..|..|.. Networking
CISCO. Academy

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Lab – File System Commands

Introduction

In this lab, you will use CLI commands to manage files and folders in Windows.

Recommended Equipment

- A computer running Windows

Instructions

Step 1: Access the Windows command prompt.

a. Log on to a Windows computer. The account **ITEUser** is used as the example user account throughout this lab.

b. To access the Windows command prompt, click **Start** and enter **cmd**. Select **Command Prompt** or **cmd.exe** to continue.

Step 2: Create and change directories.

In this step, you will use the change directory (**cd**), make directory (**md**), and directory (**dir**) commands.

Note: A directory is another word for folder. Directory and folder are used interchangeably throughout this lab.

a. Type **cd** at the command prompt.

```
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin>cd
C:\Users\Admin

C:\Users\Admin>
```

Question:

What is the current directory?

C:\Users\Admin

b. Type **dir** at the command prompt to list the files and folders that are in the current folder.

```
C:\Users\ITEUser> dir
 Volume in drive C has no label.
 Volume Serial Number is 9055-35E9

 Directory of C:\Users\ITEUser


04/27/2019  09:21 AM    <DIR>          .
04/27/2019  09:21 AM    <DIR>          ..
04/25/2019  11:39 AM    <DIR>          3D Objects
```

               www.netacad.com

```
04/25/2019  11:39 AM    <DIR>          Contacts
04/26/2019  10:29 AM    <DIR>          Desktop
04/25/2019  11:39 AM    <DIR>          Documents
04/25/2019  11:39 AM    <DIR>          Downloads
<some output omitted>
               0 File(s)              0 bytes
              15 Dir(s)   32,671,969,280 bytes free
```

```
Directory of C:\Users\Admin

13/10/2025  06:01 pm    <DIR>          .
11/08/2025  09:07 pm    <DIR>          ..
26/08/2025  08:51 pm    <DIR>          .android
01/09/2024  01:03 pm    <DIR>          .ms-ad
30/09/2025  09:02 pm              176  .packettracer
11/10/2025  10:40 pm    <DIR>          .VirtualBox
19/03/2025  09:11 am    <DIR>          .vscode
29/07/2024  08:06 pm           11,835  AMDRM_Install.log
29/07/2024  08:03 pm        3,479,742  AMD_RyzenMaster.log
29/07/2024  08:06 pm        2,702,110  AMD_RyzenMaster_Uninstall.log
30/09/2025  09:01 pm    <DIR>          Cisco Packet Tracer 7.2.2
28/02/2025  06:07 pm    <DIR>          Contacts
13/10/2025  06:01 pm    <DIR>          CrossDevice
01/01/2025  12:05 pm    <DIR>          Desktop
01/01/2025  12:05 pm    <DIR>          Documents
16/10/2025  09:15 am    <DIR>          Downloads
28/02/2025  06:07 pm    <DIR>          Favorites
28/02/2025  06:07 pm    <DIR>          Links
28/02/2025  06:07 pm    <DIR>          Music
16/10/2025  07:20 am    <DIR>          OneDrive
01/01/2025  12:05 pm    <DIR>          Pictures
28/02/2025  06:07 pm    <DIR>          Saved Games
28/02/2025  06:07 pm    <DIR>          Searches
27/04/2025  04:55 pm              362  Sti_Trace.log
28/02/2025  06:07 pm    <DIR>          Videos
11/10/2025  09:48 pm    <DIR>          VirtualBox VMs
               5 File(s)      6,194,225 bytes
              21 Dir(s)  265,947,656,192 bytes free
```

c. In the current directory, use the **md** command to create three new folders: **ITEfolder1**, **ITEfolder2**, and **ITEfolder3**. Type **md ITEfolder1** and press **Enter**. Create **ITEfolder2** and **ITEfolder3**. (**Note**: The command **mkdir** performs the same function as the command **md**.)

```
C:\Users\ITEUser> md ITEfolder1
C:\Users\ITEUser> md ITEfolder2 ITEfolder3
```

```
C:\Users\Admin>md ITEfolder1

C:\Users\Admin>md ITEfolder2 ITEfolder3
```

