PRACTICAL NO 2 :Windows (DOS) Commands

2A Date, time, prompt, md, cd, rd, path.

C:\>date

The current date is: 04-10-2023

C:\>time

The current time is: 11:55:09.08

D:\>md india

D:\>cd india

D:\>rd india

D:\>path

PATH=C:\Users\Patil\Downloads\WINDOWS.X64_193000_db_home\bin;E:\oracle\product\10.2.0\db_2\bin;E:\oracle\product\10.2.0\db_1\bin;C:\WINDOWS\system32;C:\WINDOWS;C:\WINDOWS\System32\Wbem;C:\WINDOWS\System32\WindowsPowerShell\v1.0\;C:\WINDOWS\System32\OpenSSH\;C:\Program Files\Git\cmd;C:\Users\Patil\AppData\Local\Programs\Eclipse Adoptium\jdk-17.0.7.7-hotspot\bin;C:\Users\Patil\AppData\Local\Microsoft\WindowsApps;C:\MinGW\bin;C:\Users\Patil\AppData\Local\Programs\Microsoft VS Code\bin;C:\MinGW\bin;

2B Chkdsk, copy, xcopy, format, fidsk, cls, defrag, del, move.

CHKDSK //RUN ON ADMINISTRATOR MODE

D:\>md os
D:\>cd os
D:\os>copy con t1.txt
welcome
^Z
        1 file(s) copied.
D:\os>copy con t2.txt
hwllo
^Z
        1 file(s) copied.

D:\os>copy t1.txt demo.txt
        1 file(s) copied.

// GO TO (C) DRIVE MAKE OS1 FOLDER THE BACK TO (D) DRIVE IN OS FOLDER
D:\os>copy *.* c:\os1
demo.txt
t1.txt
t2.txt

3 file(s) copied.

D:\os>xcopy *.*/h C:\os1
Overwrite C:\os1\demo.txt (Yes/No/All)? y
D:demo.txt
Overwrite C:\os1\t1.txt (Yes/No/All)? y
D:t1.txt
Overwrite C:\os1\t2.txt (Yes/No/All)? y
D:t2.txt
3 File(s) copied
D:\os>move demo.txt c:\os1
1 file(s) moved.

2C Diskcomp, diskcopy, diskpart, doskey, echo

>DISKCOMP C: D:
>DISKCOPY C: D:
C:\Windows>diskpart
Microsoft DiskPart version 10.0.22621.1
Copyright (C) Microsoft Corporation.
On computer: DESKTOP-MHTEFK1

DISKPART> list disk

Disk ###	Status	Size	Free	Dyn	Gpt
Disk 0	Online	931 GB	1024 KB		*
Disk 1	Online	232 GB	2048 KB		*

DISKPART> select disk 0

Disk 0 is now the selected disk.

DISKPART> list volume

Volume ###	Ltr	Label	Fs	Type	Size	Status	Info
Volume 0	D	HDD	NTFS	Partition	238 GB	Healthy	
Volume 1	E	HDD	NTFS	Partition	693 GB	Healthy	
Volume 2	C	SSD	NTFS	Partition	231 GB	Healthy	Boot
Volume 3			FAT32	Partition	100 MB	Healthy	System
Volume 4			NTFS	Partition	929 MB	Healthy	Hidden

DISKPART> select volume 2

Volume 2 is the selected volume.

DISKPART> assign letter Z

DOSKEY-

>doskey /history

ECHO-

C:\Users\Patil>echo "hello world"

"hello world"

2D Edit, fc, find, rename, set, type, ver

EDIT

Edit demo.txt

FC

fc t2.txt demo.txt

FIND-

D:\os>find "world" t2.txt

---------- T2.TXT

world

VER

D:\os> ver

Microsoft Windows [Version 10.0.22621.1992]

TYPE-

D:\os>type t2.txt //allow to see all content

world

welcome to syit

RENAME

D:\os>rename t2.txt t3.txt

Practical no:3 Linux commands:

3A pwd, cd, absolute and relative paths, ls, mkdir, rmdir

```
[root@localhost ~]# pwd
/root
```

```
[root@localhost ~]# mkdir os
[root@localhost ~]# cd os
[root@localhost os]#
```

