Chapter 3 (Part – 2)
DISK OPERATING SYSTEM (DOS)

DISK OPERATING SYSTEM (DOS)

- DOS stands for Disk operating system.
- It is used for abstraction and management of secondary storage devices of the computers and the information stored there.

HISTORY

- In early days of computers, there were no disk drives; instead magnetic tapes, punched cards etc. were used. After creation of hard disks and floppy disks, the need of a software for managing rapid access to block storage of sequential and other data became inevitable. So, DOS was developed.

DOS FUNCTIONS

- To manage disk files.
- To allocate system resources according to the requirement.
- To provide features essential to control hardware devices such as Keyboard, Screen, Disk Devices, Printers, Modems and programs.

NAMING THE FILES IN DOS

DOS permits the user to assign a name consisting of two parts to a filename - primary & secondary names.

Primary can consist of 8 characters while secondary can consist of 3 characters. Both names are separated by a dot (.)

For Example: Bioedit.exe

DIRECTORY STRUCTURE IN DOS

- DOS files are organized in a hierarchical or inverted tree-like structure. The general analogy is with a file cabinet having a no. of drawers, which in turn may contain folders that may contain info.
- The file cabinet in DOS is the **ROOT DIRECTORY**, the drawer is **INDIVIDUAL DIRECTORY**, the folders are **SUB-DIRECTORY** and the info contained in these files may be termed as FILES.

TYPES OF DOS

Following are the major types of DOS Command:

- **External dos commands** which are used separately to perform specific task or operation. Internal dos commands are those commands which are included in command processor (command.com). For example: FORMAT, DISKCOPY, etc
- **Internal dos commands** are built in command.com file and while the computer has been booted this file or commands are loaded in the computer memory and you can use this basic dos commands while computer is ON. For example: DEL, COPY, TYPE, etc.

INTERNAL DOS COMMAND

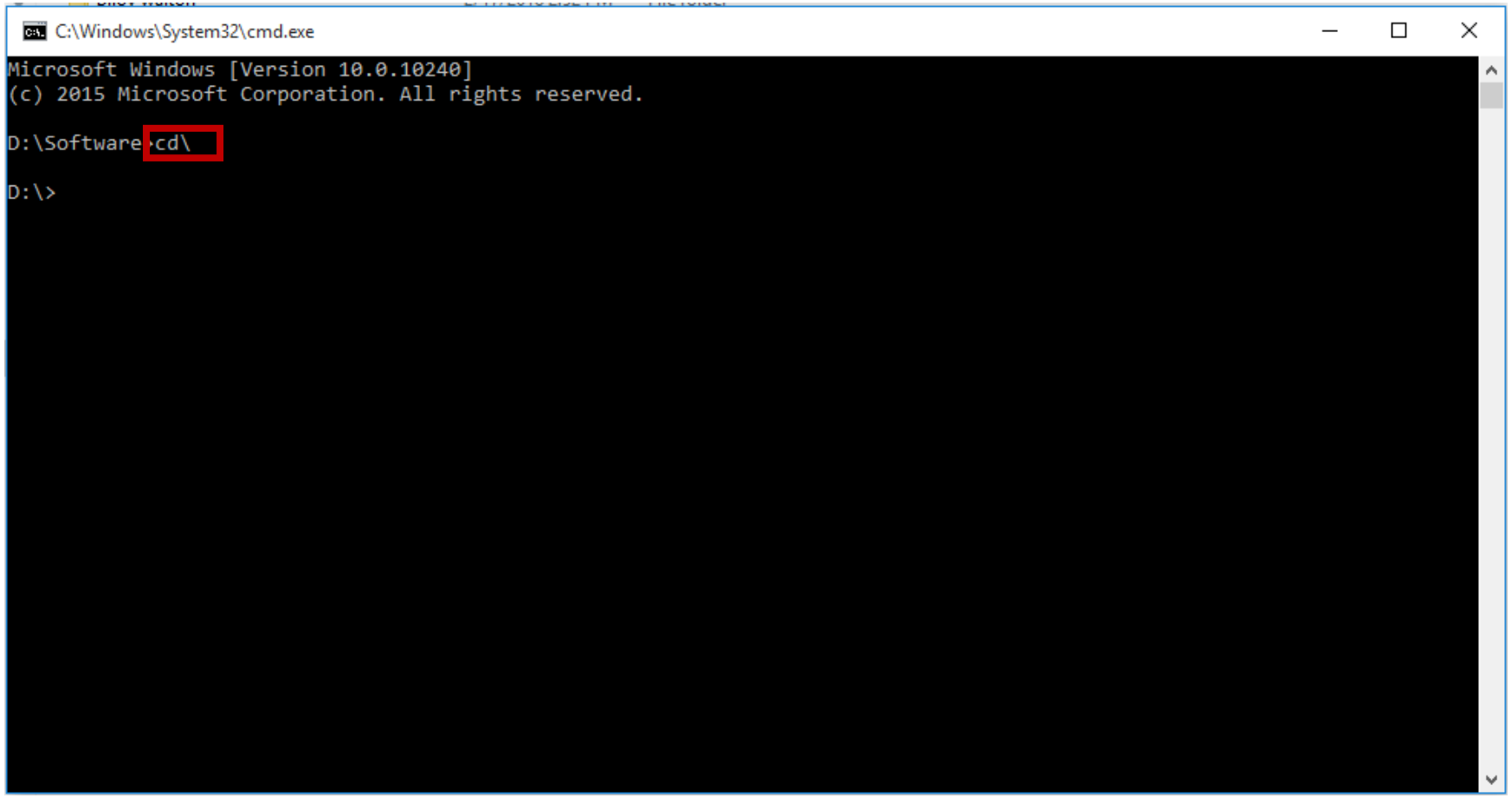
CHANGE DIRECTORY(CD) Command

This command enables to change the current directory or, in other words, to navigate to another folder from the PC.

