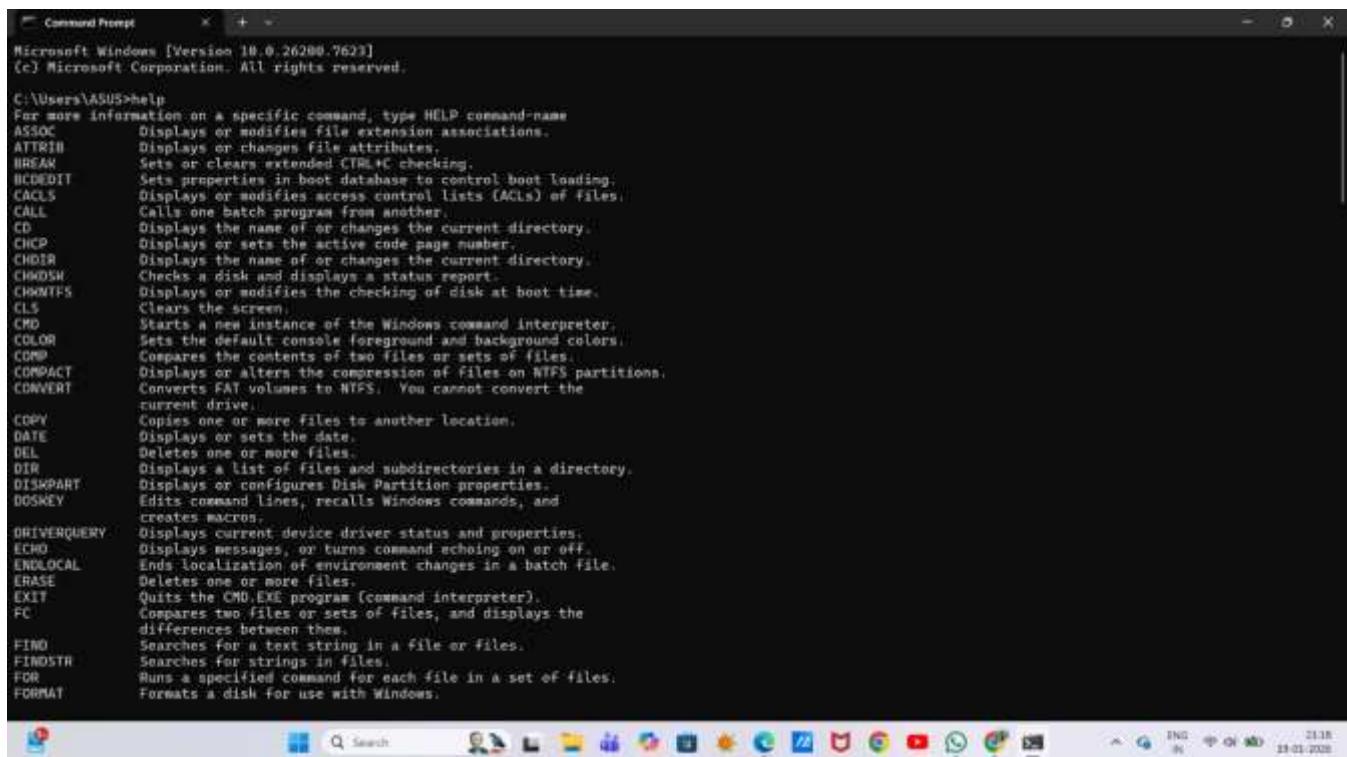


OS PRACTICAL 1 : (CD24038)

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.