d. Type **dir** to verify that the folders have been created.

```
 Directory of C:\Users\Admin

16/10/2025  09:20 am    <DIR>          .
11/08/2025  09:07 pm    <DIR>          ..
26/08/2025  08:51 pm    <DIR>          .android
01/09/2024  01:03 pm    <DIR>          .ms-ad
30/09/2025  09:02 pm               176 .packettracer
11/10/2025  10:40 pm    <DIR>          .VirtualBox
19/03/2025  09:11 am    <DIR>          .vscode
29/07/2024  08:06 pm            11,835 AMDRM_Install.log
29/07/2024  08:03 pm         3,479,742 AMD_RyzenMaster.log
29/07/2024  08:06 pm         2,702,110 AMD_RyzenMaster_Uninstall.log
30/09/2025  09:01 pm    <DIR>          Cisco Packet Tracer 7.2.2
28/02/2025  06:07 pm    <DIR>          Contacts
13/10/2025  06:01 pm    <DIR>          CrossDevice
01/01/2025  12:05 pm    <DIR>          Desktop
01/01/2025  12:05 pm    <DIR>          Documents
16/10/2025  09:15 am    <DIR>          Downloads
28/02/2025  06:07 pm    <DIR>          Favorites
16/10/2025  09:20 am    <DIR>          ITEfolder1
16/10/2025  09:20 am    <DIR>          ITEfolder2
16/10/2025  09:20 am    <DIR>          ITEfolder3
28/02/2025  06:07 pm    <DIR>          Links
28/02/2025  06:07 pm    <DIR>          Music
16/10/2025  07:20 am    <DIR>          OneDrive
01/01/2025  12:05 pm    <DIR>          Pictures
28/02/2025  06:07 pm    <DIR>          Saved Games
28/02/2025  06:07 pm    <DIR>          Searches
27/04/2025  04:55 pm               362 Sti_Trace.log
28/02/2025  06:07 pm    <DIR>          Videos
11/10/2025  09:48 pm    <DIR>          VirtualBox VMs
               5 File(s)      6,194,225 bytes
              24 Dir(s)  265,947,676,672 bytes free
```

e. Type **cd ITEfolder3** at the command prompt and press **Enter**.

```
C:\Users\Admin>cd ITEfolder3

C:\Users\Admin\ITEfolder3>
```

Question:

Which folder are you in now?

C:\Users\Admin\ITEfolder3

f. Create **ITEfolder4** in the current directory. Within the **ITEfolder4** folder, create a folder named **ITEfolder5**. Use the **dir** command to verify the folder creation.

```
C:\Users\Admin>cd ITEfolder3

C:\Users\Admin\ITEfolder3>md ITEfolder4

C:\Users\Admin\ITEfolder3>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder3

16/10/2025  09:24 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:24 am    <DIR>          ITEfolder4
               0 File(s)              0 bytes
               3 Dir(s)  265,912,446,976 bytes free

C:\Users\Admin\ITEfolder3>cd ITEfolder4

C:\Users\Admin\ITEfolder3\ITEfolder4>md ITEfolder5

C:\Users\Admin\ITEfolder3\ITEfolder4>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder3\ITEfolder4

16/10/2025  09:24 am    <DIR>          .
16/10/2025  09:24 am    <DIR>          ..
16/10/2025  09:24 am    <DIR>          ITEfolder5
               0 File(s)              0 bytes
               3 Dir(s)  265,911,857,152 bytes free

C:\Users\Admin\ITEfolder3\ITEfolder4>
```

Question:

What command or commands did you use to create the nested folders?

I used the "cd" and "md" together to access folders and create nested folders.

g. Change directory as necessary until you are in ITEfolder5.

```
C:\Users\Admin\ITEfolder3\ITEfolder4>cd ITEfolder5

C:\Users\Admin\ITEfolder3\ITEfolder4\ITEfolder5>
```

h. Type **cd ..** to change the current directory. Each **..** is a shortcut to move up one level in the directory tree.

```
C:\Users\Admin\ITEfolder3\ITEfolder4\ITEfolder5>cd ..

C:\Users\Admin\ITEfolder3\ITEfolder4>
```

Question:

After issuing the **cd ..** command, what is your directory now?

Back to ITEfolder4

What would be the current directory if you issue this command at
C:\Users\ITEUser\ITEfolder3\ITEFolder4?

