C:\>_
```

Changing Date and Time

- To change the date on the computer enter a new date at the prompt
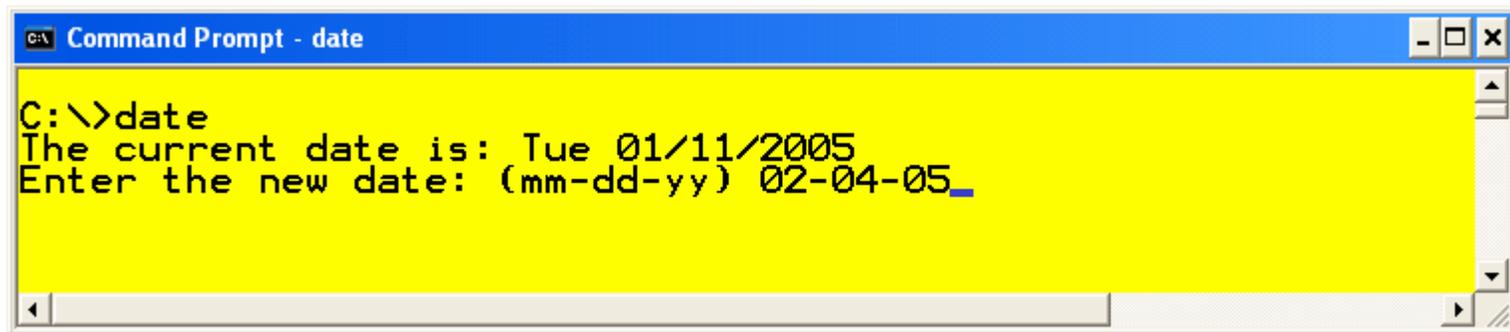