The screenshot shows a Microsoft Windows Command Prompt window. The title bar reads "Command Prompt". The window displays a list of commands and their descriptions, starting with "C:\Users\ASUS>help". The descriptions are brief explanations of what each command does. The window is set against a background of a desktop environment with icons and taskbar elements visible at the bottom.

```
C:\Users\ASUS>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.
```

```
Command Prompt

FORMAT      Formats a disk for use with Windows.
FSUTIL      Displays or configures the file system properties.
FTYPE       Displays or modifies file types used in file extension
associations.
GOTO        Directs the Windows command interpreter to a labeled line in
a batch program.
GPRESULT    Displays Group Policy information for machine or user.
HELP        Provides Help information for Windows commands.
ICAcls     Display, modify, backup, or restore ACLs for files and
directories.
IF          Perform conditional processing in batch programs.
LABEL      Creates, changes, or deletes the volume label of a disk.
MD          Creates a directory.
MKDIR      Creates a directory.
MKLINK     Creates Symbolic Links and Hard Links.
MODE        Configures a system device.
MORE        Displays output one screen at a time.
MOVE        Moves one or more files from one directory to another
directory.
OPENFILES   Displays files opened by remote users for a File share.
PATH        Displays or sets a search path for executable files.
PAUSE       Suspends processing of a batch file and displays a message.
POPD       Restores the previous value of the current directory saved by
PUSHD.
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.

C:\Windows\system32\cmd.exe - 11:19 13-01-2020
```

```
Command Prompt

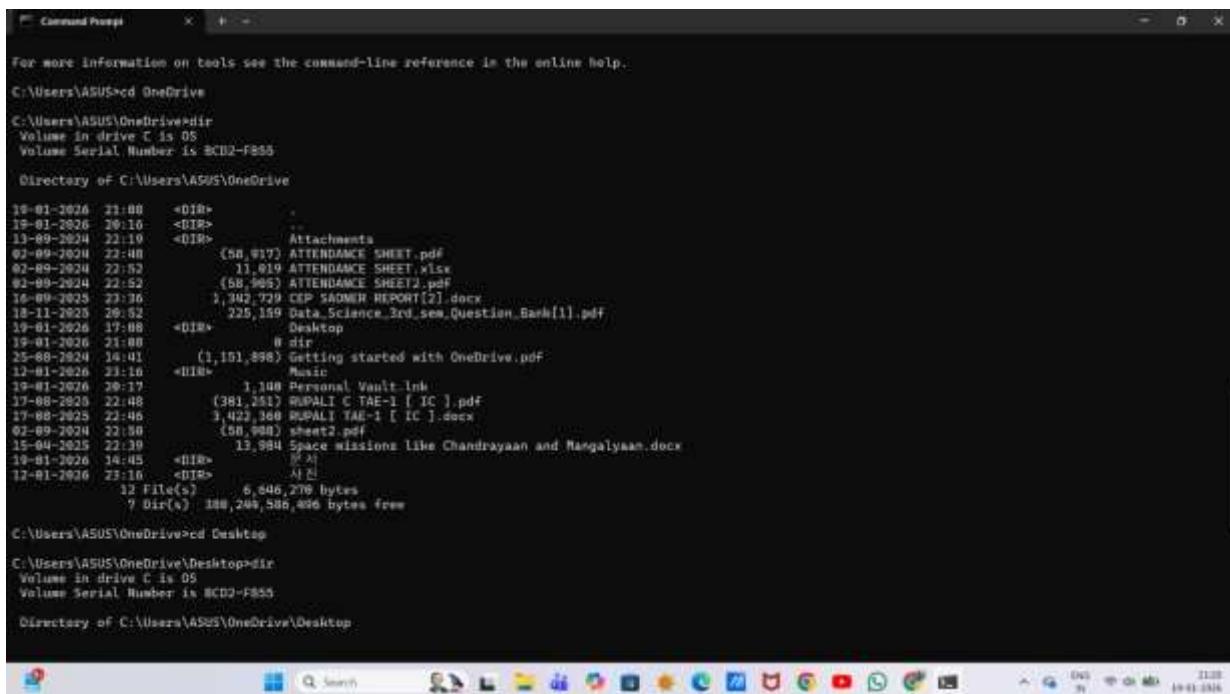
PUSHD     Saves the current directory then changes it.
RD        Removes a directory.
RECOVER   Recovers readable information from a bad or defective disk.
REM        Records comments (remarks) in batch files or CONFIG.SYS.
REN        Renames a file or files.
RENAME    Renames a file or files.
REPLACE   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\ASUS>cd OneDrive
C:\Users\ASUS\OneDrive>dir
Volume in drive C is 09
Volume Serial Number is HCD2-FB55

C:\Windows\system32\cmd.exe - 11:19 13-01-2020
```