Syntax

C:> cd\ (Press Enter)

CHANGE DIRECTORY(CD) Command



INTERNAL DOS COMMAND

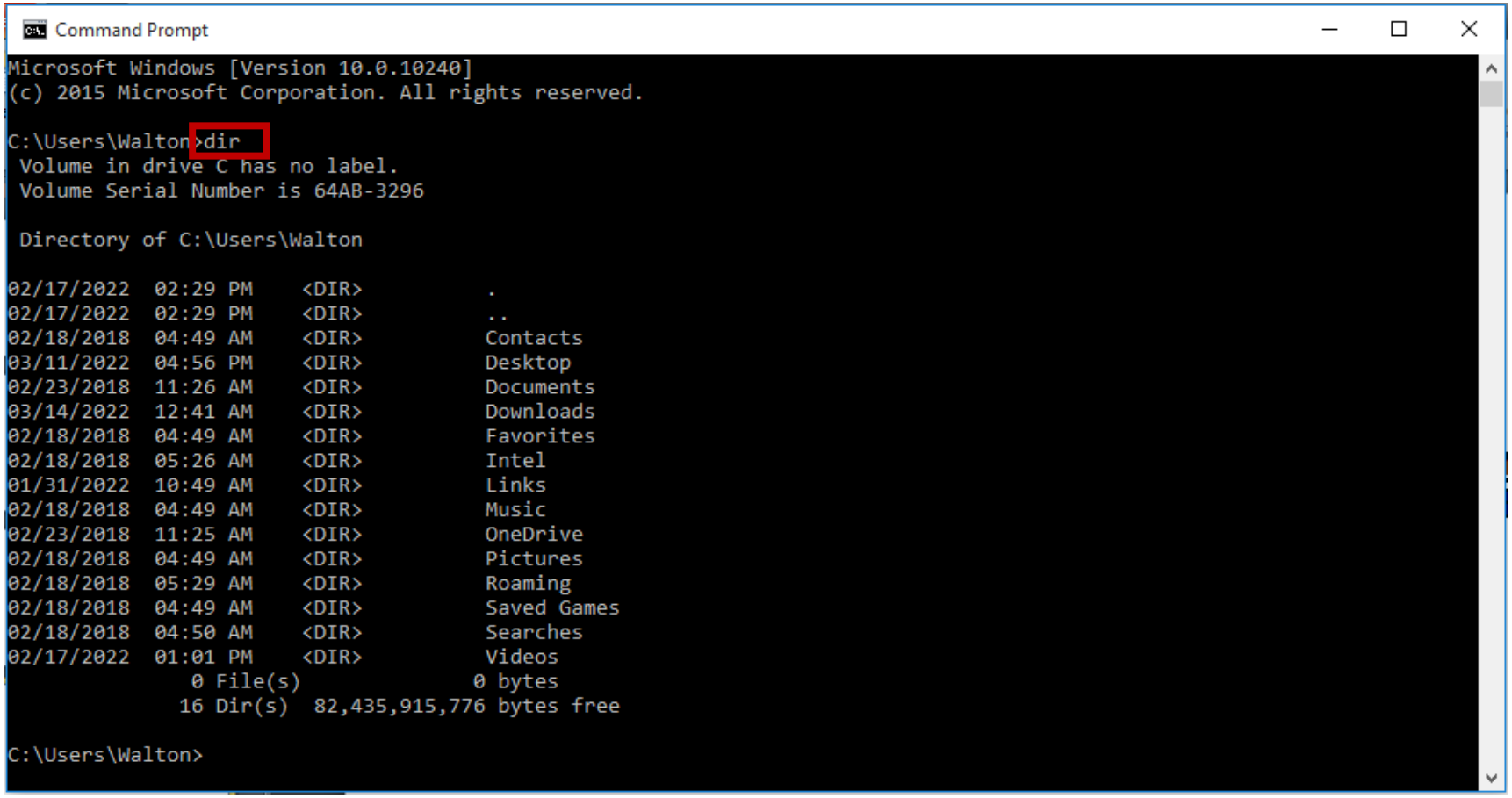
DIRECTORY(DIR) Command

dir (directory) is a command in various computer operating systems used for computer file and directory listing. It is one of the basic commands to help navigate the file system

Syntax

C:> dir (Press Enter)

DIRECTORY(DIR) Command



INTERNAL DOS COMMAND

MAKE DIRECTORY(MKDIR) Command

MKDIR (Make Directory) or the MD command is used to make new folder or directory.

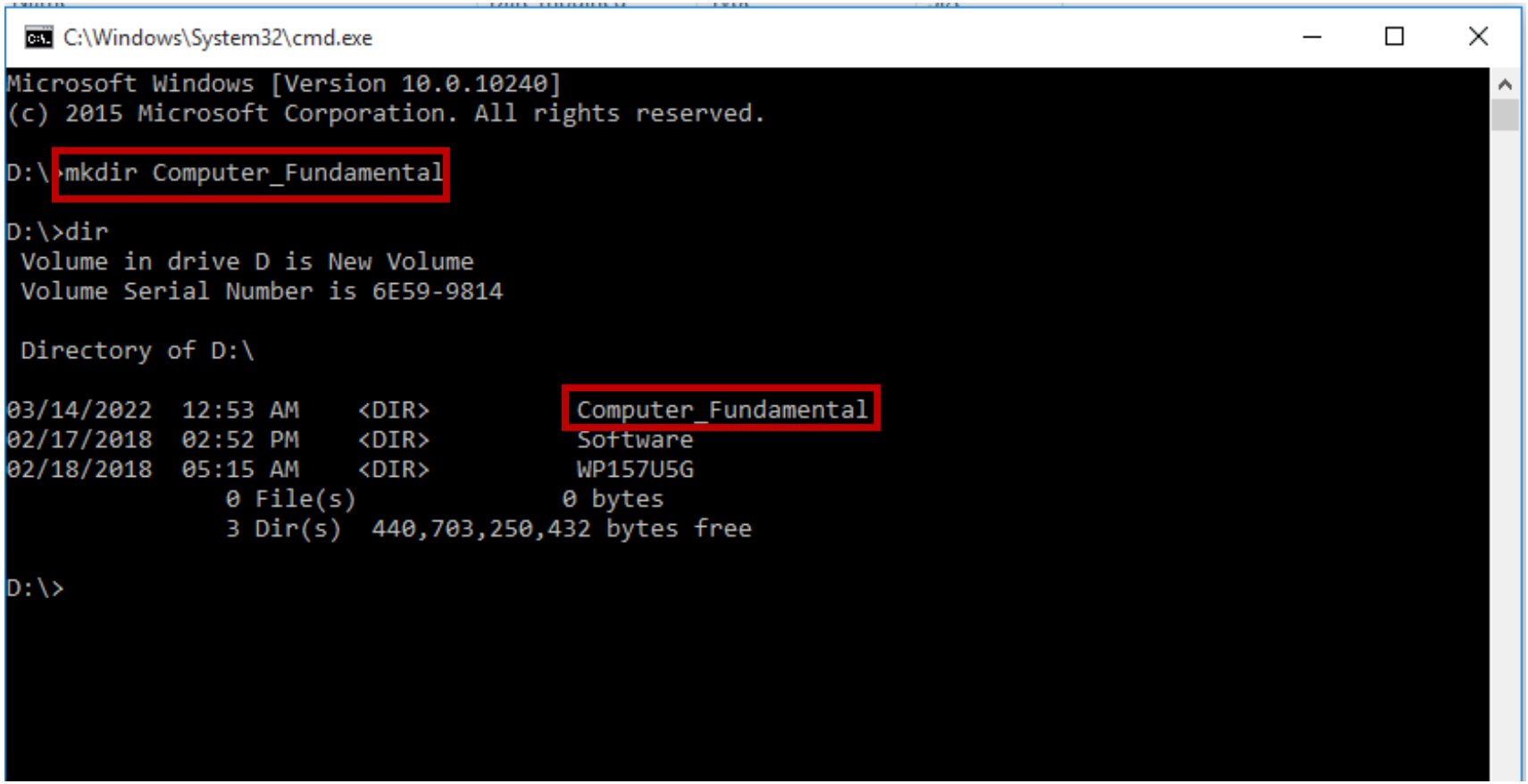
Syntax

C:> mkdir folder name(Press Enter)