I will go back to ITEfolder3

Step 3: Create text files.

a. Navigate to the **C:\Users\ITEUser\ITEfolder1** directory. Type **cd ..\ITEfolder1** at the prompt.

```
C:\Users\Admin\ITEfolder3>cd ..\ITEfolder1

C:\Users\Admin\ITEfolder1>
```

b. Type **echo This is doc1.txt > doc1.txt** at the command prompt. The **echo** command is used to display a message at the command prompt. The **>** is used to redirect the message from the screen to a file. For example, in the first line, the message **This is doc1.txt** is redirected into a new file named **doc1.txt**. Use the **echo** command and **>** redirect to create these files: **doc2.txt**, **file1.txt**, and **file2.txt**.

```
C:\Users\ITEUser\ITEfolder1> echo This is doc1.txt > doc1.txt
C:\Users\ITEUser\ITEfolder1> echo This is doc2.txt > doc2.txt
C:\Users\ITEUser\ITEfolder1> echo This is file1.txt > file1.txt
C:\Users\ITEUser\ITEfolder1> echo This is file2.txt > file2.txt
```

```
C:\Users\Admin\ITEfolder1>echo This is doc1.txt > doc1.txt

C:\Users\Admin\ITEfolder1>echo This is doc2.txt > doc2.txt

C:\Users\Admin\ITEfolder1>echo This is file1.txt > file1.txt

C:\Users\Admin\ITEfolder1>echo This is file2.txt > file2.txt
```

c. Use the **dir** command to verify the files are in the **ITEfolder1** folder.

```
C:\Users\Admin\ITEfolder1>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder1

16/10/2025  09:33 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:33 am                19 doc1.txt
16/10/2025  09:33 am                19 doc2.txt
16/10/2025  09:33 am                20 file1.txt
16/10/2025  09:33 am                20 file2.txt
               4 File(s)             78 bytes
               2 Dir(s)  265,903,542,272 bytes free
```

```
C:\Users\ITEUser\ITEFolder1> dir
<some output omitted>
04/29/2019  08:05 AM                19 doc1.txt
04/29/2019  08:06 AM                19 doc2.txt
04/29/2019  08:08 AM                20 file1.txt
04/29/2019  08:08 AM                20 file2.txt
               4 File(s)             78 bytes
               2 Dir(s)  32,625,397,760 bytes free
```

d. Use the **more** or **type** command to view the content of the newly created text files.

```
C:\Users\Admin\ITEfolder1>more doc1.txt
This is doc1.txt

C:\Users\Admin\ITEfolder1>type doc2.txt
This is doc2.txt

C:\Users\Admin\ITEfolder1>more file1.txt
This is file1.txt

C:\Users\Admin\ITEfolder1>type file2.txt
This is file2.txt
```

```
C:\Users\ITEUser\ITEfolder1> more doc1.txt
This is doc1.txt

C:\Users\ITEUser\ITEfolder1> type doc2.txt
This is doc2.txt
```

Step 4: Copy, delete, and move files.

a. At the command prompt, type **move doc2.txt C:\Users\ITEUser\ITEfolder2** to move the file **doc2.txt** to the **C:\Users\ITEUser\ITEfolder2** directory.

```
C:\Users\Admin\ITEfolder1>move doc2.txt C:\Users\Admin\ITEfolder2
        1 file(s) moved.
```

C:\Users\ITEUser\ITEfolder1> **move doc2.txt C:\Users\ITEUser\ITEfolder2**
        1 file(s) moved.

b. Type **dir** at the prompt to verify that **doc2.txt** is no longer in the current directory.

```
C:\Users\Admin\ITEfolder1>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder1

16/10/2025  09:36 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:33 am                19 doc1.txt
16/10/2025  09:33 am                20 file1.txt
16/10/2025  09:33 am                20 file2.txt
               3 File(s)             59 bytes
               2 Dir(s)  265,898,127,360 bytes free
```

c. Navigate to **C:\Users\ITEUser\ITEfolder2** to change the directory to **ITEfolder2**. Type **dir** at the prompt to verify **doc2.txt** has been moved.

```
C:\Users\Admin\ITEfolder1>cd..\ITEfolder2

C:\Users\Admin\ITEfolder2>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder2

16/10/2025  09:36 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:33 am                19 doc2.txt
               1 File(s)             19 bytes
               2 Dir(s)  265,898,467,328 bytes free
```

d. Type **copy doc2.txt doc2_copy.txt** to create a copy of **doc2.txt**. Type **dir** at the prompt to verify a copy of the file has been created.

```
C:\Users\Admin\ITEfolder2>copy doc2.txt doc2_copy.txt
        1 file(s) copied.

C:\Users\Admin\ITEfolder2>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder2

16/10/2025  09:39 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:33 am                19 doc2.txt
16/10/2025  09:33 am                19 doc2_copy.txt
               2 File(s)             38 bytes
               2 Dir(s)  265,898,430,464 bytes free
```

```
C:\Users\ITEUser\ITEfolder2> dir
<some output omitted>
Directory of C:\Users\ITEUser\ITEfolder2

04/30/2019  09:07 AM                19 doc2.txt
04/30/2019  09:07 AM                19 doc2_copy.txt
               2 File(s)             38 bytes
               2 Dir(s)  31,753,068,544 bytes free
```