2. Change the current working directory of the user :



```
Command Prompt

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

C:\Users\ASUS>cd OneDrive
C:\Users\ASUS\OneDrive>dir
Volume in drive C is 05
Volume Serial Number is 8CD2-FB55

Directory of C:\Users\ASUS\OneDrive

19-01-2026 23:00    <DIR> .
19-01-2026 20:16    <DIR> .
13-09-2024 22:19    <DIR> Attachments
02-09-2024 22:48    {58, #17} ATTENDANCE SHEET.pdf
02-09-2024 22:52    11,019 ATTENDANCE SHEET.xlsx
02-09-2024 22:52    {58, #06} ATTENDANCE SHEET2.pdf
16-09-2025 23:36    1,342,729 CEP SADMER REPORT[2].docx
18-11-2025 20:52    225,159 Data_Science_3rd_sem_Question_Bank[1].pdf
19-01-2026 21:08    <DIR> Desktop
19-01-2026 21:08    0 dir
25-08-2024 14:01    {1,151,398} Getting started with OneDrive.pdf
12-01-2026 23:16    <DIR> Music
19-01-2026 20:17    1,108 Personal Vault.lnk
17-08-2024 22:48    {381,351} RUPALI C TAE-1 [ IC ].pdf
17-08-2025 22:46    3,423,360 RUPALI TAE-1 [ IC ].docx
02-09-2024 22:48    {58, #08} sheet2.pdf
15-04-2025 22:39    13,984 Space missions like Chandrayaan and Mangalyaan.docx
19-01-2026 14:45    <DIR> .
12-01-2026 23:16    <DIR> .
12 Files(s)   6,846,276 bytes
7 Dir(s)  188,248,586,896 bytes free

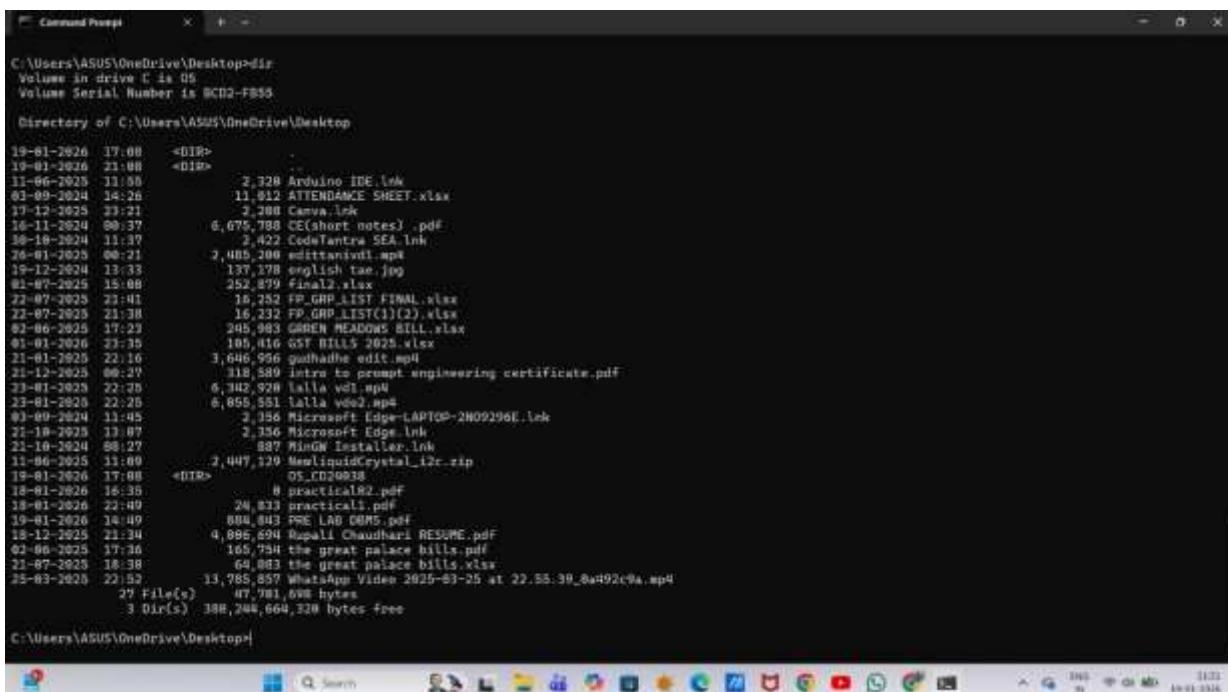
C:\Users\ASUS\OneDrive>cd Desktop
C:\Users\ASUS\OneDrive\Desktop>dir
Volume in drive C is 05
Volume Serial Number is 8CD2-FB55

Directory of C:\Users\ASUS\OneDrive\Desktop

19-01-2026 23:00    <DIR> .
19-01-2026 21:08    <DIR> .
