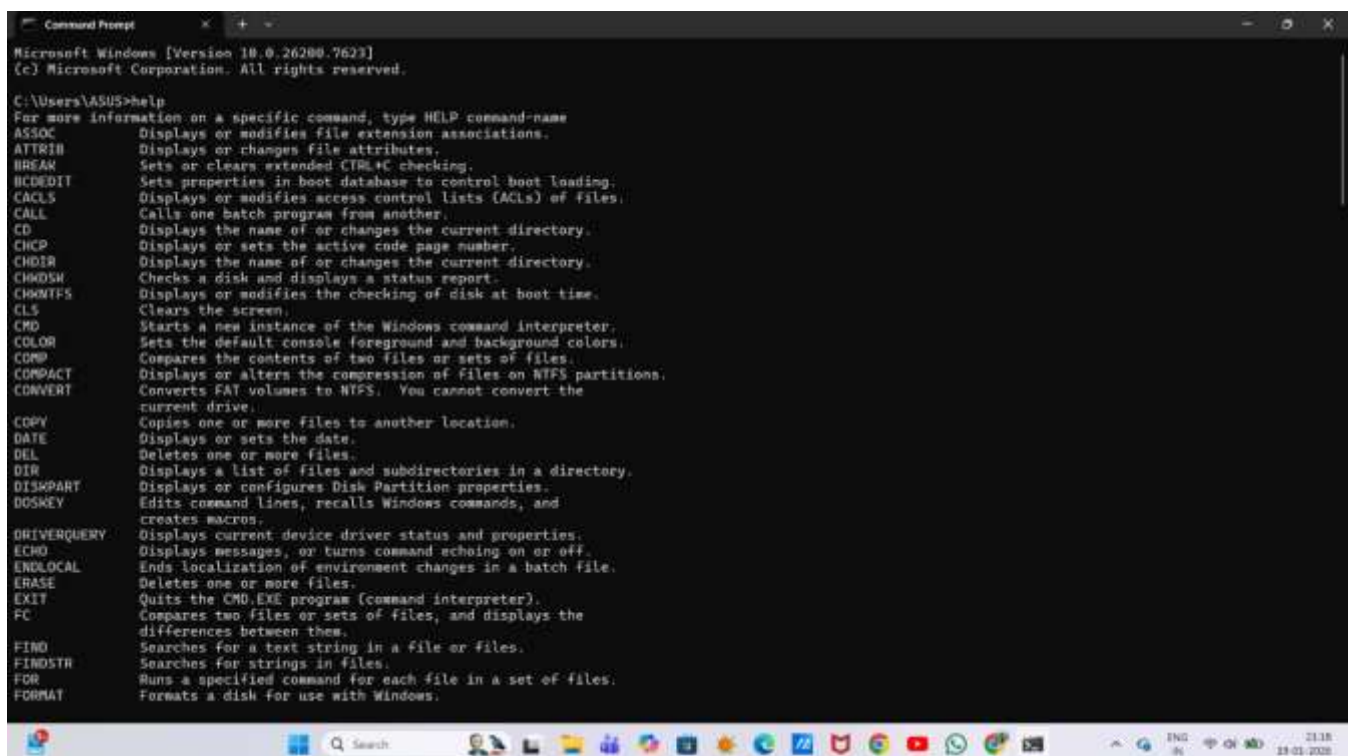


## OS PRACTICAL 1 : (CD24038)

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.



```
Microsoft Windows [Version 10.0.20200.7623]
(c) Microsoft Corporation. All rights reserved.

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          Performs 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
            PUSH.
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.
```

```
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.
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REPLACE     Replaces files.
RMDIR       Removes a directory.
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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 OS
Volume Serial Number is BC02-FB55
```

## 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 OS
Volume Serial Number is 8CD2-FB55

Directory of C:\Users\ASUS\OneDrive

19-01-2024 21:08 <DIR> .
19-01-2024 20:16 <DIR> ..
13-09-2024 22:19 <DIR> Attachments
02-09-2024 22:48 (58,817) ATTENDANCE SHEET.pdf
02-09-2024 22:52 11,919 ATTENDANCE SHEET.xlsx
02-09-2024 22:52 (58,906) ATTENDANCE SHEET2.pdf
16-09-2023 23:36 1,342,729 CEP SUMMER REPORT[2].docx
18-11-2023 20:52 225,159 Data_Science_3rd_sem.Question_Bank[1].pdf
19-01-2024 17:08 <DIR> Desktop
19-01-2024 21:08 # dir
25-09-2024 14:41 (1,101,898) Getting started with OneDrive.pdf
12-01-2024 23:16 <DIR> Music
19-01-2024 20:17 1,100 Personal Vault.lnk
17-08-2023 22:48 (381,251) RUPALI C TAE-1 [ IC ].pdf
17-08-2023 22:48 3,422,360 RUPALI TAE-1 [ IC ].docx
02-09-2024 22:50 (58,908) sheet2.pdf
15-04-2023 22:39 13,984 Space missions like Chandrayaan and Mangalyaan.docx
19-01-2024 14:45 <DIR> 사진
12-01-2024 23:16 <DIR> 사진
12 File(s) 6,846,276 bytes
7 Dir(s) 388,244,586,406 bytes free

C:\Users\ASUS\OneDrive>cd Desktop

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

Directory of 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 OS
Volume Serial Number is 8CD2-FB55

