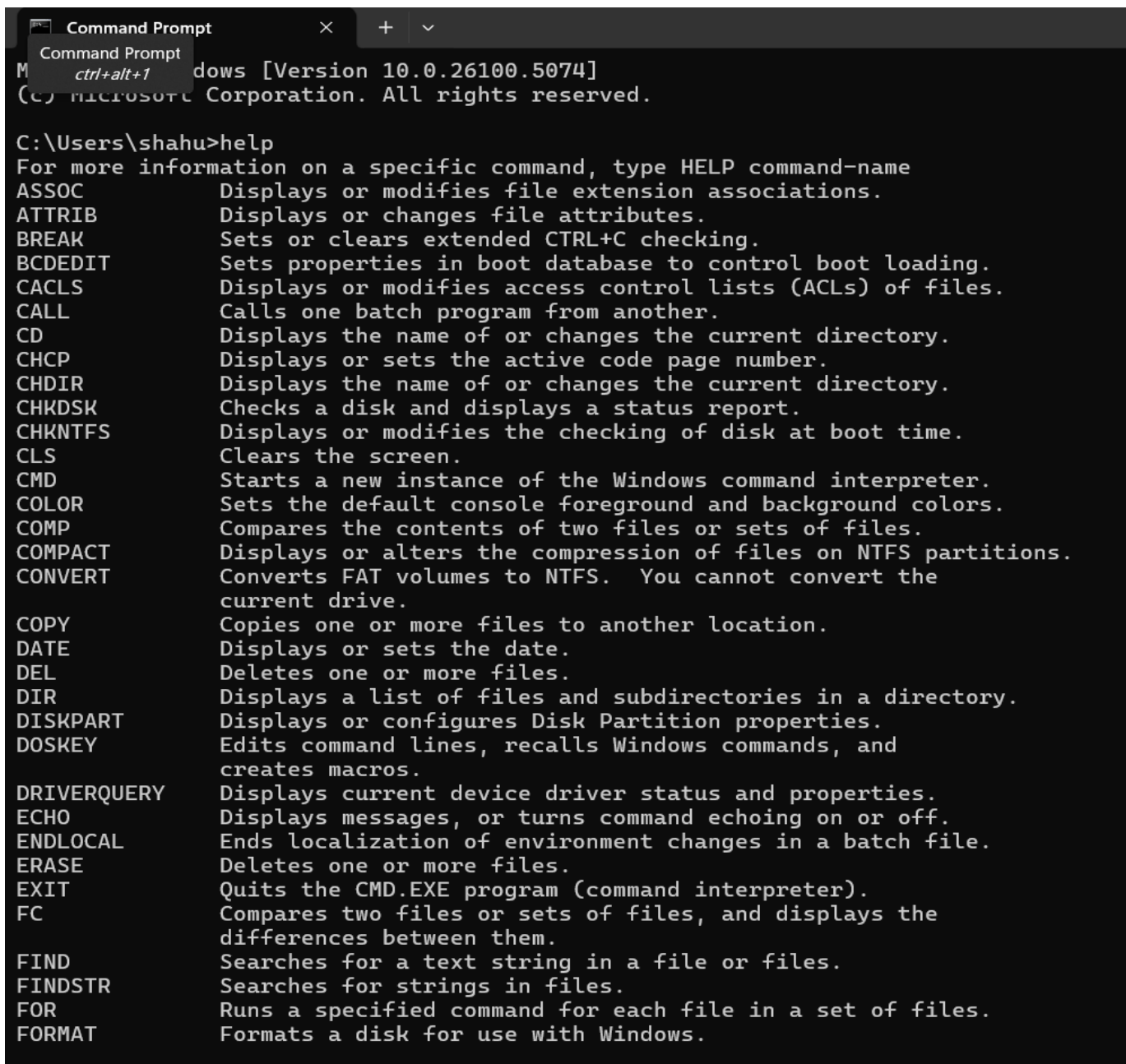


PRACTICAL - 1

John has recently started a new job as system administrator in MNC. He is dealing with computers having different operating systems such as Windows, LINUX and UNIX. How will he be able to interact with the system by using different operating system commands for the following operation?

Que.1. Display the user manual of any command that we can run on the terminal.