21-06-2025 11:00    2,328 Arduino IDE.lnk
03-09-2024 16:26    11,812 ATTENDANCE SHEET.xlsx
17-12-2025 23:21    2,308 Camva.lnk
16-11-2024 00:37    6,679,788 CE(short notes).pdf
19-10-2024 11:39    2,422 Codantra SEA.lnk
26-01-2025 00:21    2,085,200 edittanivid1.apk
19-12-2024 13:33    137,278 english tae.jpg
01-07-2025 15:00    252,879 Final2.xlsx
22-07-2025 23:01    16,252 FP_GRI_LIST FINAL.xlsx
22-07-2025 23:38    16,232 FP_GRI_LIST[1](2).xlsx
02-06-2025 17:23    245,983 GREEN MEADOWS BILL.xlsx
01-01-2026 23:35    180,416 GST BILLS 2025.xlsx
21-01-2025 22:16    3,646,996 gudhadhe edit.apk
22-12-2025 00:27    318,589 intro to prompt engineering certificate.pdf
23-01-2025 22:25    6,342,928 lalla vdt.mp4
23-01-2025 22:25    6,855,551 lalla vdo2.mp4
03-09-2024 11:45    2,356 Microsoft Edge-LAPTOP-2N09296E.lnk
21-10-2025 13:07    2,356 Microsoft Edge.lnk
22-10-2024 00:27    887 MinGW Installer.lnk
11-06-2025 11:00    2,447,129 MequinicCrystal_i2r-xip
19-01-2026 17:00    <DIR> OS_CD2003B
18-01-2026 16:35    8 practicalR2.pdf
18-01-2026 22:09    26,833 practical1.pdf
19-01-2026 14:09    884,843 PMS LAB DBM5.pdf
18-12-2025 22:34    4,696,694 Rupali Chaudhari RESUME.pdf
02-06-2025 17:36    165,754 the great palace bills.pdf
21-07-2025 18:38    64,883 the great palace bills.xlsx
25-03-2025 22:52    13,785,857 WhatsApp Video 2025-03-25 at 22.55.39_8a492c94.mp4
29 File(s)   87,781,698 bytes
3 Dir(s)  388,248,664,328 bytes free

C:\Users\ASUS\OneDrive\Desktop>
```