e. Use the **move** command to move **doc2_copy.txt** to **ITEfolder1**. Type **move doc2_copy.txt ..\ITEfolder1**.

```
C:\Users\Admin\ITEfolder2>move doc2_copy.txt ..\ITEfolder1
        1 file(s) moved.
```

```
C:\Users\ITEUser\ITEfolder2> move doc2_copy.txt ..\ITEfolder1
        1 file(s) moved.
```

f. A copy of the file **doc2.txt** can be created in a new location using the **copy** command. At the prompt, enter the **copy doc2.txt ..\ITEfolder1\doc2_new.txt**.

```
C:\Users\Admin\ITEfolder2>copy doc2.txt ..\ITEfolder1\doc2_new.txt
        1 file(s) copied.
```

```
C:\Users\ITEUser\ITEfolder2> copy doc2.txt ..\ITEfolder1\doc2_new.txt
        1 file(s) copied.
```

g. The file **doc2.txt** can also be moved to a new location with a new filename using the **move** command. Type **move doc2.txt ..\ITEfolder1\doc2_new.txt** at the prompt.

```
C:\Users\Admin\ITEfolder2>move doc2.txt ..\ITEfolder1\doc2_move.txt
        1 file(s) moved.
```

```
C:\Users\ITEUser\ITEfolder2> move doc2.txt ..\ITEfolder1\doc2_move.txt
        1 file(s) moved.
```

h. Type **dir ..\ITEfolder1** to view the content in **ITEfolder1** without leaving the current directory.

```
C:\Users\Admin\ITEfolder2>dir ..\ITEfolder1
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder1

16/10/2025  09:42 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:33 am                19 doc1.txt
16/10/2025  09:33 am                19 doc2_copy.txt
16/10/2025  09:33 am                19 doc2_move.txt
16/10/2025  09:33 am                19 doc2_new.txt
16/10/2025  09:33 am                20 file1.txt
16/10/2025  09:33 am                20 file2.txt
              6 File(s)            116 bytes
              2 Dir(s)  265,867,956,224 bytes free
```

```
C:\Users\ITEUser\ITEfolder2> dir ..\ITEfolder1
<some output omitted>
 Directory of C:\Users\ITEUser\ITEfolder1

04/29/2019  12:08 PM    <DIR>          .
04/29/2019  12:08 PM    <DIR>          ..
04/29/2019  08:05 AM                19 doc1.txt
04/29/2019  08:06 AM                19 doc2_copy.txt
04/29/2019  08:06 AM                19 doc2_move.txt
04/29/2019  08:06 AM                19 doc2_new.txt
04/29/2019  08:08 AM                20 file1.txt
04/29/2019  08:08 AM                20 file2.txt
              6 File(s)            116 bytes
              2 Dir(s)  31,467,700,224 bytes free
```

i. Change the current directory to **ITEfolder1**. Type **cd ..\ITEfolder1** at the prompt.

```
C:\Users\Admin\ITEfolder2>cd ..\ITEfolder1

C:\Users\Admin\ITEfolder1>
```

j. Move **file1.txt** and **file2.txt** into **ITEfolder3**. To move all the files that contain the word **file** into **ITEfolder3** with one command, use a **wildcard** (*****) character to represent one or more characters. Type **move file* ..\ITEfolder3**.

```
C:\Users\Admin\ITEfolder1>move file* ..\ITEfolder3
C:\Users\Admin\ITEfolder1\file1.txt
C:\Users\Admin\ITEfolder1\file2.txt
        2 file(s) moved.
```

```
C:\Users\ITEUser\ITEfolder1> move file* ..\ITEfolder3
C:\Users\ITEUser\ITEfolder1\file1.txt
C:\Users\ITEUser\ITEfolder1\file2.txt
        2 file(s) moved.
```

k. To view the content of the file doc2_new.txt, use the **type** or **more** command at the prompt.

```
C:\Users\Admin\ITEfolder1>type doc2_new.txt
This is doc2.txt
```

```
C:\Users\ITEUser\ITEfolder1> type doc2_new.txt
This is doc2.txt
```