Or

C:> md folder name(Press Enter)

MAKE DIRECTORY(MKDIR) Command



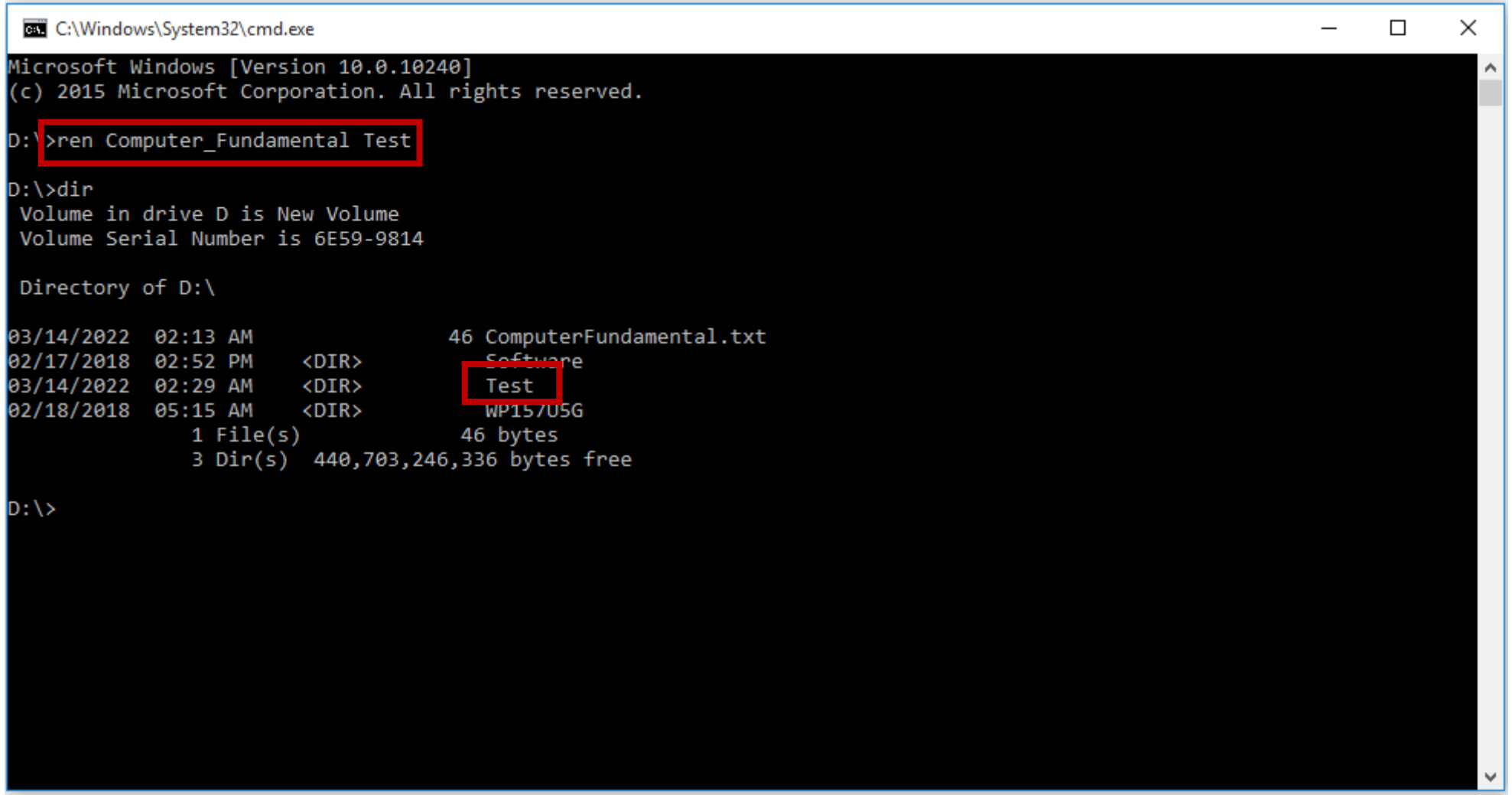
INTERNAL DOS COMMAND

Rename DIRECTORY(REN) Command

REN command is used to rename the directory or folder.

Syntax

C:> ren folder-name new-folder-name(Press Enter)


C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.10240]
(c) 2015 Microsoft Corporation. All rights reserved.
D:\>ren Computer_Fundamental Test
D:\>dir
Volume in drive D is New Volume
Volume Serial Number is 6E59-9814
Directory of D:\
03/14/2022 02:13 AM 46 ComputerFundamental.txt
02/17/2018 02:52 PM <DIR> Software
03/14/2022 02:29 AM <DIR> Test
02/18/2018 05:15 AM <DIR> WP157U5G
1 File(s) 46 bytes
3 Dir(s) 440,703,246,336 bytes free
D:\>

