Experiment Number: 1

Problem Statement: Basic Linux Command

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CLASS: TY\_IT\_A BATCH: B1

DATE OF PERFORMANCE:

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PROGARM:

GENERAL PURPOSE COMMANDS

**1.DATE**

vboxuser@arman:~$ date

Thursday 06 July 2023 11:24:18 AM IST

vboxuser@arman:~$ date +"%A, %B %d, %Y %H:%M:%S"

Saturday, July 15, 2023 22:15:55

vboxuser@arman:~$ date -u

Saturday 15 July 2023 04:47:12 PM UTC

**2.CAL**

vboxuser@arman:~$ cal

July 2023

Su Mo Tu We Th Fr Sa

1

2 3 4 5 6 7 8

9 10 11 12 13 14 15

16 17 18 19 20 21 22

23 24 25 26 27 28 29

30 31

vboxuser@arman:~$ cal 2022

2022

January February March

Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa

1 1 2 3 4 5 1 2 3 4 5

2 3 4 5 6 7 8 6 7 8 9 10 11 12 6 7 8 9 10 11 12

9 10 11 12 13 14 15 13 14 15 16 17 18 19 13 14 15 16 17 18 19

16 17 18 19 20 21 22 20 21 22 23 24 25 26 20 21 22 23 24 25 26

23 24 25 26 27 28 29 27 28 27 28 29 30 31

30 31

April May June

Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa

1 2 1 2 3 4 5 6 7 1 2 3 4

3 4 5 6 7 8 9 8 9 10 11 12 13 14 5 6 7 8 9 10 11

10 11 12 13 14 15 16 15 16 17 18 19 20 21 12 13 14 15 16 17 18

17 18 19 20 21 22 23 22 23 24 25 26 27 28 19 20 21 22 23 24 25

24 25 26 27 28 29 30 29 30 31 26 27 28 29 30

July August September

Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa

1 2 1 2 3 4 5 6 1 2 3

3 4 5 6 7 8 9 7 8 9 10 11 12 13 4 5 6 7 8 9 10

10 11 12 13 14 15 16 14 15 16 17 18 19 20 11 12 13 14 15 16 17

17 18 19 20 21 22 23 21 22 23 24 25 26 27 18 19 20 21 22 23 24

24 25 26 27 28 29 30 28 29 30 31 25 26 27 28 29 30

31

October November December

Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa Su Mo Tu We Th Fr Sa

1 1 2 3 4 5 1 2 3

2 3 4 5 6 7 8 6 7 8 9 10 11 12 4 5 6 7 8 9 10

9 10 11 12 13 14 15 13 14 15 16 17 18 19 11 12 13 14 15 16 17

16 17 18 19 20 21 22 20 21 22 23 24 25 26 18 19 20 21 22 23 24

23 24 25 26 27 28 29 27 28 29 30 25 26 27 28 29 30 31

30 31

**3.WHO**

vboxuser@arman:~$ who

vboxuser :1 2023-07-06 11:13 (:1)

**4.WHOAMI**

vboxuser@arman:~$ whoami

vboxuser

**5.ECHO**

vboxuser@arman:~$ echo "arman"

arman

vboxuser@arman:~$ echo -e "my \bname \bis \barman"

mynameisarman

vboxuser@arman:~$ echo -e "my \cname is arman"

my vboxuser@arman:~$ echo -e "my \nname \nis \narman"

my

name

is

arman

vboxuser@arman:~$ echo -e "my \tname \tis \tarman"

my name is arman

vboxuser@arman:~$ echo -e "my \vname \vis \varman"

my

name

is

arman

**6.CLEAR**

vboxuser@arman:~$ clear

**7.ALIAS**

vboxuser@arman:~$ alias CD="cd Desktop"

vboxuser@arman:~$ CD

vboxuser@arman:~/Desktop$ cd ..

**8.BC**

vboxuser@arman:~$ echo "12+5" |bc

17

**9.MAN**

vboxuser@arman:~$ man ls

**10.PASSWD**

vboxuser@arman:~$ passwd

Changing password for vboxuser.