l. Use the **ren** command to rename doc2_new.txt to doc3.txt. Use the **dir** command to display the content in the directory.

```
C:\Users\Admin\ITEfolder1>ren doc2_new.txt file.log
```

```
c:\Users\ITEUser\ITEfolder1> ren doc2_new.txt file.log
```

m. Use the **type** or **more** command to view the content of the newly rename file **file.log.**

```
C:\Users\Admin\ITEfolder1>more file.log
This is doc2.txt
```

```
C:\Users\ITEUser\ITEfolder1> more file.log
This is doc2.txt
```

n. To delete a file or multiple files, use the **del** command with the file names at the prompt.

```
C:\Users\Admin\ITEfolder1>del *doc2*
```

Question:

What single command would you use to delete all the files with doc2 in the filename? Use the command to remove the files with doc2 in the filename.

del *"nameofthefile"*

What command would you use to delete all the files in the directory? Use the command to remove the files.

del *

Step 5: Use the xcopy and robocopy commands.

In this step, the **xcopy** and **robocopy** commands are used to copy the content in a directory.

a. View the content of ITEfolder3.

```
16/10/2025  09:44 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:33 am                20 file1.txt
16/10/2025  09:33 am                20 file2.txt
16/10/2025  09:24 am    <DIR>          ITEfolder4
              2 File(s)             40 bytes
              3 Dir(s)  265,853,644,800 bytes free
```

```
C:\Users\ITEUser\ITEfolder1> dir ..\ITEfolder3
<some output omitted>
 Directory of c:\Users\ITEUser\ITEfolder3

04/29/2019  03:11 PM    <DIR>          .
04/29/2019  03:11 PM    <DIR>          ..
04/29/2019  03:05 PM                20 file1.txt
04/29/2019  03:05 PM                20 file2.txt
04/29/2019  03:01 PM    <DIR>          ITEfolder4
              2 File(s)             40 bytes
              3 Dir(s)  31,492,157,440 bytes free
```

b. Type **xcopy ..\ITEfolder3 .** at the prompt to copy the content of **ITEfolder3** to **ITEfolder1**. Note the **.** at the end of the command. It is a shortcut for the current directory.

```
C:\Users\Admin\ITEfolder1>xcopy ..\ITEfolder3
..\ITEfolder3\file1.txt
..\ITEfolder3\file2.txt
2 File(s) copied
```

```
C:\Users\ITEUser\ITEfolder1> xcopy ..\ITEfolder3 .
..\ITEfolder3\file1.txt
..\ITEfolder3\file2.txt
2 File(s) copied
```

c. At the prompt, type **dir** to display the content of **ITEfolder1**. Only the files in the **ITEfolder3** were copied into **ITEfolder1**. The directory **ITEfolder4** was not copied into **ITEfolder3**.

```
C:\Users\Admin\ITEfolder1>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder1

16/10/2025  09:56 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:33 am                20 file1.txt
16/10/2025  09:33 am                20 file2.txt
              2 File(s)             40 bytes
              2 Dir(s)  265,852,612,608 bytes free
```

```
C:\Users\ITEUser\ITEfolder1> dir
<some output omitted>
 Directory of C:\Users\ITEUser\ITEfolder1
04/29/2019  03:16 PM    <DIR>          .
04/29/2019  03:16 PM    <DIR>          ..
04/29/2019  03:05 PM                20 file1.txt
04/29/2019  03:05 PM                20 file2.txt
               2 File(s)             40 bytes
               2 Dir(s)   31,491,321,856 bytes free
```

d. Use **help xcopy** or **xcopy /?** to determine which switch would allow the **xcopy** command to copy **all** the files and directories.

Question:

What option allows you to copy all the files and directories, including the empty directories?

/E option

e. Because **ITEfolder4** is a subfolder and **ITEfolder5** is both a subfolder and an empty folder, **/E** is needed to copy all the contents of **ITEfolder3** and the empty subfolder.