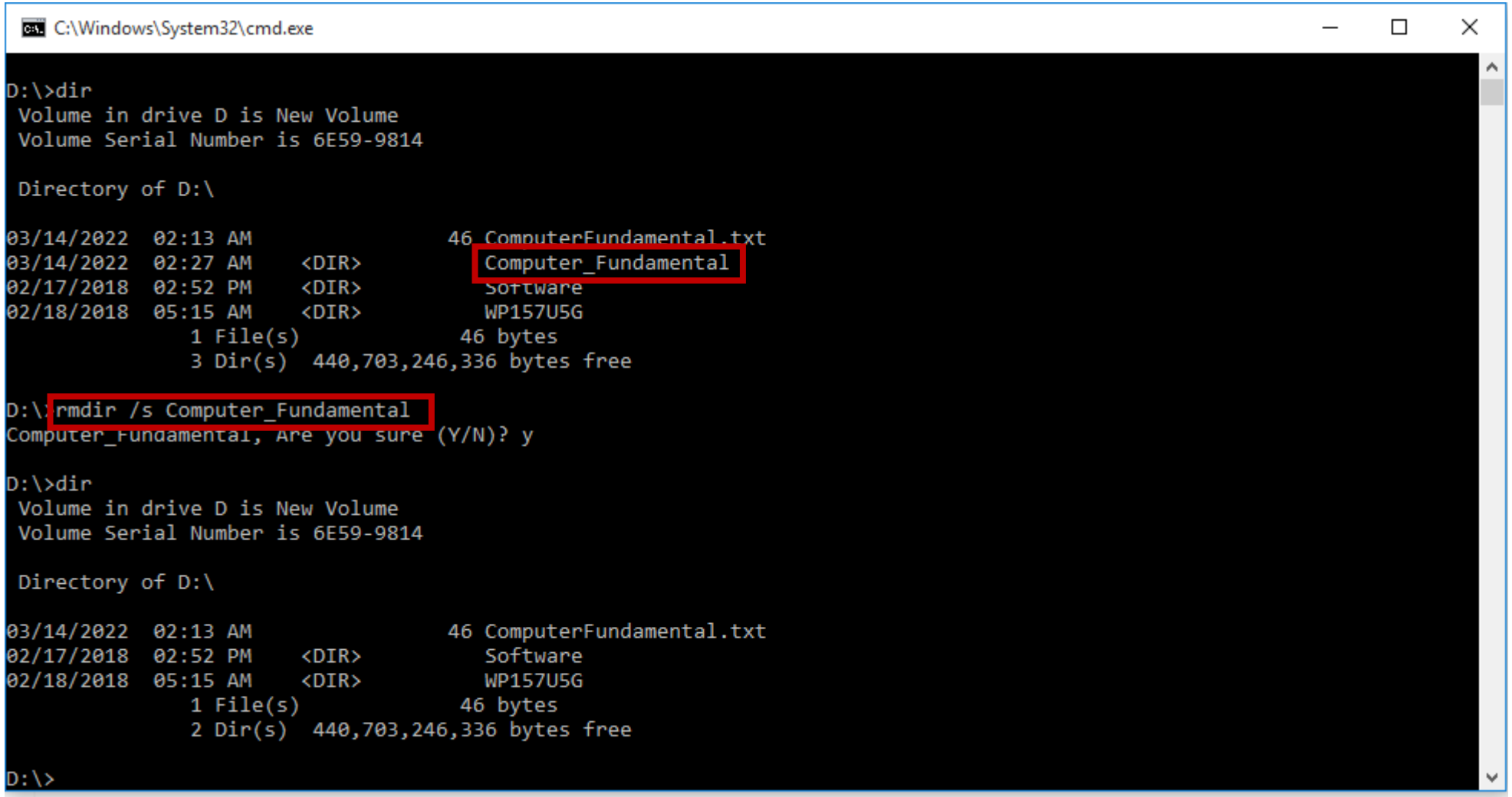
INTERNAL DOS COMMAND

REMOVE DIRECTORY(RMDIR) Command

RMDIR (Remove Directory) is used to remove or delete the folder or directory.

Syntax

C:> rmdir /s folder-name (Press Enter)


C:\Windows\System32\cmd.exe
D:\>dir
Volume in drive D is New Volume
Volume Serial Number is 6E59-9814
Directory of D:\
03/14/2022 02:13 AM 46 ComputerFundamental.txt
03/14/2022 02:27 AM <DIR> Computer_Fundamental
02/17/2018 02:52 PM <DIR> Software
02/18/2018 05:15 AM <DIR> WP157U5G
1 File(s) 46 bytes
3 Dir(s) 440,703,246,336 bytes free
D:\>rmdir /s Computer_Fundamental
Computer_Fundamental, Are you sure (Y/N)? y
D:\>dir
Volume in drive D is New Volume
Volume Serial Number is 6E59-9814
Directory of D:\
03/14/2022 02:13 AM 46 ComputerFundamental.txt
02/17/2018 02:52 PM <DIR> Software
02/18/2018 05:15 AM <DIR> WP157U5G
1 File(s) 46 bytes
2 Dir(s) 440,703,246,336 bytes free
D:\>

INTERNAL DOS COMMAND

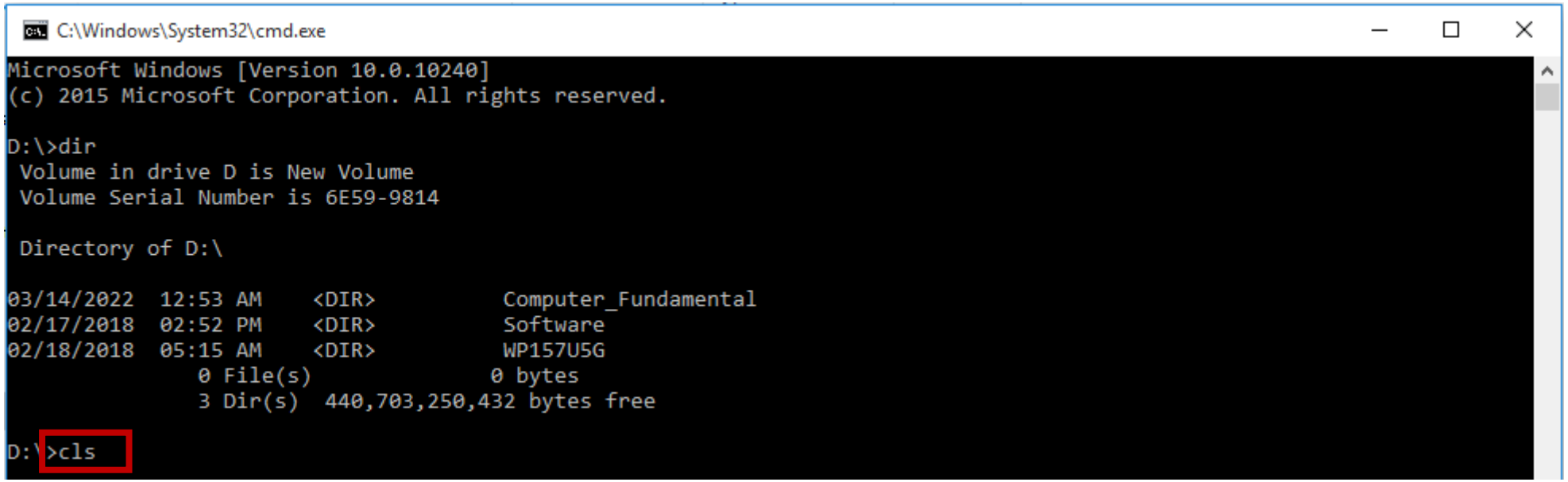
CLS Command

- This is an Internal dos command which is used to clear the output on the screen obtained when executed any basic dos commands.
- These commands clears all the text from the screen and shows user a Command prompt.