Current password:

New password:

Retype new password:

passwd: password updated successfully

**11.EXIT**

vboxuser@arman:~$ exit

FILE AND DIRECTORY RELATED COMMANDS

**1.CP**

vboxuser@arman:~$ cp f2 f1

vboxuser@arman:~$ cp -i f2 f1

cp: overwrite 'f1'? y

**2.MV**

vboxuser@arman:~$ mv f1 f11

vboxuser@arman:~$ ls

d1 dir1 dir3 Downloads f2 Music Public Templates

Desktop dir2 Documents f11 f3 Pictures snap Videos

**3.RM**

vboxuser@arman:~$ rm f11

vboxuser@arman:~$ rm -i f3

rm: remove regular file 'f3'? y

**4.MKDIR**

vboxuser@arman:~$ mkdir dir1 dir2 dir3

vboxuser@arman:~$ ls

d1 dir1 dir3 Downloads f2 Pictures snap Videos

Desktop dir2 Documents f1 Music Public Templates

**5.RMDIR**

vboxuser@arman:~$ rmdir dir2

**6.CD**

vboxuser@arman:~$ cd d1

vboxuser@arman:~/d1$ pwd

/home/vboxuser/d1

**7.PWD**

vboxuser@arman:~$ pwd

/home/vboxuser

**8.CAT**

vboxuser@arman:~$ cat > f2

my name is arman

**9.CAT**

vboxuser@arman:~$ cat >> f2

this is appended text

**10.CAT**

vboxuser@arman:~$ cat f2

my name is arman

this is appended text

**11.MORE**

vboxuser@arman:~$ more f3

my name is arman

this is appended text

vboxuser@arman:~$ more -p f3

my name is arman

this is appended text

**12.FILE**

vboxuser@arman:~$ file f2

f2: ASCII text

vboxuser@arman:~$ file d1

d1: directory

vboxuser@arman:~$ file /dev/log

/dev/log: symbolic link to /run/systemd/journal/dev-log

vboxuser@arman:~$ file /dev/tty1

/dev/tty1: character special (4/1)

vboxuser@arman:~$ file /dev/loop0

/dev/loop0: block special (7/0)

**13.WC**

vboxuser@arman:~$ wc f2

2 8 39 f2

vboxuser@arman:~$ wc -l f2

2 f2

vboxuser@arman:~$ wc -w f2

8 f2

vboxuser@arman:~$ wc -c f2

39 f2

vboxuser@arman:~$ wc f2 f3

2 8 39 f2

2 8 39 f3

4 16 78 total

**14.CMP**

vboxuser@arman:~$ cat sub1

se

dbms

daa

dc

vboxuser@arman:~$ cat sub2

se

dbms

lp

hci

edd

vboxuser@arman:~$ cmp sub1 sub2

sub1 sub2 differ: byte 9, line 3

**15.COMM**

vboxuser@arman:~$ comm sub11 sub22

daa

dbms

dc

edd

hci

lp

se

vboxuser@arman:~$ comm -12 sub11 sub22

dbms

se

vboxuser@arman:~$ comm -13 sub11 sub22

edd

hci

lp

vboxuser@arman:~$ comm -23 sub11 sub22

daa

dc

**16.DIFF**

vboxuser@arman:~$ diff sub1 sub2

3,4c3,5

< daa

< dc

---

> lp

> hci

> edd

vboxuser@arman:~$ diff sub2 sub1

3,5c3,4

< lp

< hci

< edd

---

> daa

> dc

**17.GZIP**

vboxuser@arman:~$ gzip sub1

vboxuser@arman:~$ ls

Desktop Documents f3 Public sub1.gz Templates

dir1 Downloads Music snap sub2 Videos

dir3 f2 Pictures sub11 sub22

**18.GUNZIP**

vboxuser@arman:~$ gunzip sub1.gz

vboxuser@arman:~$ ls

Desktop dir3 Downloads f3 Pictures snap sub11 sub22 Videos

dir1 Documents f2 Music Public sub1 sub2 Templates

**19.LS**

vboxuser@arman:~$ ls

Desktop Downloads f2 Pictures snap Videos

Documents f1 Music Public Templates

**20.LS**

vboxuser@arman:~$ ls d1

f2

vboxuser@arman:~/d1$ ls -a

. ..