Make os1 directory

```
[root@localhost os]# mkdir os1
```

Rmdir -remove any directory we want

3B file, touch, rm, cp. mv, rename, head, tail, cat, tac, more, less, strings, chmod

//FIRST WE NEED TO CREATE T1.TXT FILE

```
[root@localhost os]# cat>t1.txt
1
2
3
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
^Z
[3]+  Stopped(SIGTSTP)        cat > t1.txt
```

//USED TO CREATE CHANGE MODIFY

```
[root@localhost os]# touch t1.txt
```

//REMOVE FILE

```
[root@localhost os]# rm t1.txt
```

//HERE COPY T1.TXT TO DEMO.TXT

```
[root@localhost os]# cp t1.txt demo.txt
```

// MOVE FILE IN T1.TXT TO OS1 FOLDER FIRST MAKE OS1 FOLDER

```
[root@localhost os]# mv t1.txt /root/os1
```

//HEAD : PRINT FIRST 10 NUM

//TAIL : PRINT LAST 10 NUM

```
[root@localhost os]# head t1.txt
1
2
3
3
4
5
6
7
8
9

[root@localhost os]# tail t1.txt
9
10
11
12
13
14
15
16
17
18
```

//CAT : READ DATA

```
[root@localhost os]# cat t1.txt
1
2
3
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
```

TAC: //PRINT REVERSE

```
[root@localhost os]# tac t1.txt
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
3
2
1
```

MORE:// VIEWS FILES

```
[root@localhost os]# more t1.txt
1
2
3
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
```

LESS // READ CONTENT OF FILE ONE PAGE PER TIME

```
[root@localhost os]# less t1.txt
```

```
1
2
3
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18

[5]+  Stopped(SIGTSTP)        less t1.txt
```

3C ps, top, kill, pkill, bg, fg

PS// PRINT CURRENTLY WORKING PROCESSES

```
[root@localhost os]# ps
  PID TTY          TIME CMD
   47 hvc0     00:00:02 sh
  132 hvc0     00:00:00 cat
  133 hvc0     00:00:00 cat
  157 hvc0     00:00:00 cat
  159 hvc0     00:00:00 cat
  174 hvc0     00:00:00 less
  177 hvc0     00:00:00 ps
```

TOP//PROVIDE DYNAMIC VIEW OF RUNNING SYSTEM

KILL// USED TO TERMINATE PROCESS

//FOR KILLING TAKE (TOP) UPPER COMMAND (PID)

```
[root@localhost os]# kill -9 132
[1]   Killed                  cat > t1.txt
```

PKILL//KILL BASED ON PARAMETERS

```
[root@localhost os]# pkill -9 78
```

BG//PUT BACKGROUND JOB

FG// PLACED FOREGROUND JOB

3D grep, locate, find, locate

//FIRST CREATE FRUIT.TXT FILE

```
[root@localhost os]# cat>fruit.txt
hello
welcome
^Z
[7]+  Stopped(SIGTSTP)        cat > fruit.txt
```

GREP

```
[root@localhost os]# grep -i 'hello' fruit.txt
Hello //SERCH FOR MATCHING
[root@localhost os]# grep -c 'hello' fruit.txt
1 //PRINT THEIR LINE NUMBER
[root@localhost os]# grep -i 'el' fruit.txt
hello
welcome
[root@localhost os]# grep -w 'el' fruit.txt //MATCH WHOLE WORD
[root@localhost os]# grep -n 'hello' fruit.txt
1:hello //MATCH LINE WITH THEIR NUMBER
```

FIND

FIRST WE NEED TO CREATE F1 FOLDER

THEN GO TO F1

THEN MAKE F2

GO TO F2

THEN CREATE SYIT.TXT FILE

THEN COME BACK TO F2 FOLDER

THEN PERFORM FIND

```
[root@localhost os]# mkdir f1
[root@localhost os]# cd f1
[root@localhost f1]# mkdir f2
[root@localhost f1]# cd f2
[root@localhost f2]# cat>syit.txt
hiiii
^Z
```

```
[9]+  Stopped(SIGTSTP)         cat > syit.txt
```

```
[root@localhost f2]# cd -
/root/os/f1
```

```
[root@localhost f1]# find  ./f2 -name syit.txt
./f2/syit.txt
```