A screenshot of a Windows Command Prompt window. The title bar reads 'Command Prompt'. The window content shows the command 'help' entered at the prompt 'C:\Users\shahu>'. The output lists various Windows command-line utilities and their functions. A small tooltip is visible over the 'Ctrl+Alt+T' keyboard shortcut icon in the top-left corner of the window.

```
Command Prompt
M ctrl+alt+T dows [Version 10.0.26100.5074]
(C) MICROSOFT Corporation. All rights reserved.

C:\Users\shahu>help
For more information on a specific command, type HELP command-name
ASSOC          Displays or modifies file extension associations.
ATTRIB         Displays or changes file attributes.
BREAK          Sets or clears extended CTRL+C checking.
BCDEDIT        Sets properties in boot database to control boot loading.
CACLS          Displays or modifies access control lists (ACLs) of files.
CALL           Calls one batch program from another.
CD             Displays the name of or changes the current directory.
CHCP           Displays or sets the active code page number.
CHDIR          Displays the name of or changes the current directory.
CHKDSK         Checks a disk and displays a status report.
CHKNTFS        Displays or modifies the checking of disk at boot time.
CLS            Clears the screen.
CMD            Starts a new instance of the Windows command interpreter.
COLOR          Sets the default console foreground and background colors.
COMP           Compares the contents of two files or sets of files.
COMPACT        Displays or alters the compression of files on NTFS partitions.
CONVERT        Converts FAT volumes to NTFS. You cannot convert the
               current drive.
COPY           Copies one or more files to another location.
DATE           Displays or sets the date.
DEL            Deletes one or more files.
DIR            Displays a list of files and subdirectories in a directory.
DISKPART       Displays or configures Disk Partition properties.
DOSKEY         Edits command lines, recalls Windows commands, and
               creates macros.
DRIVERQUERY    Displays current device driver status and properties.
ECHO           Displays messages, or turns command echoing on or off.
ENDLOCAL       Ends localization of environment changes in a batch file.
ERASE          Deletes one or more files.
EXIT           Quits the CMD.EXE program (command interpreter).
FC             Compares two files or sets of files, and displays the
               differences between them.
FIND           Searches for a text string in a file or files.
FINDSTR        Searches for strings in files.
FOR            Runs a specified command for each file in a set of files.
FORMAT         Formats a disk for use with Windows.
```

PAUSE	Suspends processing of a batch file and displays a message.
POPD	Restores the previous value of the current directory saved by PUSH.D.
PRINT	Prints a text file.
PROMPT	Changes the Windows command prompt.
PUSHD	Saves the current directory then changes it.
RD	Removes a directory.
RECOVER	Recovers readable information from a bad or defective disk.
REM	Records comments (remarks) in batch files or CONFIG.SYS.
REN	Renames a file or files.
RENAME	Renames a file or files.
REPLACE	Replaces files.
RMDIR	Removes a directory.
ROBOCOPY	Advanced utility to copy files and directory trees
SET	Displays, sets, or removes Windows environment variables.
SETLOCAL	Begins localization of environment changes in a batch file.
SC	Displays or configures services (background processes).
SCHTASKS	Schedules commands and programs to run on a computer.
SHIFT	Shifts the position of replaceable parameters in batch files.
SHUTDOWN	Allows proper local or remote shutdown of machine.
SORT	Sorts input.
START	Starts a separate window to run a specified program or command.
SUBST	Associates a path with a drive letter.
SYSTEMINFO	Displays machine specific properties and configuration.
TASKLIST	Displays all currently running tasks including services.
TASKKILL	Kill or stop a running process or application.
TIME	Displays or sets the system time.
TITLE	Sets the window title for a CMD.EXE session.
TREE	Graphically displays the directory structure of a drive or path.
TYPE	Displays the contents of a text file.
VER	Displays the Windows version.
VERIFY	Tells Windows whether to verify that your files are written correctly to a disk.
VOL	Displays a disk volume label and serial number.
XCOPY	Copies files and directory trees.
WMIC	Displays WMI information inside interactive command shell.

For more information on tools see the command-line reference in the online help.

C:\Users\shahu>

2. Change the current working directory of the user

```
C:\Users\shahu>dir
Volume in drive C is Windows-SSD
Volume Serial Number is 68E9-ACD9

Directory of C:\Users\shahu

26-01-2026  17:41    <DIR>          .
05-01-2025  15:13    <DIR>          ..
15-11-2024  09:19    <DIR>          .dist
14-08-2024  18:05    <DIR>          .vscode
19-03-2025  07:58           722,288 abl_soum[1].pdf
14-08-2024  18:17           390 codes
15-11-2024  09:46           186 codes.txt
05-01-2025  20:01    <DIR>          Contacts
03-12-2023  11:01    <DIR>          Documents
27-01-2026  14:19    <DIR>          Downloads
05-01-2025  20:01    <DIR>          Favorites
05-01-2025  20:01    <DIR>          Links
05-01-2025  20:01    <DIR>          Music
27-01-2026  18:29    <DIR>          OneDrive
05-01-2025  20:01    <DIR>          Saved Games
05-01-2025  20:01    <DIR>          Searches
05-01-2025  20:01    <DIR>          Videos
               3 File(s)              722,864 bytes
              14 Dir(s)  350,359,957,504 bytes free

C:\Users\shahu>|
```