```
Command Prompt - date

C:\>date
The current date is: Tue 01/11/2005
Enter the new date: (mm-dd-yy) 02-04-05_
```
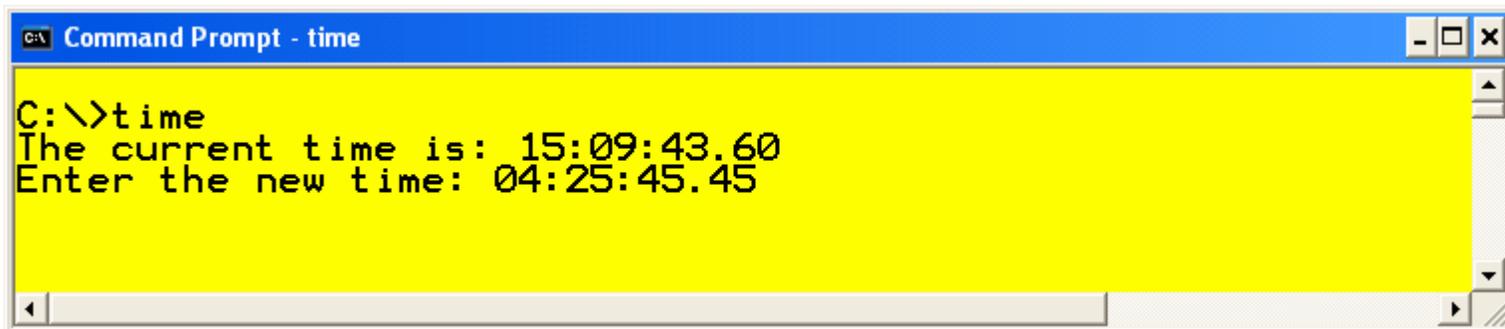
Changing Date and Time

- The TIME command is used to check the time or change the time

Changing Date and Time

- To view the date without the option to change the date use DATE /t

- To view the time without the option to change the time use TIME /t

Copying Disks

- To make a copy of a floppy disk we use the diskcopy command.
- C:>CD \windows\system32
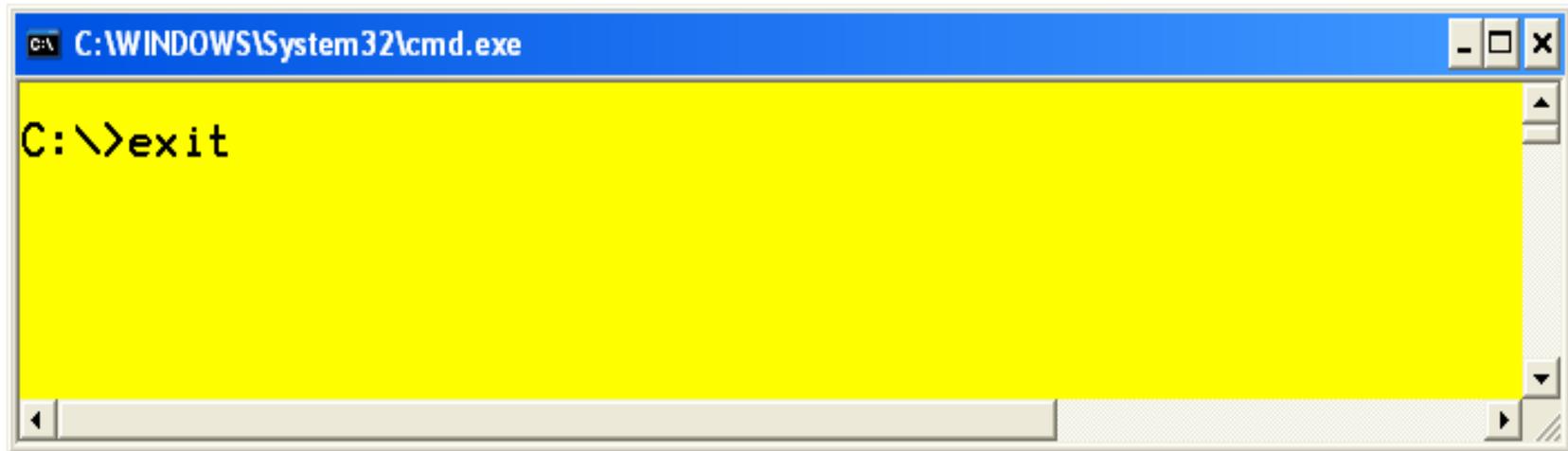- C:\ windows\system32>DISKCOPY A: A:
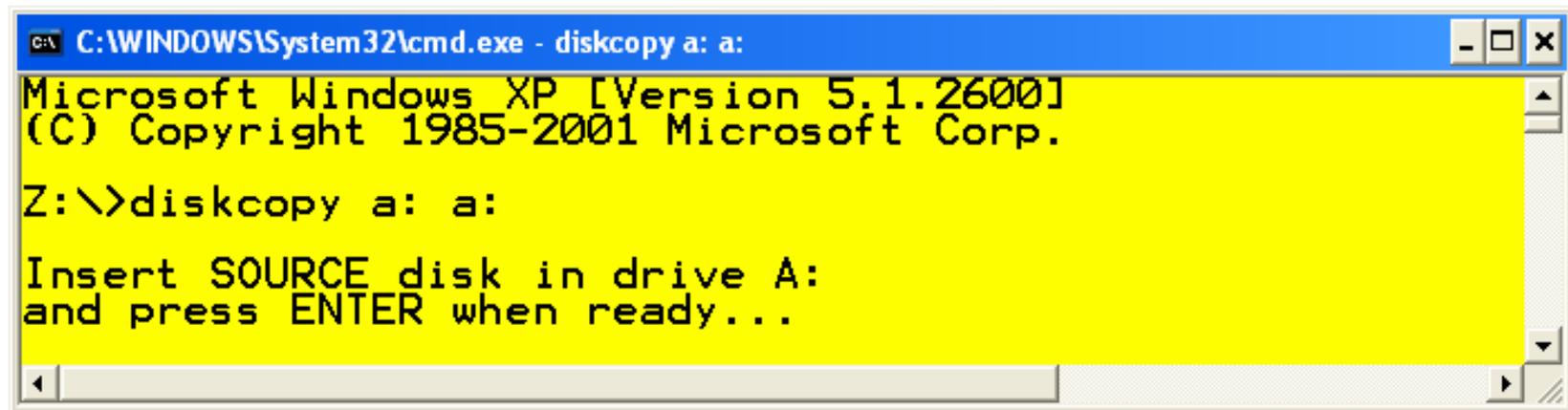
```
C:\WINDOWS\System32\cmd.exe - diskcopy a: a:

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

Z:\>diskcopy a: a:

Insert SOURCE disk in drive A:
and press ENTER when ready...
```

Shutting Down

- You can leave the command prompt by
  - Using the Exit command
  - Closing the window