Type **xcopy /E ..\ITEfolder3 .** at the prompt to copy the files. When prompted, type **a** to allow overwriting the existing files.


```
c:\Users\ITEUser\ITEfolder1> xcopy /E ..\ITEfolder3
```

```
Overwrite C:\Users\ITEUser\ITEfolder1\file1.txt (Yes/No/All)? a
..\ITEfolder3\file1.txt
..\ITEfolder3\file2.txt
2 File(s) copied
```

f. Verify that the **ITEfolder4** and **ITEfolder5** were also copied in **ITEfolder1**.

```
C:\Users\Admin\ITEfolder1>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder1

16/10/2025  09:59 am    <DIR>          .
16/10/2025  09:20 am    <DIR>          ..
16/10/2025  09:33 am                20 file1.txt
16/10/2025  09:33 am                20 file2.txt
16/10/2025  09:59 am    <DIR>          ITEfolder4
               2 File(s)             40 bytes
               3 Dir(s)  265,847,963,648 bytes free
```

```
c:\Users\ITEUser\ITEfolder1> dir
<some output omitted>
 Directory of c:\Users\ITEUser\ITEfolder1

04/29/2019  04:41 PM    <DIR>          .
04/29/2019  04:41 PM    <DIR>          ..
04/29/2019  03:05 PM                20 file1.txt
04/29/2019  03:05 PM                20 file2.txt
04/29/2019  04:41 PM    <DIR>          ITEfolder4
               2 File(s)             40 bytes
               3 Dir(s)  31,493,193,728 bytes free
```

```
C:\Users\Admin\ITEfolder1>dir ITEfolder4
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin\ITEfolder1\ITEfolder4

16/10/2025  09:59 am    <DIR>          .
16/10/2025  09:59 am    <DIR>          ..
16/10/2025  09:24 am    <DIR>          ITEfolder5
               0 File(s)              0 bytes
               3 Dir(s)  265,846,206,464 bytes free
```

```
c:\Users\ITEUser\ITEfolder1> dir ITEfolder4
<some output omitted>
 Directory of c:\Users\ITEUser\ITEfolder1\ITEfolder4

04/29/2019  04:41 PM    <DIR>          .
04/29/2019  04:41 PM    <DIR>          ..
04/29/2019  03:00 PM    <DIR>          ITEfolder5
               0 File(s)              0 bytes
               3 Dir(s)  31,493,193,728 bytes free
```

g. The robocopy command can also be used to copy the content of a directory to a new destination. The robocopy command has more capabilities than the built-in Windows copy and xcopy command, such as resume copying after a network interruption, skip files that appear to be identical to the files in the