3E date, cal, uptime, w, whoami, finger, uname, man, df, du, free, whereis, which

```
[root@localhost f1]# date
```

```
[root@localhost f1]# cal
```

```
 [root@localhost f1]# uptime
```

```
 [root@localhost f1]# w
```

```
 [root@localhost f1]# whoami
root
```

```
 [root@localhost f1]# uname
Linux
```

```
[root@localhost f1]# df
```

```
[root@localhost f1]# du
```

```
[root@localhost f1]# free
```

```
[root@localhost f1]# whereis pwd
pwd: /usr/bin/pwd /usr/include/pwd.h /usr/share/man/man1p/pwd.1p.gz
 /usr/share/m
an/man1/pwd.1.gz
```

```
[root@localhost f1]# which date
/bin/date
```

3F Compression: tar, gzip

//FIRST WE NEED TO HAVE 2 FILES IN OS FOLDER

```
[root@localhost ~]# mkdir syit
[root@localhost ~]# cd syit
[root@localhost syit]# mkdir os
```

```
[root@localhost syit]# cd os
[root@localhost os]# cat >t1.txt
hello
^Z
[1]+  Stopped(SIGTSTP)        cat > t1.txt
[root@localhost os]# cat >t2.txt
welcome
^Z
[2]+  Stopped(SIGTSTP)        cat > t2.txt
[root@localhost os]# tar cvf comp.tar *.txt
t1.txt
t2.txt
[root@localhost os]# cd -
/root/syit
[root@localhost os]# mv comp.tar /root/syit/
[root@localhost os]# cd -
```

```
[root@localhost ~]# ls syit
comp.tar  os
[root@localhost ~]# cd syit
[root@localhost syit]# tar xvf comp.tar
t1.txt
t2.txt
```

```
[root@localhost syit]# gzip -k t1.txt
[root@localhost syit]# cd --
[root@localhost ~]# ls syit
comp.tar  os  t1.txt  t1.txt.gz  t2.txt
```

```
[root@localhost ~]# cd syit
[root@localhost syit]# gzip t2.txt
[root@localhost syit]# cd --
[root@localhost ~]# ls syit
comp.tar  os  t1.txt  t1.txt.gz  t2.txt.gz
```

```
[root@localhost ~]# cd syit
[root@localhost syit]# gzip -d t2.txt.gz
[root@localhost syit]# cd --
[root@localhost ~]# ls syit
comp.tar  os  t1.txt  t1.txt.gz  t2.txt
```

Practical no: 4 Working with Linux Desktop and utilities

4H Creating users and shares (jslinux)

```
[root@localhost ~]# sudo useradd u1
[root@localhost ~]# sudo passwd u1
Changing password for user u1.
New password: //syit2023
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# sudo useradd u2
[root@localhost ~]# sudo passwd u2
Changing password for user u2.
New password://syit2023
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]# mkdir /home/sharefolder
[root@localhost ~]# cd /home/sharefolder
[root@localhost sharefolder]# cat>f1.txt
hello
^Z
[1]+  Stopped(SIGTSTP)        cat > f1.txt
[root@localhost sharefolder]# sudo groupadd fileshare
[root@localhost sharefolder]# sudo chgrp fileshare /home/sharefolde
r
[root@localhost sharefolder]# sudo chmod +s /home/sharefolder
[root@localhost sharefolder]# sudo chmod 770 /home/sharefolder
[root@localhost sharefolder]# sudo usermod -a -G fileshare u1
[root@localhost sharefolder]# su u2
[u2@localhost sharefolder]$ cd /home/sharefolder
bash: cd: /home/sharefolder: Permission denied
[u2@localhost sharefolder]$ su u1
Password:
[u1@localhost sharefolder]$ cd /home/sharefolder
```