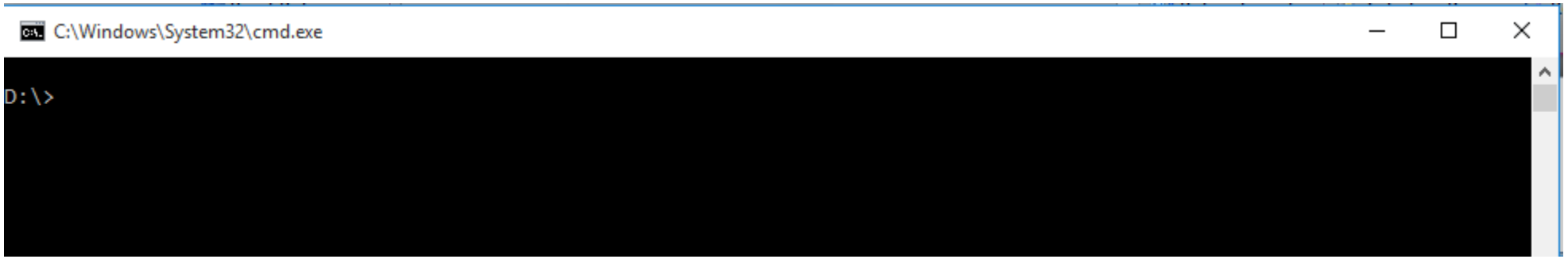
Syntax

C:\>cls (Press Enter)

CLS Command



After pressing enter, all the output are cleared.



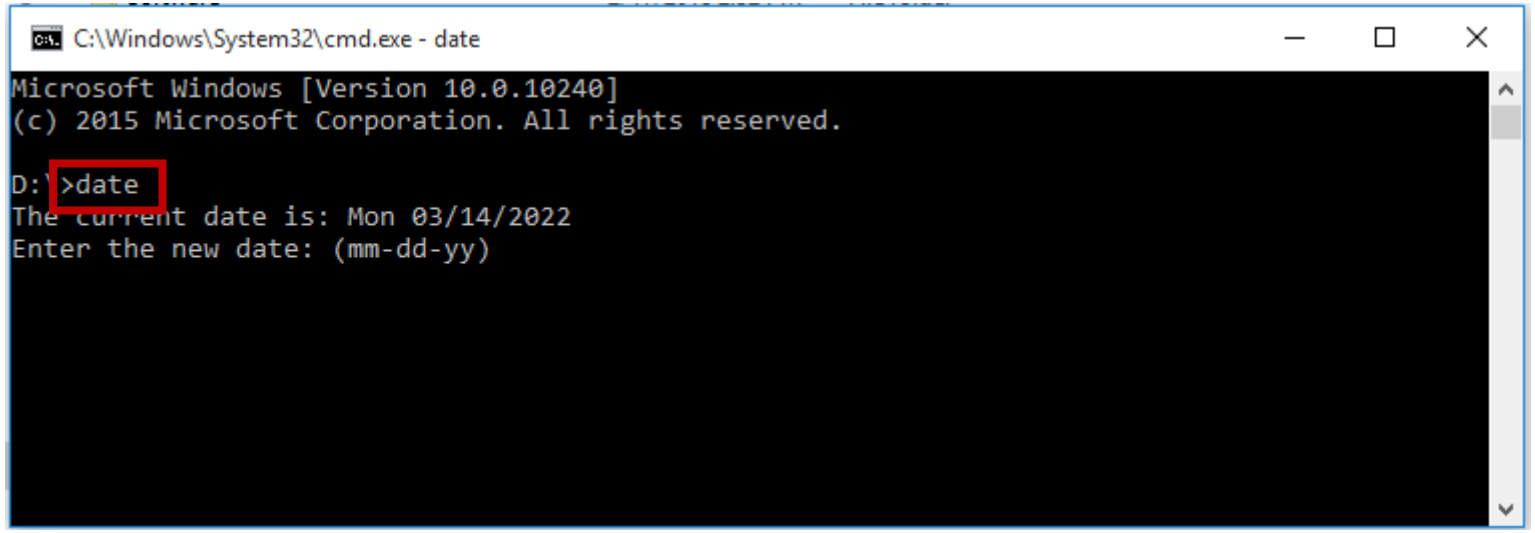
INTERNAL DOS COMMAND

DATE Command

- Date command is a internal basic dos command which is used to display or change current date of system in format of mm/dd/yy.

Syntax

C:\>date (Press Enter)



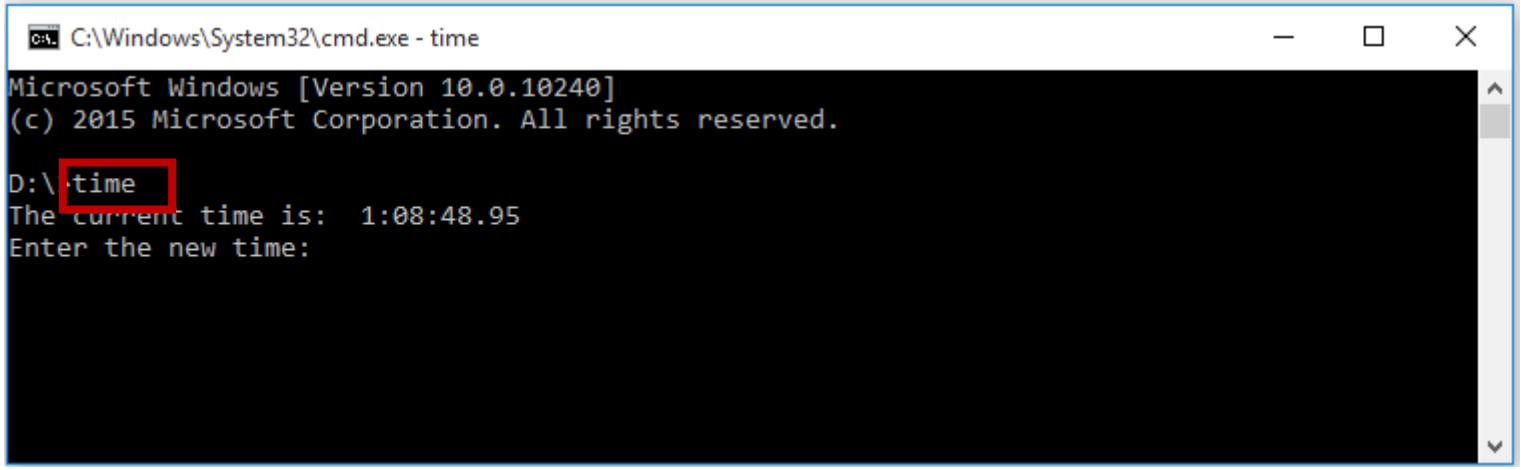
INTERNAL DOS COMMAND

TIME Command

- Time command is used to display or change the current time of Computer system. The format which is used by time command is HH:MM:SS .Where HH stands for hours of the day in 24 hour format , MM for minutes , SS For seconds and CC For hundreds of a second.