destination folders, and mirror a directory by keeping the destination directory in sync with the source directory.

```
C:\Users\Admin\ITEfolder1>robocopy /E C:\Users\Admin\ITEfolder3\ITEfolder4\ C:\Users\Admin

-------------------------------------------------------------------------------
   ROBOCOPY     ::     Robust File Copy for Windows
-------------------------------------------------------------------------------

  Started : Thursday, 16 October 2025 10:06:02 am
   Source : C:\Users\Admin\ITEfolder3\ITEfolder4\
     Dest : C:\Users\Admin\

    Files : *.*

  Options : *.* /S /E /DCOPY:DA /COPY:DAT /R:1000000 /W:30

-------------------------------------------------------------------------------

                          0    C:\Users\Admin\ITEfolder3\ITEfolder4\
        *EXTRA Dir        -1    C:\Users\Admin\.android\
        *EXTRA Dir        -1    C:\Users\Admin\.ms-ad\
        *EXTRA Dir        -1    C:\Users\Admin\.VirtualBox\
        *EXTRA Dir        -1    C:\Users\Admin\.vscode\
        *EXTRA Dir        -1    C:\Users\Admin\AppData\
        *EXTRA Dir        -1    C:\Users\Admin\Application Data\
        *EXTRA Dir        -1    C:\Users\Admin\Cisco Packet Tracer 7.2.2\
        *EXTRA Dir        -1    C:\Users\Admin\Contacts\
        *EXTRA Dir        -1    C:\Users\Admin\Cookies\
        *EXTRA Dir        -1    C:\Users\Admin\CrossDevice\
        *EXTRA Dir        -1    C:\Users\Admin\Desktop\
        *EXTRA Dir        -1    C:\Users\Admin\Documents\
        *EXTRA Dir        -1    C:\Users\Admin\Downloads\
        *EXTRA Dir        -1    C:\Users\Admin\Favorites\
        *EXTRA Dir        -1    C:\Users\Admin\ITEfolder1\
        *EXTRA Dir        -1    C:\Users\Admin\ITEfolder2\
        *EXTRA Dir        -1    C:\Users\Admin\ITEfolder3\
        *EXTRA Dir        -1    C:\Users\Admin\Links\
        *EXTRA Dir        -1    C:\Users\Admin\Local Settings\
        *EXTRA Dir        -1    C:\Users\Admin\Music\
        *EXTRA Dir        -1    C:\Users\Admin\My Documents\
        *EXTRA Dir        -1    C:\Users\Admin\NetHood\
        *EXTRA Dir        -1    C:\Users\Admin\OneDrive\
        *EXTRA Dir        -1    C:\Users\Admin\Pictures\
        *EXTRA Dir        -1    C:\Users\Admin\PrintHood\
        *EXTRA Dir        -1    C:\Users\Admin\Recent\
        *EXTRA Dir        -1    C:\Users\Admin\Saved Games\
        *EXTRA Dir        -1    C:\Users\Admin\Searches\
        *EXTRA Dir        -1    C:\Users\Admin\SendTo\
        *EXTRA Dir        -1    C:\Users\Admin\Start Menu\
        *EXTRA Dir        -1    C:\Users\Admin\Templates\
        *EXTRA Dir        -1    C:\Users\Admin\Videos\
        *EXTRA Dir        -1    C:\Users\Admin\VirtualBox VMs\
        *EXTRA Dir        -1    C:\Users\Admin\WPS Cloud Files\
          *EXTRA File       176         .packettracer
          *EXTRA File     11835         AMDRM_Install.log
          *EXTRA File     3.3 m         AMD_RyzenMaster.log
          *EXTRA File     2.5 m         AMD_RyzenMaster_Uninstall.log
          *EXTRA File    17.2 m         NTUSER.DAT
          *EXTRA File     1.5 m         ntuser.dat.LOG1
          *EXTRA File     4.5 m         ntuser.dat.LOG2
          *EXTRA File     65536         NTUSER.DAT{9005fea3-f5b9-11ef-a77a-b6da07968de2}.TM.blf
          *EXTRA File    524288         NTUSER.DAT{9005fea3-f5b9-11ef-a77a-b6da07968de2}.TMContainer00000000000000000001.regtrans-ms
          *EXTRA File    524288         NTUSER.DAT{9005fea3-f5b9-11ef-a77a-b6da07968de2}.TMContainer00000000000000000002.regtrans-ms
          *EXTRA File        20         ntuser.ini
          *EXTRA File       362         Sti_Trace.log
          New Dir          0    C:\Users\Admin\ITEfolder3\ITEfolder4\ITEfolder5\

-------------------------------------------------------------------------------

              Total    Copied   Skipped  Mismatch    FAILED    Extras
   Dirs :         2         1         1         0         0        34
   Files :        0         0         0         0         0        12
   Bytes :        0         0         0         0         0    30.27 m
   Times :   0:00:00   0:00:00                       0:00:00   0:00:00
   Ended : Thursday, 16 October 2025 10:06:02 am
```

Copy the ITEfolder4 content to ITEUser folder using the robocopy command.

```
C:\Users\ITEUser\ITEfolder1> robocopy /E
C:\Users\ITEUser\ITEfolder3\ITEfolder4\ C:\Users\ITEUser
```

Note the information provided by the command during the copying process.

h. Navigate to **C:\Users\ITEUser** to verify that the folder ITEfolder5 is copied.

```
C:\Users\Admin\ITEfolder1>cd ..

C:\Users\Admin>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin

16/10/2025  10:06 am    <DIR>          .
11/08/2025  09:07 pm    <DIR>          ..
26/08/2025  08:51 pm    <DIR>          .android
01/09/2024  01:03 pm    <DIR>          .ms-ad
30/09/2025  09:02 pm               176 .packettracer
11/10/2025  10:40 pm    <DIR>          .VirtualBox
19/03/2025  09:11 am    <DIR>          .vscode
29/07/2024  08:06 pm            11,835 AMDRM_Install.log
29/07/2024  08:03 pm         3,479,742 AMD_RyzenMaster.log
29/07/2024  08:06 pm         2,702,110 AMD_RyzenMaster_Uninstall.log
30/09/2025  09:01 pm    <DIR>          Cisco Packet Tracer 7.2.2
28/02/2025  06:07 pm    <DIR>          Contacts
13/10/2025  06:01 pm    <DIR>          CrossDevice
01/01/2025  12:05 pm    <DIR>          Desktop
01/01/2025  12:05 pm    <DIR>          Documents
16/10/2025  09:31 am    <DIR>          Downloads
28/02/2025  06:07 pm    <DIR>          Favorites
16/10/2025  09:59 am    <DIR>          ITEfolder1
16/10/2025  09:42 am    <DIR>          ITEfolder2
16/10/2025  09:44 am    <DIR>          ITEfolder3
16/10/2025  09:24 am    <DIR>          ITEfolder5
28/02/2025  06:07 pm    <DIR>          Links
28/02/2025  06:07 pm    <DIR>          Music
16/10/2025  07:20 am    <DIR>          OneDrive
01/01/2025  12:05 pm    <DIR>          Pictures
28/02/2025  06:07 pm    <DIR>          Saved Games
28/02/2025  06:07 pm    <DIR>          Searches
27/04/2025  04:55 pm               362 Sti_Trace.log
28/02/2025  06:07 pm    <DIR>          Videos
11/10/2025  09:48 pm    <DIR>          VirtualBox VMs
               5 File(s)      6,194,225 bytes
              25 Dir(s)  265,847,857,152 bytes free
```