3. Lists all the contents in the current working directory

```
C:\Users\shahu\Downloads>dir
Volume in drive C is Windows-SSD
Volume Serial Number is 68E9-ACD9

Directory of C:\Users\shahu\Downloads

27-01-2026  14:19    <DIR>          .
26-01-2026  17:41    <DIR>          ..
19-01-2026  21:20             13,254 100_Students_Data (1).xlsx
19-01-2026  21:13             13,254 100_Students_Data.xlsx
25-01-2026  17:51            105,903 44cc0ba3-49d3-4178-a4d0-9f0c4d858705-md.jpeg
08-10-2025  21:25            156,213 arbee oe report new header.docx
10-04-2024  12:01       12,301,559 Arihant Chemistry HandBook (crackjee.xyz).pdf
10-04-2024  12:02       15,987,045 Arihant Mathematics HandBook (crackjee.xyz).pdf
10-04-2024  12:02       12,849,752 Arihant Physics HandBook (crackjee.xyz).pdf
02-12-2023  19:48        3,653,101 biology D 2.pdf
02-12-2023  19:43        2,908,481 biology D.pdf
26-10-2023  09:56        1,572,452 biology.pdf
25-07-2024  11:13        151,780 BOI statment_1.jpg
25-07-2024  11:13        191,154 BOI statment_10.jpg
25-07-2024  11:13        195,715 BOI statment_11.jpg
25-07-2024  11:13        191,222 BOI statment_12.jpg
25-07-2024  11:13        191,384 BOI statment_13.jpg
25-07-2024  11:13        183,936 BOI statment_14.jpg
25-07-2024  11:13        189,830 BOI statment_15.jpg
25-07-2024  11:13        186,777 BOI statment_16.jpg
25-07-2024  11:13        192,711 BOI statment_17.jpg
25-07-2024  11:13        195,646 BOI statment_18.jpg
25-07-2024  11:13        186,641 BOI statment_19.jpg
25-07-2024  11:13        185,272 BOI statment_2.jpg
25-07-2024  11:13        184,345 BOI statment_20.jpg
25-07-2024  11:13        191,440 BOI statment_21.jpg
25-07-2024  11:13        190,737 BOI statment_22.jpg
25-07-2024  11:13        188,473 BOI statment_23.jpg
```

4. Read, modify or concatenate text files • Read a text file:

```
C:\Users\shahu\Downloads>type Shruti.txt
Hi My name is Shruti
C:\Users\shahu\Downloads>|
```

- Modify a text file:

```
C:\Users\shahu\Downloads>notepad Shruti.txt  
  
C:\Users\shahu\Downloads>type Shruti.txt  
Hi My name is Shruti  
this is modified version  
C:\Users\shahu\Downloads>|
```

- Concatenate text files:

```
C:\Users\shahu\Downloads>type Shruti.txt demo.txt > c.txt  
  
Shruti.txt  
  
  
demo.txt  
  
  
C:\Users\shahu\Downloads>type c.txt  
Hi My name is Shruti  
this is modified versionThis is a demo file  
just for txt  
C:\Users\shahu\Downloads>|
```

5. Create a new directory under any directory

```
C:\Users\shahu\Downloads>mkdir shrutidemo  
  
C:\Users\shahu\Downloads>dir  
Volume in drive C is Windows-SSD  
Volume Serial Number is 68E9-ACD9  
  
Directory of C:\Users\shahu\Downloads
```

6. Display the current working directory of the terminal

```
C:\Users\shahu\Downloads>cd  
C:\Users\shahu\Downloads  
  
C:\Users\shahu\Downloads>|
```

7. Write its arguments to standard output

```
C:\Users\shahu\Downloads>echo Hello shruti  
Hello shruti  
  
C:\Users\shahu\Downloads>
```

```
C:\Users\shahu\Downloads>runas /user:administrator cmd  
Enter the password for administrator: |
```

9. Delete a directory

```
C:\Users\ASUS\Downloads>rmdir dream  
  
C:\Users\ASUS\Downloads>
```

10. Copy a file or directory

```
C:\Users\ASUS\Downloads>xcopy ZenMode D:\Backup\ZenMode /E  
Does D:\Backup\ZenMode specify a file name  
or directory name on the target  
(F = file, D = directory)? D  
0 File(s) copied
```

11. Switch to root-user

```
Command Prompt
C:\Users\ASUS\Downloads>runas /user:administrator cmd
Enter the password for administrator:
Attempting to start cmd as user "SHARSPC\administrator" ...
RUNAS ERROR: Unable to run - cmd
1326: The user name or password is incorrect.
C:\Users\ASUS\Downloads>
```

12. Moves files and directories from one directory to another

```
C:\Users\ASUS\Downloads>move Shars.txt.txt D:\Documents\
1 file(s) moved.
C:\Users\ASUS\Downloads>
```