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

19-01-2024 17:08 <DIR> .
19-01-2024 21:08 <DIR> ..
11-06-2023 11:50 2,328 Arduino IDE.lnk
03-09-2024 14:24 11,912 ATTENDANCE SHEET.xlsx
17-12-2023 23:21 2,288 Canva.lnk
16-11-2024 00:37 6,675,788 CE(short notes).pdf
09-10-2024 11:37 2,422 CodeTantra SEA.lnk
26-01-2023 00:21 2,485,200 editandviii.apk
19-12-2024 13:33 137,178 english tae.jpg
01-07-2023 15:00 252,879 final2.xlsx
22-07-2023 21:41 16,252 FP_GRP LIST FINAL.xlsx
22-07-2023 21:38 16,232 FP_GRP LIST(1)(2).xlsx
02-06-2023 17:23 245,983 GREEN MEADOWS BILL.xlsx
01-01-2024 23:35 105,416 GST BILL5 2025.xlsx
21-01-2023 22:16 3,646,956 gudhadhe edit.mp4
21-12-2023 00:27 318,589 intro to prompt engineering certificate.pdf
23-01-2023 22:25 6,342,928 lalla v01.mp4
23-01-2023 22:25 6,055,551 lalla v002.mp4
03-09-2024 11:45 2,356 Microsoft Edge-LAPTOP-2N09296E.lnk
21-10-2023 13:07 2,386 Microsoft Edge.lnk
21-10-2024 00:27 887 RINGW Installer.lnk
11-06-2023 11:00 2,447,129 NewliquidCrystal_i2c.zip
19-01-2024 17:08 <DIR> OT_CD20038
18-01-2024 16:35 # practical1.pdf
18-01-2024 22:49 24,873 practical1.pdf
19-01-2024 14:49 884,843 PRE LAB OMS.pdf
18-12-2023 21:34 4,096,694 Rupali Chaudhari RESUME.pdf
02-06-2023 17:36 165,754 the great palace bills.pdf
21-07-2023 18:38 64,083 the great palace bills.xlsx
25-03-2023 22:52 13,785,857 WhatsApp Video 2025-03-25 at 22.55.39_8a492c9a.mp4
27 File(s) 47,781,608 bytes
3 Dir(s) 388,244,664,320 bytes free

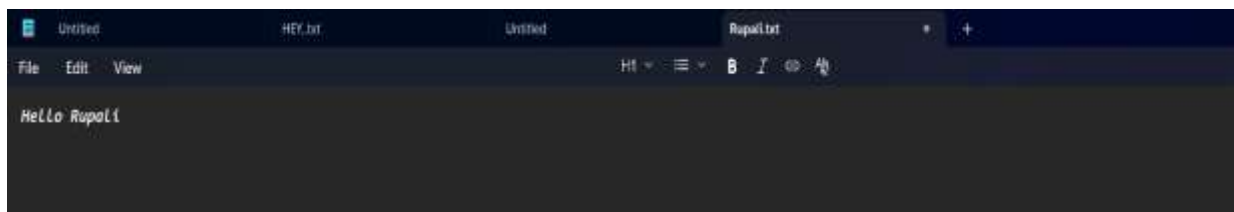
C:\Users\ASUS\OneDrive\Desktop>
```

#### 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 0s  
Practical 0s  
C:\Users\91942\OneDrive\Desktop>
```

8. Remove a file.

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

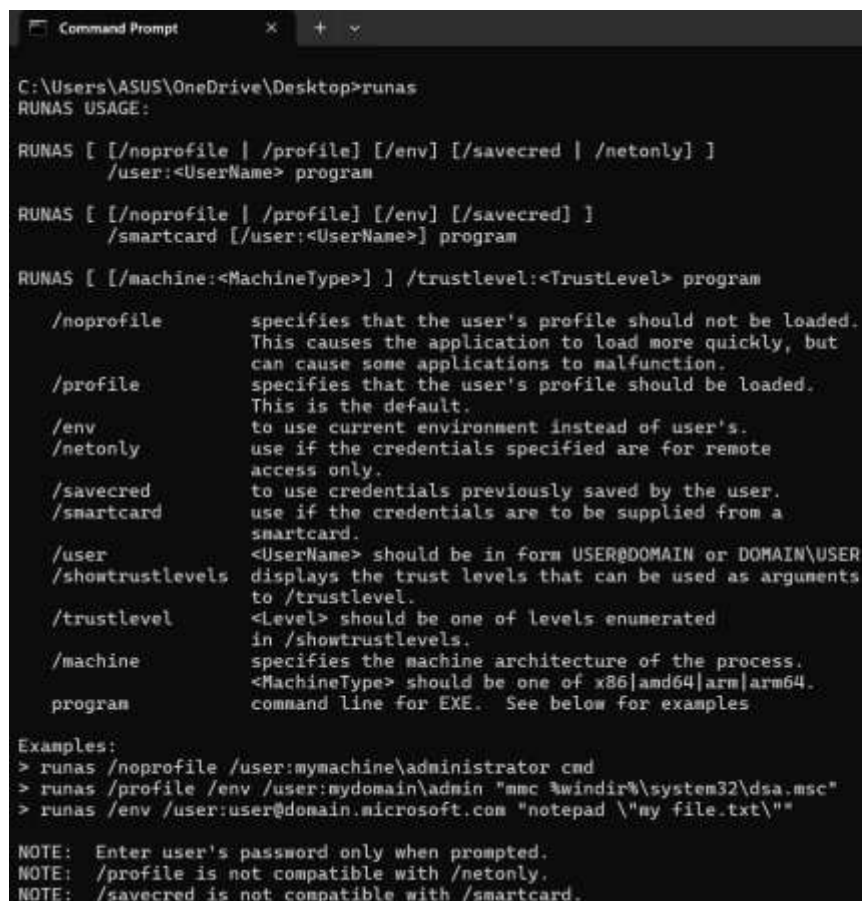
## 9. Delete a directory

```
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



```
Command Prompt  
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 re move 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
```

