

# OS EXPERIMENT 1

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**Roll No: 02**

**AIM:** Explore usage of basic linux commands and system calls for files, directory and process management.

## **THEORY:**

1. who : it is used to find out the current user who is logged into the system.
2. pwd : present working directory, lets you know the current directory you are in.
3. cal : show the calendar of the complete month.
4. date : It shows you the current date, along with the time, along with the day, along with the year.
5. mkdir: to create a new directory under any directory
6. chdir/cd : to change the current working directory
7. cat : to create the file and display the contents of the file
8. chmod: to change the mode of the file. There are three modes read(r), write(w) and execute(e)
9. ls : to list all directories and subdirectories
  - a. ls-l : to show the long listing information about the directory
  - b. ls-lh : human readable format.
  - c. ls-ls : shows the details of the directory content.
  - d. ls-d\* : to show the sub directories in a directory
  - e. ls-a : to show hidden files
  - f. ls-lhs : show files in the descending order in which you have used your files.
10. sort-r file name.txt : sorts the list in reverse order
11. sort-n file name.txt : its sorts the numerical list in ascending order
12. sort nr file name.txt : its sorts the numerical list in reverse order
13. sort u file name.txt : to remove the duplicates
14. sort m file name.txt : Sorts the months in ascending order
15. awk : it is used for the user that defines text patterns that are to be searched for each line of the file.

Syntax , awk '{print}' file name.txt

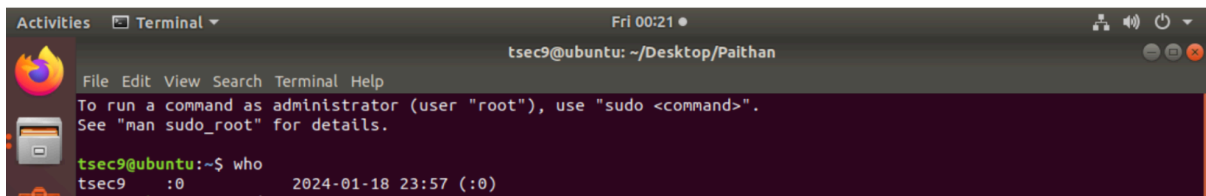
awk '/faculty/{print}' file name.txt :

awk '{print}NR, \$0}' file name.txt :

NR - specifies the number of lines.

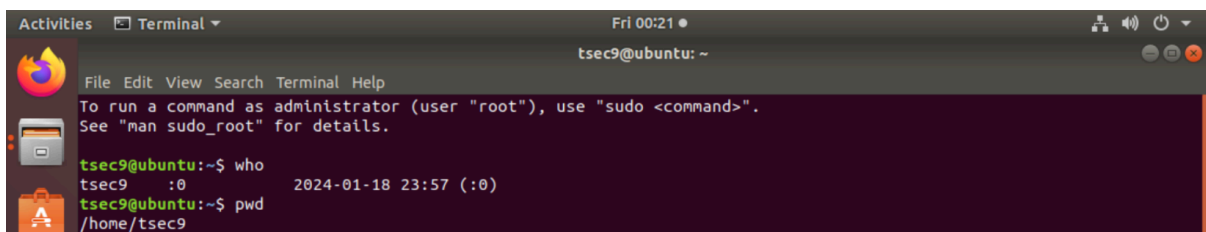
## OUTPUT:

1) who:



```
Activities Terminal Fri 00:21 tsec9@ubuntu: ~/Desktop/Paithan
File Edit View Search Terminal Help
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
tsec9@ubuntu:~$ who
tsec9 :0 2024-01-18 23:57 (:0)
```

2) pwd:



```
Activities Terminal Fri 00:21 tsec9@ubuntu: ~
File Edit View Search Terminal Help
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
tsec9@ubuntu:~$ who
tsec9 :0 2024-01-18 23:57 (:0)
tsec9@ubuntu:~$ pwd
/home/tsec9
```

3) cal:



```
tsec9@ubuntu:~$ cal
January 2024
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

tsec9@ubuntu:~$ cal may 2016
May 2016
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
```

4) date:



```
tsec9@ubuntu:~$ date
Fri Jan 19 00:24:02 PST 2024
tsec9@ubuntu:~$
```

5) Mkdir:

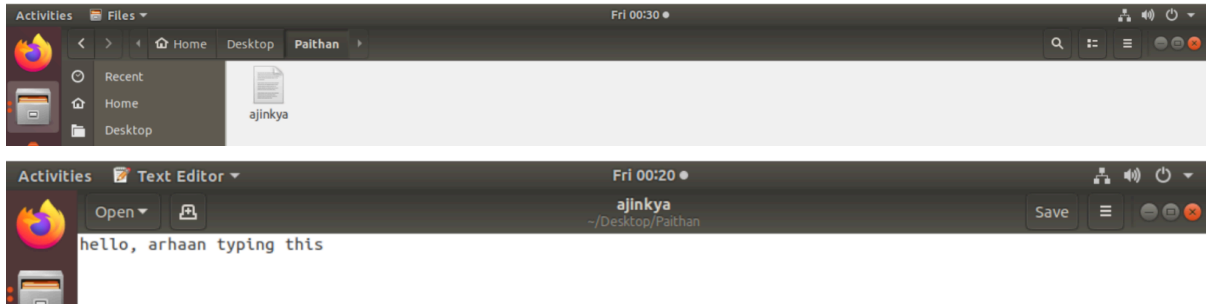


```
? bash: cd: desktop: no such file or directory
tsec9@ubuntu:~$ cd Desktop
tsec9@ubuntu:~/Desktop$ mkdir Paithan
```



6) cd,7) cat:

```
tsec9@ubuntu:~$ cd desktop
bash: cd: desktop: No such file or directory
tsec9@ubuntu:~$ cd Desktop
tsec9@ubuntu:~/Desktop$ mkdir Paithan
tsec9@ubuntu:~/Desktop$ cd Paithan
tsec9@ubuntu:~/Desktop/Paithan$ cat ->ajinkya
hello, arhaan typing this
```



9) ls :

```
tsec9@ubuntu:~$ ls
a1  ab  Desktop  Downloads  fact.sh  nisarg  Public  sort.save  Templates  Videos
aab  add.sh  Documents  evenodd.sh  Music  Pictures  sort  sum.sh  tsec1
tsec9@ubuntu:~$ ls -l
total 64
-rw-rw-r-- 1 tsec9 tsec9  0 Jan 26  2023 a1
-rw-rw-r-- 1 tsec9 tsec9  0 Jan 26  2023 aab
-rw-rw-r-- 1 tsec9 tsec9  0 Jan 26  2023 ab
-rw-rw-r-- 1 tsec9 tsec9 67 Jan 25  2023 add.sh
drwxr-xr-x 5 tsec9 tsec9 4096 Jan 19 00:17 Desktop
drwxr-xr-x 2 tsec9 tsec9 4096 Feb  1  2023 Documents
drwxr-xr-x 2 tsec9 tsec9 4096 Jan 25  2023 Downloads
-rw-rw-r-- 1 tsec9 tsec9 101 Jan 25  2023 evenodd.sh
-rw-rw-r-- 1 tsec9 tsec9 253 Feb  1  2023 fact.sh
drwxr-xr-x 2 tsec9 tsec9 4096 Jan 25  2023 Music
-rw-rw-r-- 1 tsec9 tsec9 14 Jan 18 03:04 nisarg
drwxr-xr-x 2 tsec9 tsec9 4096 Jan 19 00:21 Pictures
drwxr-xr-x 2 tsec9 tsec9 4096 Jan 25  2023 Public
-rw-rw-r-- 1 tsec9 tsec9 42 Jan 18 03:07 sort
-rw-rw-r-- 1 tsec9 tsec9 43 Jan 18 03:12 sort.save
-rw-rw-r-- 1 tsec9 tsec9 96 Jan 25  2023 sum.sh
drwxr-xr-x 2 tsec9 tsec9 4096 Jan 25  2023 Templates
-rw-rw-r-- 1 tsec9 tsec9 162 Jan 26  2023 tsec1
drwxr-xr-x 2 tsec9 tsec9 4096 Jan 25  2023 Videos
tsec9@ubuntu:~$
```

```
tsec9@ubuntu:~$ ls -a
.  aab  .bash_history  .cache  Documents  fact.sh  .local  nisarg  Public  .ssh  tsec1
.. ab  .bash_logout  .config  Downloads  .gnupg  .mozilla  Pictures  sort  sum.sh  Videos
a1  add.sh  .bashrc      Desktop  evenodd.sh  .ICEauthority  Music  .profile  sort.save  Templates
```

10) sort -r to 14) sort m :

```
tsec9@ubuntu:~$ cat ->ajinkya
12
15
90
14
10
12
^C
tsec9@ubuntu:~$ sort -n ajinkya
10
12
12
14
15
90
tsec9@ubuntu:~$ sort -u ajinkya
10
12
14
15
90
tsec9@ubuntu:~$ sort -nr ajinkya
90
15
14
12
12
10
tsec9@ubuntu:~$
```