Syntax

C:\>time (Press Enter)



INTERNAL DOS COMMAND

COPY CON Command

- This is a very important internal dos command which is used to create text files . The filename used while creating a file using this basic dos command consist of a primary name and a extension which is separated by a dot or commonly called as period.
- While creating a File there are some rules, that a primary file name must not be greater then 8 characters and the extension must be not greater then 3 characters.
- Filename can consist of digits and special symbols such as 0 to 9 or @ # % etc

For more internal DOS command

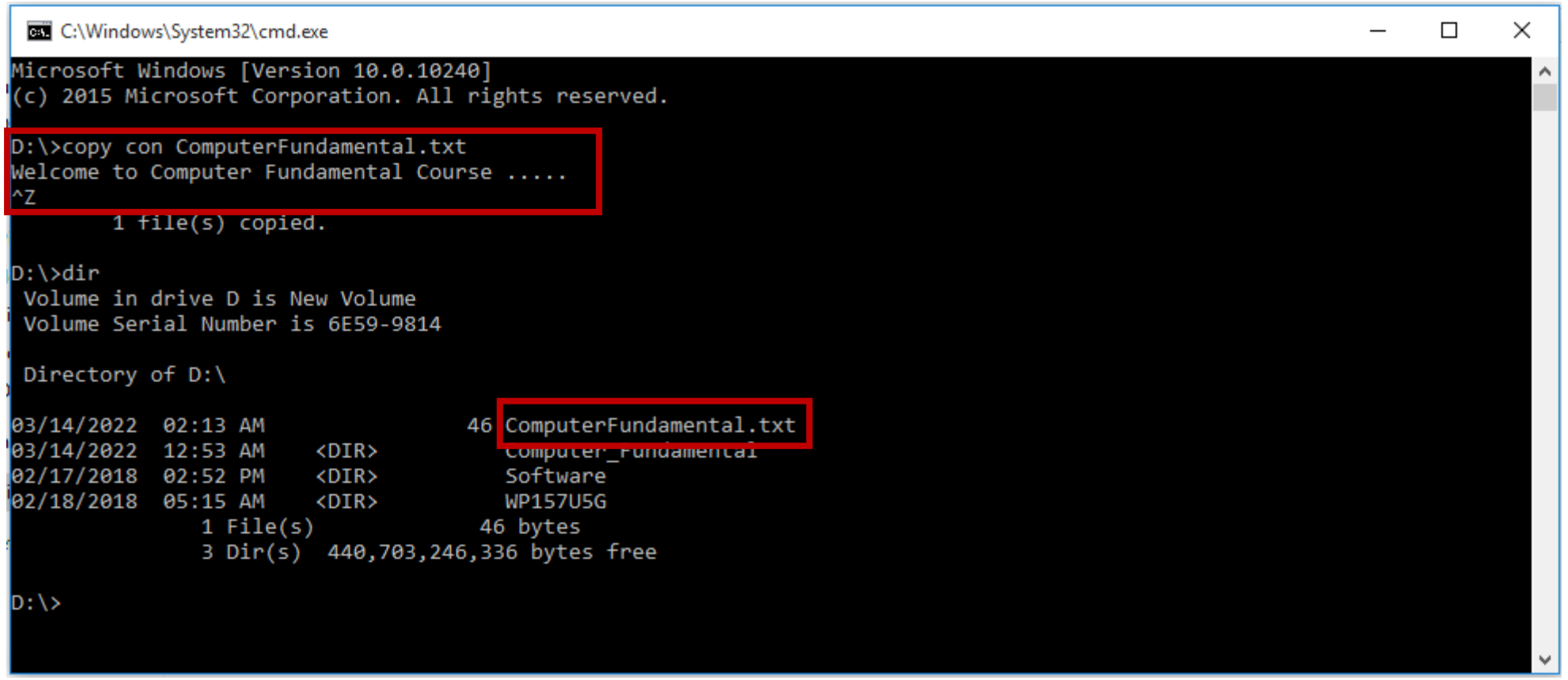
- https://www.youtube.com/watch?v=6EQPJ4rS6W0

Syntax

C:\>copy con FileName (Press Enter)

- Every body wants to go to heaven but nobody wants to die.
- To save the file use CTRL+Z OR F6 OR to cancel use CTRL+C from keyboard.