**21.LN**

vboxuser@arman:~$ ln hello.txt linkfile

vboxuser@arman:~$ ln -s hello.txt linkfile1

vboxuser@arman:~$ ln -f hello.txt linkfile2

**EXTRA COMMANDS**

**1.PS: LISTS CURRENT RUNNING PROCESS**

vboxuser@arman:~$ ps

PID TTY TIME CMD

3951 pts/0 00:00:00 bash

4151 pts/0 00:00:00 bc

5105 pts/0 00:00:00 ps

**2.LOCATE : FIND A FILE IN DATABASE SYSTEM**

-i : to remove case sensitivity

vboxuser@arman:~$ locate -i hello

/boot/grub/i386-pc/hello.mod

/boot/grub/x86\_64-efi/hello.mod

/home/vboxuser/hello.txt

/home/vboxuser/hello1.txt

/home/vboxuser/Desktop/hello.txt

/snap/core20/1822/usr/lib/python3.8/\_\_phello\_\_.foo.py

/snap/core20/1822/usr/lib/python3.8/\_\_pycache\_\_/\_\_phello\_\_.foo.cpython-38.pyc

/snap/core20/1974/usr/lib/python3.8/\_\_phello\_\_.foo.py

/snap/core20/1974/usr/lib/python3.8/\_\_pycache\_\_/\_\_phello\_\_.foo.cpython-38.pyc

**3.FIND: search for files within a specific directory**

vboxuser@arman:~$ find -name hello.txt

./hello.txt

./Desktop/hello.txt

**4.DF: Report the system’s disk space usage, shown in percentage and kilobyte (KB)**

vboxuser@arman:~$ df -m

Filesystem 1M-blocks Used Available Use% Mounted on

tmpfs 198 2 197 1% /run

/dev/sda3 24519 12223 11026 53% /

tmpfs 988 0 988 0% /dev/shm

tmpfs 5 1 5 1% /run/lock

/dev/sda2 512 7 506 2% /boot/efi

tmpfs 198 1 198 1% /run/user/1000

vboxuser@arman:~$ df -k

Filesystem 1K-blocks Used Available Use% Mounted on

tmpfs 202292 1544 200748 1% /run

/dev/sda3 25106692 12515976 11290032 53% /

tmpfs 1011456 0 1011456 0% /dev/shm

tmpfs 5120 4 5116 1% /run/lock

/dev/sda2 524252 6216 518036 2% /boot/efi

tmpfs 202288 108 202180 1% /run/user/1000

vboxuser@arman:~$ df -T

Filesystem Type 1K-blocks Used Available Use% Mounted on

tmpfs tmpfs 202292 1544 200748 1% /run

/dev/sda3 ext4 25106692 12515976 11290032 53% /

tmpfs tmpfs 1011456 0 1011456 0% /dev/shm

tmpfs tmpfs 5120 4 5116 1% /run/lock

/dev/sda2 vfat 524252 6216 518036 2% /boot/efi

tmpfs tmpfs 202288 108 202180 1% /run/user

**5.PING : checking whether a network or a server is reachable.**

vboxuser@arman:~$ ping google.com

PING google.com (142.250.192.78) 56(84) bytes of data.

64 bytes from bom12s16-in-f14.1e100.net (142.250.192.78): icmp\_seq=1 ttl=52 time=59.0 ms

64 bytes from bom12s16-in-f14.1e100.net (142.250.192.78): icmp\_seq=2 ttl=52 time=56.1 ms

64 bytes from bom12s16-in-f14.1e100.net (142.250.192.78): icmp\_seq=3 ttl=52 time=56.3 ms

64 bytes from bom12s16-in-f14.1e100.net (142.250.192.78): icmp\_seq=4 ttl=52 time=54.6 ms