Experiment No.: 3

Aim

Familiarisation of Linux Commands

CO2

Perform System administration tasks

Procedure

1) **pwd-The path of the current working diectory**

```
student@t2:~/riya$ pwd
/home/student/riya
```

2) **ls- To view the contents of the directory**

```
student@t2:~/riya$ ls
mark1  marvel1
```

a) **ls –R – Tp view list of all files in subdirectory**

```
student@t2:~/riya$ ls -R
.:
mark1  marvel1
student@t2:~/riya$ mkdir riyasub
student@t2:~/riya$ touch file1
student@t2:~/riya$ touch file2
student@t2:~/riya$ ls -R
.:
file1  file2  mark1  marvel1  riyasub

./riyasub:
```

b) ls –l – Long listig of the contents

```
student@t2:~/riya$ ls -l
total 12
-rw-rw-r-- 1 student student    0 Mar  7 15:49 file1
-rw-rw-r-- 1 student student    0 Mar  7 15:50 file2
-rw-rw-r-- 1 student student   35 Mar  7 14:50 mark1
-rw-rw-r-- 1 student student   35 Mar  7 15:09 marvel1
drwxrwxr-x 2 student student 4096 Mar  7 15:49 riyasub
```

c) ls –a – Tto list all the hidden files

```
student@t2:~/riya$ ls -a
.  ..  file1  file2  mark1  marvel1  riyasub
```

d) ls –al- List the files and directories with detailed information such as owner, file size, permission etc.

```
student@t2:~/riya$ ls -al
total 20
drwxrwxr-x  3 student student 4096 Mar  7 15:50 .
drwxr-xr-x 23 student student 4096 Mar  7 15:44 ..
-rw-rw-r--  1 student student    0 Mar  7 15:49 file1
-rw-rw-r--  1 student student    0 Mar  7 15:50 file2
-rw-rw-r--  1 student student   35 Mar  7 14:50 mark1
-rw-rw-r--  1 student student   35 Mar  7 15:09 marvel1
drwxrwxr-x  2 student student 4096 Mar  7 15:49 riyasub
student@t2:~/riya$
```

e) ls –t – List the files in the order of last modified

```
student@t2:~/riya$ ls -t
file2  file1  riyasub  marvel1  mark1
```

f) ls –r – To reverse in natural sorting order

```
student@t2:~/riya$ ls -r
riyasub  marvel1  mark1  file2  file1
```

3) history – To review the commands that have been previously executed for certain period of time

```
student@t2:~/riya$ history
    1  ./studio.sh
    2  ./studio.sh
    3  su mca
    4  pwd
    5  ls
    6  ls-R
    7  ls -R
    8  ls -l
    9  ls -a
   10  ls -al
   11  ls -t
   12  ls -r
   13  history
   14  man ls
   15  mkdir riya
   16  cd riya
   17  pwd
   18  cd ..
   19  rmdir riya
   20  pwd
   21  mkdir riya
   22  touch file1.txt
   23  cat > file1.txt
   24  cat file1.txt
   25  cat > file2.txt
   26  cat file2.txt
   27  cat >> file2.txt
```

4) man – You can learn and understand about different commands, write from the shell using man command

```
LS(1)                                    User Commands                                    LS(1)

NAME
       ls - list directory contents

SYNOPSIS
       ls [OPTION]... [FILE]...

DESCRIPTION
       List  information  about the FILEs (the current directory by default).  Sort entries alphabetically if none of -cftuvSUX nor --sort
       is specified.

       Mandatory arguments to long options are mandatory for short options too.

       -a, --all
              do not ignore entries starting with .

       -A, --almost-all
              do not list implied . and ..
```

5) mkdir – To create a new directory

```
mca@t2:~$ mkdir new
mca@t2:~$ cd new
mca@t2:~/new$ ls
mca@t2:~/new$ cd ..
mca@t2:~$ ls
Desktop  Documents  Downloads  Music  new  Pictures  Public  Templates  Videos
```

6) cd –Used to change the directory to previous directory

```
mca@t2:~$ cd
mca@t2:~$ cd new
mca@t2:~/new$ cd ..
```