COPY CON Command



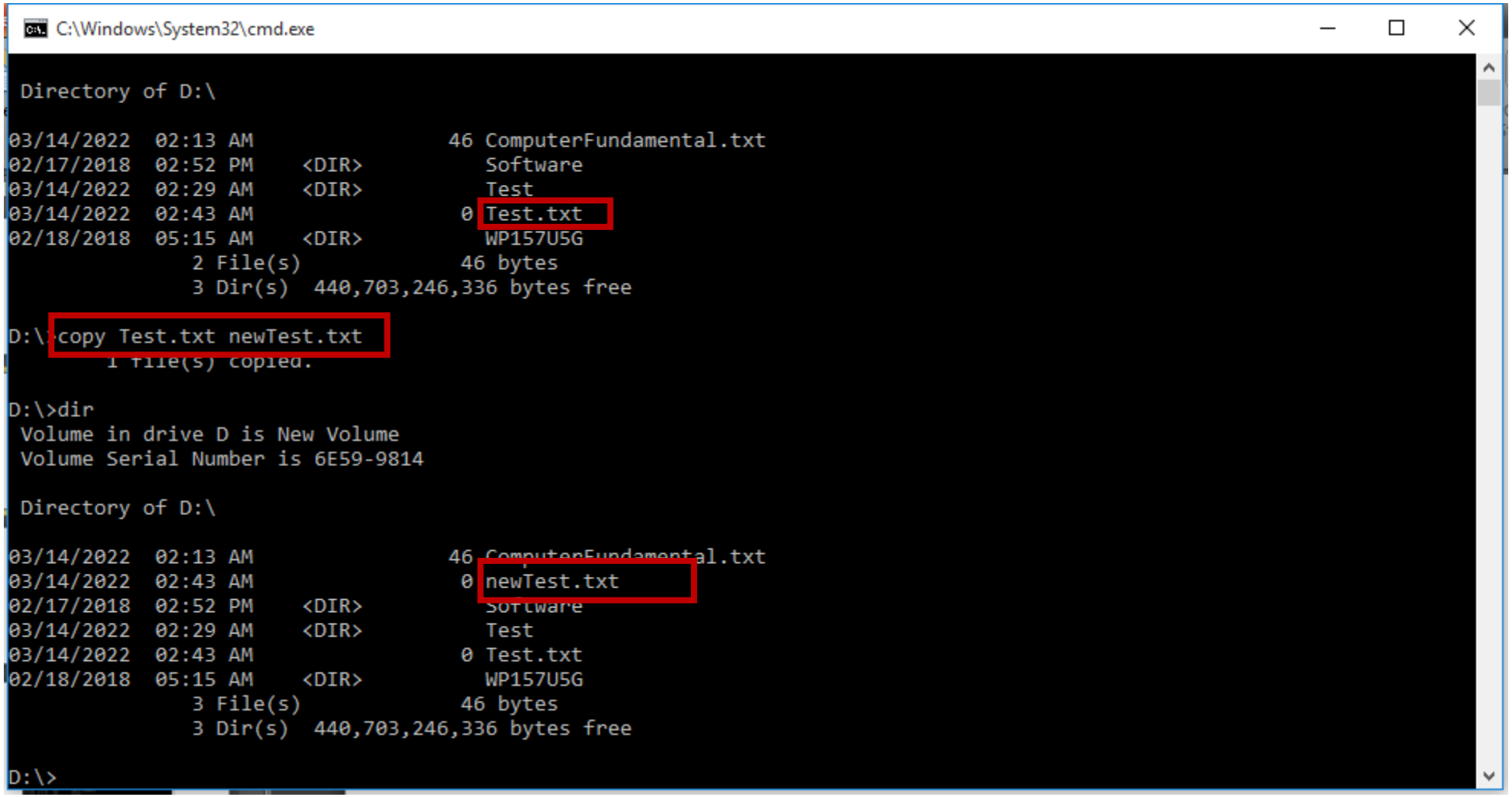
INTERNAL DOS COMMAND

COPY Command

- This command is used to copy file.

Syntax

C:\>copy original-filename new-filename(Press Enter)


C:\Windows\System32\cmd.exe
Directory of D:\
03/14/2022 02:13 AM 46 ComputerFundamental.txt
02/17/2018 02:52 PM <DIR> Software
03/14/2022 02:29 AM <DIR> Test
03/14/2022 02:43 AM 0 Test.txt
02/18/2018 05:15 AM <DIR> WP157U5G
2 File(s) 46 bytes
3 Dir(s) 440,703,246,336 bytes free
D:\>copy Test.txt newTest.txt
1 file(s) copied.
D:\>dir
Volume in drive D is New Volume
Volume Serial Number is 6E59-9814
Directory of D:\
03/14/2022 02:13 AM 46 ComputerFundamental.txt
03/14/2022 02:43 AM 0 newTest.txt
02/17/2018 02:52 PM <DIR> Software
03/14/2022 02:29 AM <DIR> Test
03/14/2022 02:43 AM 0 Test.txt
02/18/2018 05:15 AM <DIR> WP157U5G
3 File(s) 46 bytes
3 Dir(s) 440,703,246,336 bytes free
D:\>

INTERNAL DOS COMMAND

RENAME (REN) Command

- This command is used to rename a file.

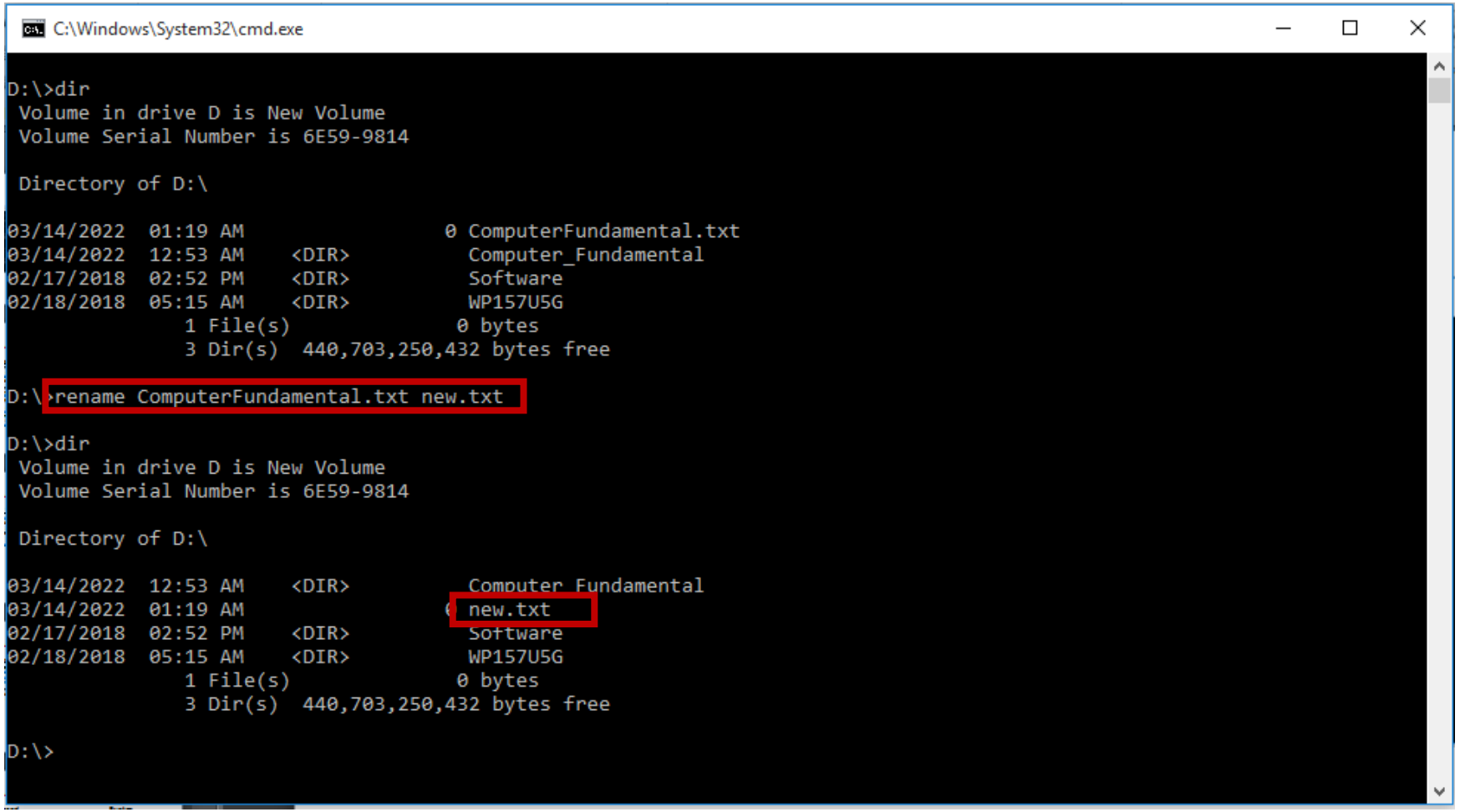
Syntax

C:\>rename original-filename new-filename(Press Enter)

Or

C:\>ren original-filename new-filename(Press Enter)

RENAME (REN) Command



INTERNAL DOS COMMAND

Delete (del) Command

- This command is used to delete a file.