Step 6: Delete directories.

In this step, you will delete an empty and a non-empty directory using the **rd** command.

a. Use the **rd ITEfolder2** to delete the empty directory and verify that the directory was deleted.

```
C:\Users\Admin>rd ITEfolder2

C:\Users\Admin>dir
 Volume in drive C is Acer
 Volume Serial Number is 460D-5241

 Directory of C:\Users\Admin

16/10/2025  10:07 am    <DIR>          .
11/08/2025  09:07 pm    <DIR>          ..
26/08/2025  08:51 pm    <DIR>          .android
01/09/2024  01:03 pm    <DIR>          .ms-ad
30/09/2025  09:02 pm              176 .packettracer
11/10/2025  10:40 pm    <DIR>          .VirtualBox
19/03/2025  09:11 am    <DIR>          .vscode
29/07/2024  08:06 pm           11,835 AMDRM_Install.log
29/07/2024  08:03 pm        3,479,742 AMD_RyzenMaster.log
29/07/2024  08:06 pm        2,702,110 AMD_RyzenMaster_Uninstall.log
30/09/2025  09:01 pm    <DIR>          Cisco Packet Tracer 7.2.2
28/02/2025  06:07 pm    <DIR>          Contacts
13/10/2025  06:01 pm    <DIR>          CrossDevice
01/01/2025  12:05 pm    <DIR>          Desktop
01/01/2025  12:05 pm    <DIR>          Documents
16/10/2025  09:31 am    <DIR>          Downloads
28/02/2025  06:07 pm    <DIR>          Favorites
16/10/2025  09:59 am    <DIR>          ITEfolder1
16/10/2025  09:44 am    <DIR>          ITEfolder3
16/10/2025  09:24 am    <DIR>          ITEfolder5
28/02/2025  06:07 pm    <DIR>          Links
28/02/2025  06:07 pm    <DIR>          Music
16/10/2025  07:20 am    <DIR>          OneDrive
01/01/2025  12:05 pm    <DIR>          Pictures
28/02/2025  06:07 pm    <DIR>          Saved Games
28/02/2025  06:07 pm    <DIR>          Searches
27/04/2025  04:55 pm              362 Sti_Trace.log
28/02/2025  06:07 pm    <DIR>          Videos
11/10/2025  09:48 pm    <DIR>          VirtualBox VMs
               5 File(s)      6,194,225 bytes
              24 Dir(s)  265,847,443,456 bytes free
```

`C:\Users\ITEUser>` **rd ITEfolder2**

b. Navigate to the **C:\Users\ITEUser\ITEfolder3** directory.

c. Use the **rd ITEfolder1** to delete the directory. Verify the directory removal using the **dir** command.

Were you able to delete the directory? Explain.

No I was not able to delete ITEfolder1. This because ITEfolder1 is not inside the ITEfolder3 directory

d. Use **rd /?** command to determine the switch that allows the deletion of a non-empty directory.

```
C:\Users\Admin\ITEfolder3>rd /S ITEfolder4
ITEfolder4, Are you sure (Y/N)? y
```

c:\Users\ITEUser\ITEfolder3> **rd /S ITEfolder4**
ITEfolder4, Are you sure (Y/N)? **y**

e. Use the appropriate commands to delete all the text files and folders that you have created in this lab. Type **exit** to close the command prompt window.

Reflection Question

What are the advantages of using CLI vs. GUI?

CLI has an advantage of being able inside program scripts. This is because it can be ran using a line of code as opposed to GUI that needs a user actions. CLI also has an advantage of being ran faster on very slow systems because they require much less resources than GUI.