3. Lists all the contents in the current working directory



```
Command Prompt

C:\Users\ASUS\OneDrive\Desktop>dir
Volume in drive C is 05
Volume Serial Number is 8CD2-FB55

Directory of C:\Users\ASUS\OneDrive\Desktop

19-01-2026 23:00    <DIR> .
19-01-2026 21:08    <DIR> .
21-06-2025 11:00    2,328 Arduino IDE.lnk
03-09-2024 16:26    11,812 ATTENDANCE SHEET.xlsx
17-12-2025 23:21    2,308 Camva.lnk
16-11-2024 00:37    6,679,788 CE(short notes).pdf
19-10-2024 11:39    2,422 Codantra SEA.lnk
26-01-2025 00:21    2,085,200 edittanivid1.apk
19-12-2024 13:33    137,278 english tae.jpg
01-07-2025 15:00    252,879 Final2.xlsx
22-07-2025 23:01    16,252 FP_GRI_LIST FINAL.xlsx
22-07-2025 23:38    16,232 FP_GRI_LIST[1](2).xlsx
02-06-2025 17:23    245,983 GREEN MEADOWS BILL.xlsx
01-01-2026 23:35    180,416 GST BILLS 2025.xlsx
21-01-2025 22:16    3,646,996 gudhadhe edit.apk
22-12-2025 00:27    318,589 intro to prompt engineering certificate.pdf
23-01-2025 22:25    6,342,928 lalla vdt.mp4
23-01-2025 22:25    6,855,551 lalla vdo2.mp4
03-09-2024 11:45    2,356 Microsoft Edge-LAPTOP-2N09296E.lnk
21-10-2025 13:07    2,356 Microsoft Edge.lnk
22-10-2024 00:27    887 MinGW Installer.lnk
11-06-2025 11:00    2,447,129 MequinicCrystal_i2r-xip
19-01-2026 17:00    <DIR> OS_CD2003B
18-01-2026 16:35    8 practicalR2.pdf
18-01-2026 22:09    26,833 practical1.pdf
19-01-2026 14:09    884,843 PMS LAB DBM5.pdf
18-12-2025 22:34    4,696,694 Rupali Chaudhari RESUME.pdf
02-06-2025 17:36    165,754 the great palace bills.pdf
21-07-2025 18:38    64,883 the great palace bills.xlsx
25-03-2025 22:52    13,785,857 WhatsApp Video 2025-03-25 at 22.55.39_8a492c94.mp4
29 File(s)   87,781,698 bytes
3 Dir(s)  388,248,664,328 bytes free

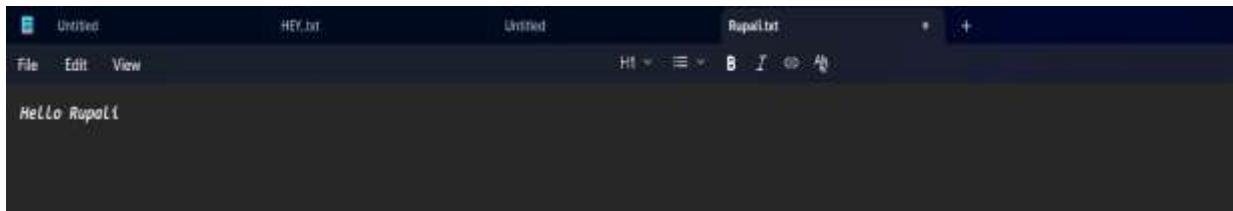
C:\Users\ASUS\OneDrive\Desktop>
```