Syntax

C:\> del fie-name (Press Enter)

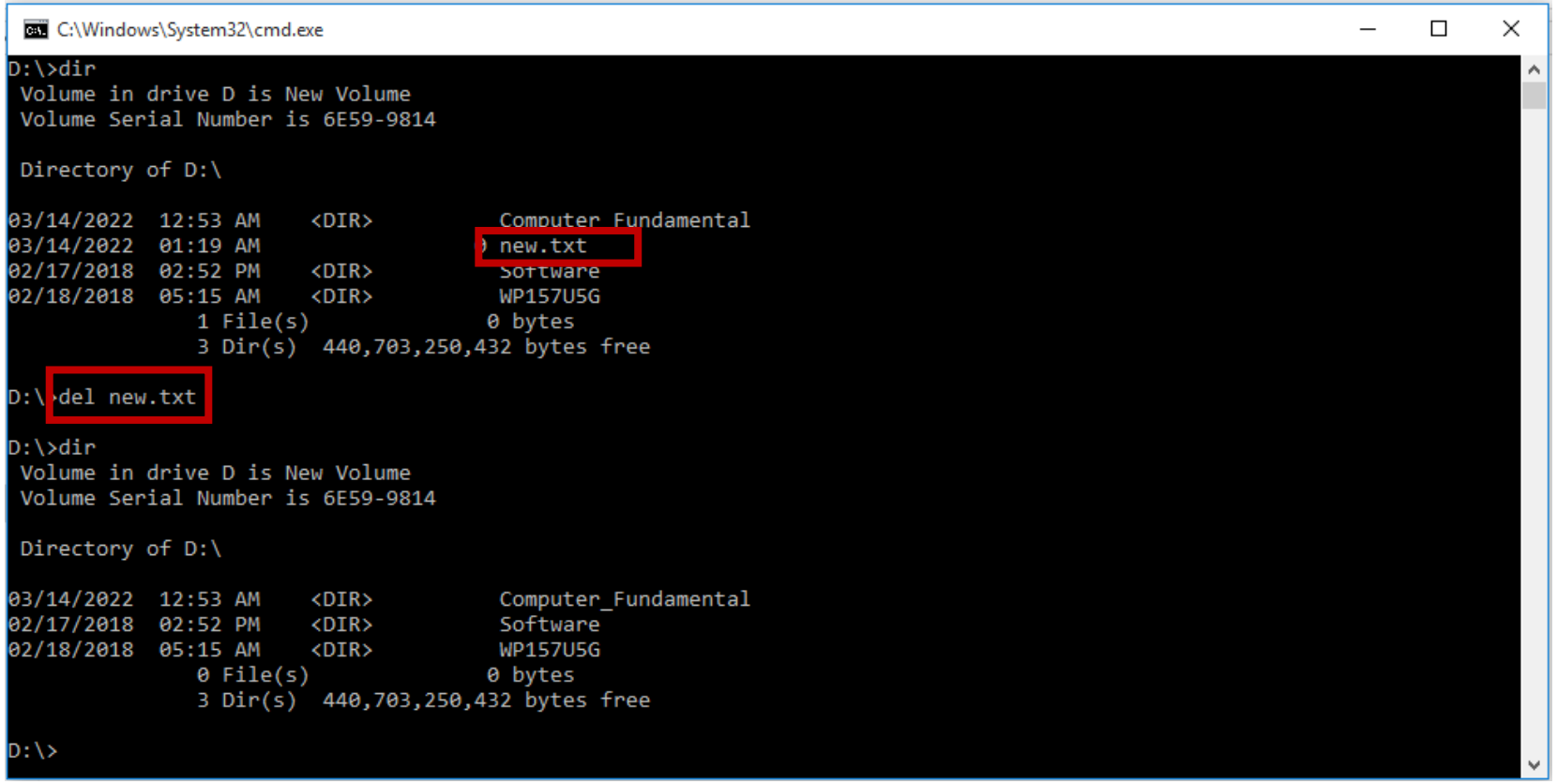
INTERNAL DOS COMMAND

DELETE (DEL) Command

- This command is used to rename a file.

Syntax

C:\>del filename (Press Enter)



EXTERNAL DOS COMMAND

FORMAT Command

- Format command is a external command and to run format command you need a supporting file named format.com
- Format command deletes or erase all the data present in the drives . which can be any flash drives , hard drives or floppy disk.
- The format command creates new allocation table and root directory and make the drive use able. The command also checks for bad areas of drives commonly called as bad sectors.

Syntax

C:> format (drive name) (Press Enter)

C:>format A: (Press Enter)

Switches used in format command.

EXTERNAL DOS COMMAND

DISKCOPY Command

- DISKCOPY is a basic dos commands which comes in a category of external dos command which is used to copy entire content of one drive to another .
- Diskcopy command works only with floppy disk.

Syntax

C:>Diskcopy A: B:

(Press Enter)

EXTERNAL DOS COMMAND

XCOPY Command

- XCOPY DOS COMMAND is used to copy entire files , directories and subdirectories from one location to another.
- xcopy command is executed when xcopy.exe file is present in hard disk or bootable drive .

Syntax

C:>xcopy(source) (destination) (Press Enter)

Example:

C:>xcopy/s/e c:movies d:new (Press Enter)

- In the Example xcopy will copy all files and directories from c:movies to d:new .where /s is used for copying nonempty subdirectories.
- And /e is used for copying directories and subdirectories including empty ones. Switches used in XCOPY COMMAND.use xcopy/? To know all the switches used.

EXTERNAL DOS COMMAND

SYS Command

- SYS COMMAND is another external dos command which is used to transfer system files into destination drive and make the drive bootable .
- Usually sys commands copy three files namely command.com,io.sys and msdos.sys.

For more external DOS Command

- https://www.youtube.com/watch?v=_8vkSneFcsw

Syntax

C:> sys a: (Press Enter)

A:> sys c: (Press Enter)