13. Search for a particular string/word in a text file

```
C:\Users\shahu\Downloads>find "just" Demo.txt
----- DEMO.TXT
HII this is made just for a demo
C:\Users\shahu\Downloads>
```

14. Print the top N number of data of the given input

```
C:\Users\ASUS\Downloads>more Fakesss.txt
A significant percentage of reviews are fake, paid, or bot-generated
Users blindly trust star ratings
Honest businesses suffer because of fake downvotes
No India-focused fake-review detection tool exists
C:\Users\ASUS\Downloads>
```

15. Print the last N number of data of the given input

```
C:\Users\ASUS\Downloads>more Fakesss.txt
A significant percentage of reviews are fake, paid, or bot-generated

Users blindly trust star ratings

Honest businesses suffer because of fake downvotes

No India-focused fake-review detection tool exists

C:\Users\ASUS\Downloads>
```

16. Remove read permission from owner of the file

```
C:\Users\ASUS\Downloads>attrib -r Fakesss.txt

C:\Users\ASUS\Downloads>
```

17. Add read permission to owner plus remove write permission and add write permission to group

```
C:\Users\ASUS\Downloads>icacls ZenMode /grant:r SharsPC:R /deny SharsPC:
W /grant Users:W
processed file: ZenMode
Successfully processed 1 files; Failed processing 0 files

C:\Users\ASUS\Downloads>
```

18. Add write permission to owner no permission to others

```
C:\Users\ASUS\Downloads>icacls ZenMode /grant SharsPC:W /inheritance:r /
remove Users
processed file: ZenMode
Successfully processed 1 files; Failed processing 0 files

C:\Users\ASUS\Downloads>
```

19. Assign permission to users

```
C:\Users\ASUS\Downloads> icacls ZenMode /grant Users:F
processed file: ZenMode
Successfully processed 1 files; Failed processing 0 files

C:\Users\ASUS\Downloads>
```


20. Assign R/W/X to others

```
C:\Users\ASUS\Downloads>icacls ZenMode /grant Users:F
processed file: ZenMode
Successfully processed 1 files; Failed processing 0 files

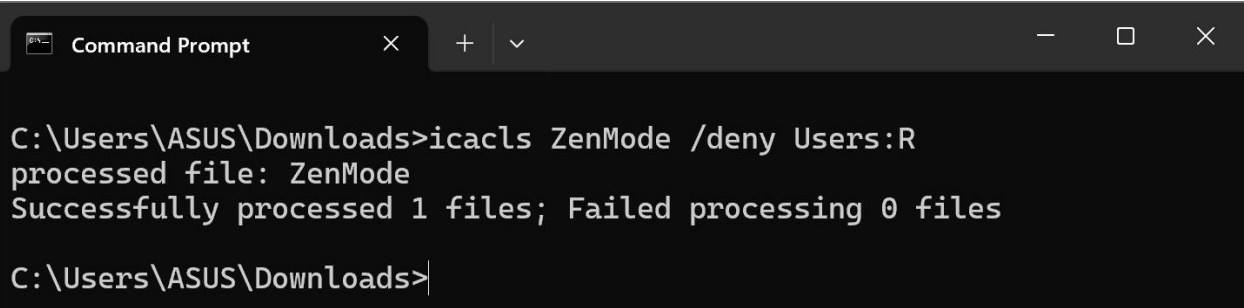
C:\Users\ASUS\Downloads>|
```

21. Remove all permission from all users

```
C:\Users\ASUS\Downloads>icacls ZenMode /inheritance:r /remove Users
/remove SharsPC
processed file: ZenMode
Successfully processed 1 files; Failed processing 0 files

C:\Users\ASUS\Downloads>|
```

22. Remove read permission from user using absolute mode



```
Command Prompt
C:\Users\ASUS\Downloads>icacls ZenMode /deny Users:R
processed file: ZenMode
Successfully processed 1 files; Failed processing 0 files

C:\Users\ASUS\Downloads>|
```

23. Add R/w permission to owner no permission to group and no permission to other using absolute mode

```
C:\Users\ASUS\Downloads>icacls ZenMode /inheritance:r /grant SharsPC
:R,W /remove Users
Invalid parameter "SharsPC:R,W"

C:\Users\ASUS\Downloads>|
```

24. Add execute permission to owner, read permission to group and other

```
C:\Users\ASUS\Downloads>icacls "ZenMode" /grant SharsPC:(X) /grant U
sers:(R)
processed file: ZenMode
Successfully processed 1 files; Failed processing 0 files

C:\Users\ASUS\Downloads>|
```

25. Add execute permission to all user

```
C:\Users\ASUS\Downloads> icacls ZenMode /grant Users:(X)
processed file: ZenMode
Successfully processed 1 files; Failed processing 0 files

C:\Users\ASUS\Downloads>
```