7) rmdir - To remove the empty direcory

```
mca@t2:~$ rmdir new
mca@t2:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
```

8) touch – To create a new empty file

```
mca@t2:~$ touch tinu
mca@t2:~$ man touch
mca@t2:~$ ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  tinu  Videos
```

9) cat – To view, create, concatenate files

a) cat > file1.txt – To add contents

```
mca@t2:~$ cat > tinu
TINU CLARA EMMANUEL
AJCE
MCA
^Z
[1]+  Stopped                 cat > tinu
```

b) cat file1.txt – To view

```
mca@t2:~$ cat tinu
TINU CLARA EMMANUEL
AJCE
MCA
```

c) cat >> file1.txt – To append the contents

```
mca@t2:~$ cat >> tinu
kanjirappally
^Z
[2]+  Stopped                 cat >> tinu
mca@t2:~$ cat tinu
TINU CLARA EMMANUEL
AJCE
MCA
kanjirappally
```

d) cat file1.txt file2.txt > file3.txt – To store the contents of the two files to another file

```
mca@t2:~$ cat tinu
TINU CLARA EMMANUEL
AJCE
MCA
kanjirappally
```

```
mca@t2:~$ cat > tinusample
minu
anu
sebin
^Z
[3]+  Stopped                 cat > tinusample
mca@t2:~$ cat tinu tinusample > c.txt
mca@t2:~$ cat c.txt
TINU CLARA EMMANUEL
AJCE
MCA
kanjirappally
minu
anu
sebin
```

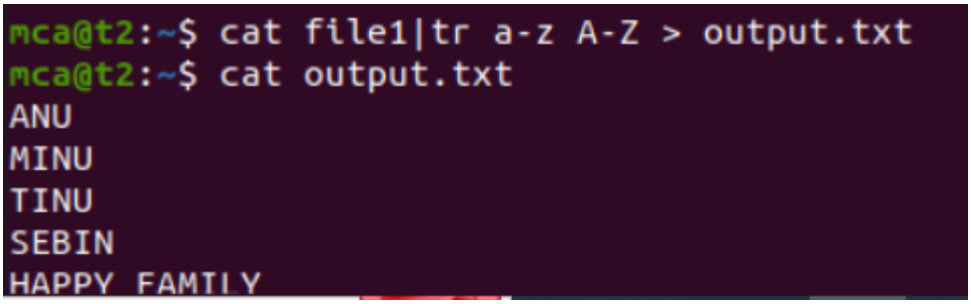
e) cat -n file3.txt – To display the contents with line numbers

```
mca@t2:~$ cat -n c.txt
     1  TINU CLARA EMMANUEL
     2  AJCE
     3  MCA
     4  kanjirappally
     5  minu
     6  anu
     7  sebin
```

f) cat -b file4.txt – To remove the empty line numbers

```
mca@t2:~$ cat file1
anu
minu
tinu
sebin
happy family



time
mca@t2:~$ cat -b file1
     1  anu
     2  minu
     3  tinu
     4  sebin
     5  happy family



     6  time
```

f) cat file1.txt | tr a-z A-Z > output.txt – To change the contents to capital letters



Result

The program was executed and the result was successfully obtained. Thus CO2 was obtained.