7A Introduction to Linux Shell Scripting

jslinux

//i- for inserting value

//esc then(:wq) save and quit

7A BASIC OPERATOR

```
[root@localhost ~]# touch calculator.sh
[root@localhost ~]# vi calculator.sh
read -p 'enter num1:' a
read -p 'enter num2:' b
add=$((a+b))
echo sum of $a and $b is $add
```

```
sub=$((a-b))
echo sub of $a and $b is $sub
mul=$((a*b))
echo mul of $a and $b is $mul
div=$((a/b))
echo div of $a and $b is $div
[root@localhost ~]# chmod +x calculator.sh
[root@localhost ~]# ./calculator.sh
```

OUTPUT:

```
enter num1:8
enter num2:2
sum of 8 and 2 is 10
sub of 8 and 2 is 6
mul of 8 and 2 is 16
div of 8 and 2 is 4
```

7B DECISION MAKING

```
[root@localhost ~]# touch decision.sh
[root@localhost ~]# vi decision.sh
read -p 'enter num1:' a
read -p 'enter num2:' b
if(a==b)
then
if(a>b)
then
echo $a is greater than $b
else
echo $a is smaller than $b
fi
fi
[root@localhost ~]# chmod +x decision.sh
[root@localhost ~]# ./decision.sh
enter num1:2
enter num2:3
2 is smaller than 3
```

7C LOOPING (:wq for quit) (i for insert)

FOR LOOP:

```
[root@localhost ~]# touch looping.sh
[root@localhost ~]# vi looping.sh
for i in 1 2 3 4 5
```

```
do echo interation n $i
done
[root@localhost ~]# chmod +x looping.sh
[root@localhost ~]# ./looping.sh
interation n 1
interation n 2
interation n 3
interation n 4
interation n 5
```

WHILE LOOP:

```
[root@localhost ~]# touch looping.sh
[root@localhost ~]# vi looping.sh
i=0
while test $i -lt 10
do
echo interation no $i
i=$((i+1))
done
[root@localhost ~]# chmod +x looping.sh
[root@localhost ~]# ./looping.sh
interation no 0
interation no 1
interation no 2
interation no 3
interation no 4
interation no 5
interation no 6
interation no 7
interation no 8
interation no 9
```

UNTIL LOOP:

```
[root@localhost ~]# touch looping.sh
[root@localhost ~]# vi looping.sh
i=0
until test $i -gt 10
do
echo iteration no $i
i=$((i+1))
done
[root@localhost ~]# chmod +x looping.sh
[root@localhost ~]# ./looping.sh
iteration no 0
iteration no 1
```

```
iteration no 2
iteration no 3
iteration no 4
iteration no 5
iteration no 6
iteration no 7
iteration no 8
iteration no 9
iteration no 10
```

7D REGULAR EXPRESSION

```
[root@localhost ~]# cat> countries
India
Bhutan
Columbia
Brazil
Odissa
^Z
[1]+  Stopped(SIGTSTP)        cat > countries
[root@localhost ~]# cat countries |grep I
India
[root@localhost ~]# cat countries |grep I..ia
India
[root@localhost ~]# cat countries |grep ^B
Bhutan
Brazil
[root@localhost ~]# cat countries |grep n$
Bhutan
[root@localhost ~]# cat countries |grep la*
Columbia
Brazil
[root@localhost ~]# cat countries |grep -E "(Col)"
Columbia
[root@localhost ~]# cat countries |grep -E BhC?
Bhutan
[root@localhost ~]# cat countries|grep "\ "  (words with spl char.)
Sri Lanka
```

7E SPECIAL VARIABLE AND COMMAND LINE ARGUMENT

```
[root@localhost ~]# touch script.sh
[root@localhost ~]# vi script.sh
echo "current program is $0"
for ARGS in $@
```

```
do
let i=i+1
echo "argument $i is $ARGS"
done
echo "parameter lis(individually) $@" // individual list shows(@)
echo "parameter list(as single list) $*" // single list shows (*)
echo "total number of parameters $#"
echo "process ID $$"
[root@localhost ~]# chmod +x script.sh
[root@localhost ~]# ./script.sh
current program is ./script.sh
parameter list (individually)
parameter list (as single list)
total number of parameters 0
process id 127
```