4. Read, modify or concatenate text files:

- Read a text file:

```
C:\Users\ASUS\OneDrive\Desktop>echo hello Rupali > Rupali.txt.txt  
C:\Users\ASUS\OneDrive\Desktop>type Rupali.txt.txt  
hello Rupali
```

- Modify a text file & Concatenate text files:



5. Create a new directory under any directory

```
C:\Users\ASUS\OneDrive\Desktop>mkdir Practical
```

```
C:\Users\ASUS\OneDrive\Desktop>md Practical
A subdirectory or file Practical already exists.
```

6. Display the current working directory of the terminal

```
C:\Users\91942\OneDrive\Desktop>cd
```

```
C:\Users\91942\OneDrive\Desktop
```

```
C:\Users\91942\OneDrive\Desktop>
```

7. Write its arguments to standard output

```
C:\Users\91942\OneDrive\Desktop>echo Practical Os
Practical Os
```

```
C:\Users\91942\OneDrive\Desktop>
```

8. Remove a file.

```
C:\Users\ASUS\OneDrive\Desktop>del Rupali.txt
```

```
C:\Users\ASUS\OneDrive\Desktop>|
```

9. Delete a directory

```
C:\Users\ASUS\OneDrive\Desktop>del Rupali.txt
```

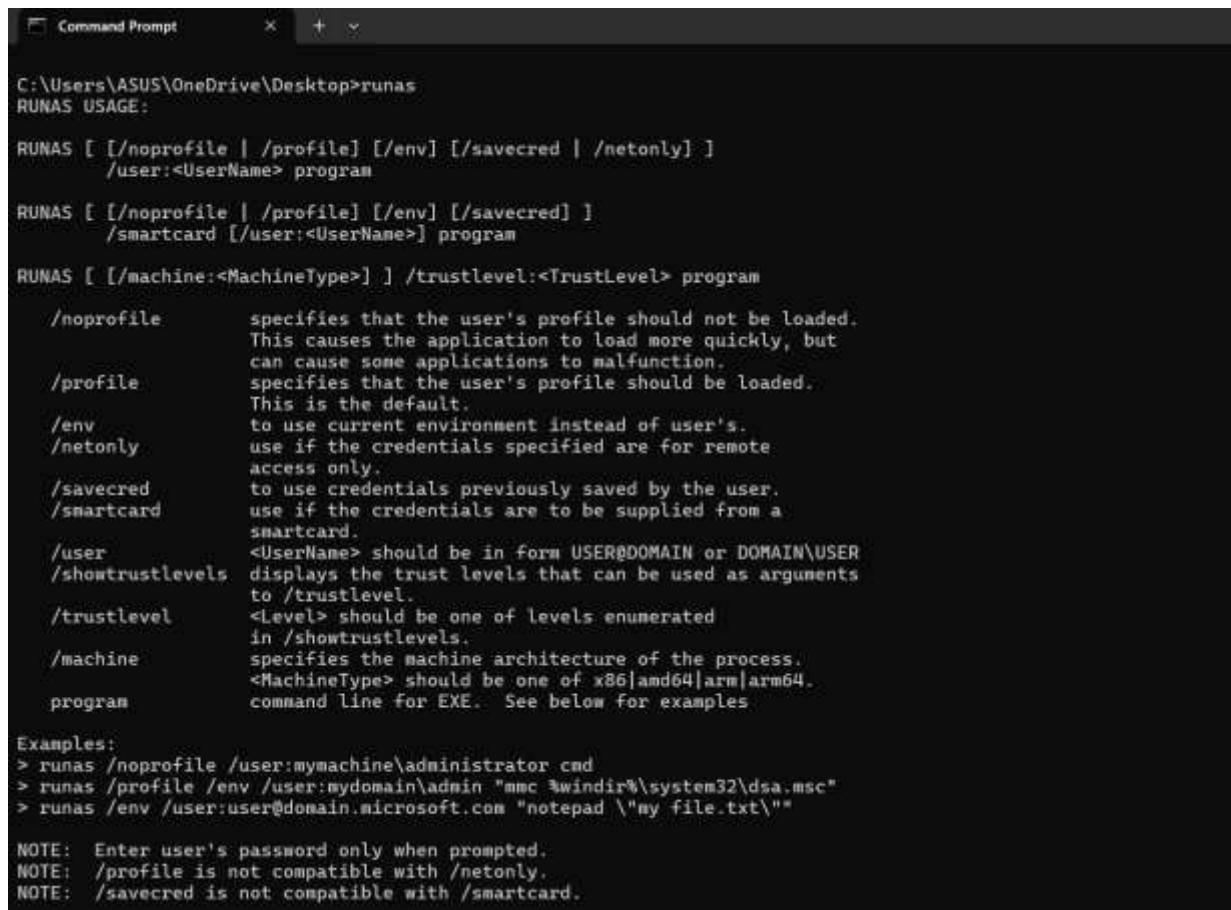
```
C:\Users\ASUS\OneDrive\Desktop>
```

10. Copy a file or directory

```
C:\Users\ASUS\OneDrive\Desktop>copy Rupali.txt.txt Rupali.txt  
1 file(s) copied.
```

```
C:\Users\ASUS\OneDrive\Desktop>
```