Experiment No.: 4

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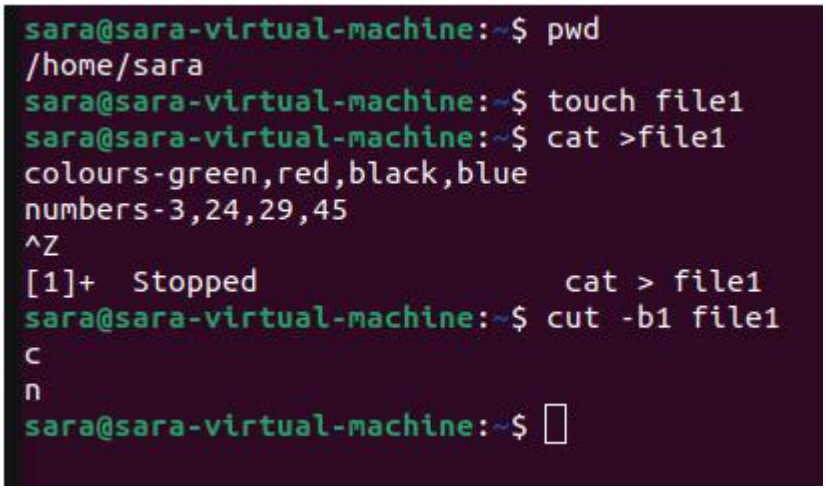
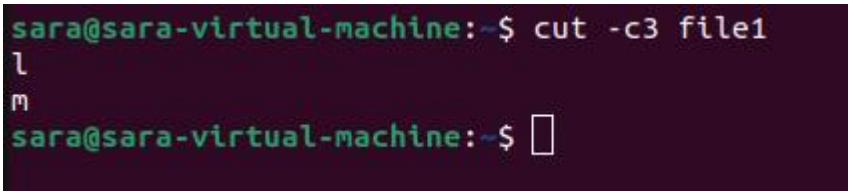
Procedure

1)cut-cut the content in a file and output he content in a specified format

a) $cut -b1 filename-cut by byte position



b)$cut -c3 filename-cut by character position



c)cut -d - -f1 filename: cut command to just print the first field of the file using the delimiter "-"

```
sara@sara-virtual-machine:~$ cut -d - -f1 file1
colours
numbers
sara@sara-virtual-machine:~$
```

```
sara@sara-virtual-machine:~$ cut -d - -f2 file1
green,red,black,blue
3,24,29,45
sara@sara-virtual-machine:~$
```

d)cut –c 1,4,6 filename – cut command to cut and print the specified character position

```
sara@sara-virtual-machine:~$ cut -c 1,4,6 file1
cor
nbr
sara@sara-virtual-machine:~$
```

e)cut –d ‘ ‘ –f filename - cut command to just print the first field of the file using the empty delimiter “”

```
sara@sara-virtual-machine:~$ cut -d ' ' -f1 file1
colours-green,red,black,blue
numbers-3,24,29,45
sara@sara-virtual-machine:~$
```

2)paste- Paste command is used to join files horizontally(Each file consisting of different lines)

a)paste file1 file2-To paste file1 contents in file2

```
sara@sara-virtual-machine:~$ touch file2
sara@sara-virtual-machine:~$ cat>file2
year-2021,2022,2023,2024
months-jan,feb,march,april
^Z
[2]+  Stopped                 cat > file2
sara@sara-virtual-machine:~$ paste file1 file2
colours-green,red,black,blue    year-2021,2022,2023,2024
numbers-3,24,29,45      months-jan,feb,march,april
sara@sara-virtual-machine:~$
```

b)paste file1 file2 > file3-To paste file1 and file2 contents in a new file

```
sara@sara-virtual-machine:~$ paste file1 file2 >file3
sara@sara-virtual-machine:~$ cat file3
colours-green,red,black,blue    year-2021,2022,2023,2024
numbers-3,24,29,45      months-jan,feb,march,april
sara@sara-virtual-machine:~$
```

c)paste –d '%' file1 file2- By specifying the delimiter, we can also split the lines into columns with specified delimiter.

```
sara@sara-virtual-machine:~$ paste -d '%' file1 file2
colours-green,red,black,blue%year-2021,2022,2023,2024
numbers-3,24,29,45%months-jan,feb,march,april
sara@sara-virtual-machine:~$
```

d)paste –s file1- Helps to display the contents in the file in a horizontal format

```
sara@sara-virtual-machine:~$ cat file1
colours-green,red,black,blue
numbers-3,24,29,45
sara@sara-virtual-machine:~$ paste -s file1
colours-green,red,black,blue    numbers-3,24,29,45
sara@sara-virtual-machine:~$
```

3) cp - To copy the content to a new file

a)cp file1 file2-To copy file1 contents in file2

```
sara@sara-virtual-machine:~$ cp file1 file2
sara@sara-virtual-machine:~$ cat file2
colours-green,red,black,blue
numbers-3,24,29,45
sara@sara-virtual-machine:~$
```

Result

The program was executed and the result was successfully obtained. Thus CO2 was obtained.