11. Switch to root-user



The screenshot shows a Windows Command Prompt window titled "Command Prompt". The command "runas" is entered, and the help documentation for the RUNAS command is displayed. The text is as follows:

```
C:\Users\ASUS\OneDrive\Desktop>runas  
RUNAS USAGE:  
RUNAS [ [/noprofile | /profile] [/env] [/savecred | /netonly] ]  
/user:<UserName> program  
RUNAS [ [/noprofile | /profile] [/env] [/savecred] ]  
/smartcard [/user:<UserName>] program  
RUNAS [ [/machine:<MachineType>] ] /trustlevel:<TrustLevel> program  
/noprofile specifies that the user's profile should not be loaded.  
This causes the application to load more quickly, but  
can cause some applications to malfunction.  
/profile specifies that the user's profile should be loaded.  
This is the default.  
/env to use current environment instead of user's.  
/netonly use if the credentials specified are for remote  
access only.  
/savecred to use credentials previously saved by the user.  
/smartcard use if the credentials are to be supplied from a  
smartcard.  
/user <UserName> should be in form USER@DOMAIN or DOMAIN\USER  
/showtrustlevels displays the trust levels that can be used as arguments  
to /trustlevel.  
/trustlevel <Level> should be one of levels enumerated  
in /showtrustlevels.  
/machine specifies the machine architecture of the process.  
<MachineType> should be one of x86|amd64|arm|arm64.  
program command line for EXE. See below for examples  
  
Examples:  
> runas /noprofile /user:mymachine\administrator cmd  
> runas /profile /env /user:mydomain\admin "mmc %windir%\system32\dsa.msc"  
> runas /env /user:user@domain.microsoft.com "notepad \"my file.txt\""  
  
NOTE: Enter user's password only when prompted.  
NOTE: /profile is not compatible with /netonly.  
NOTE: /savecred is not compatible with /smartcard.
```

12. Moves files and directories from one directory to another

```
C:\Users\91942\OneDrive\Desktop>move Palak.txt.txt D:\Downloads  
1 file(s) moved.
```

```
C:\Users\91942\OneDrive\Desktop>
```

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

```
C:\Users\ASUS\OneDrive\Desktop>find "rupali" Rupali.txt
```

```
----- RUPALI.TXT
```

```
C:\Users\ASUS\OneDrive\Desktop>
```

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

```
C:\Users\ASUS\OneDrive\Desktop>more Rupali.txt  
Apple  
Orange  
Banana  
Cherry  
Grapes
```

```
C:\Users\ASUS\OneDrive\Desktop>
```

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

```
C:\Users\ASUS\OneDrive\Desktop>type Rupali.txt  
Apple  
Orange  
Banana  
Cherry  
Grapes
```

```
C:\Users\ASUS\OneDrive\Desktop>
```

16. Remove read permission from owner of the file

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /deny "ASUS":R  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files  
C:\Users\ASUS\OneDrive\Desktop>
```

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

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /deny "ASUS":R  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files
```

18. Add write permission to owner no permission to others

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /grant "ASUS":W  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files  
C:\Users\ASUS\OneDrive\Desktop>
```

19. Assign permission to users

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /grant "ASUS:F  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files  
C:\Users\ASUS\OneDrive\Desktop>
```

20. Assign R/W/X to others

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /grant "ASUS:F  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files  
C:\Users\ASUS\OneDrive\Desktop>
```

21. Remove all permission from all users

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /remove Everyone  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files
```

22. Remove read permission from user using absolute mode

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /deny "ASUS":R  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files
```

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

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /grant "ASUS":RW  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files  
  
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /remove Everyone  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files  
  
C:\Users\ASUS\OneDrive\Desktop>
```

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

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /grant "ASUS":RX Everyone:R  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files
```

25. Add execute permission to all user

```
C:\Users\ASUS\OneDrive\Desktop>icacls Rupali.txt /grant Everyone:RX  
processed file: Rupali.txt  
Successfully processed 1 files; Failed processing 0 files
```

