Task 1

Task 1: Experiment Unix commands (files directory, data manipulation, network communication etc)

$cp: used for copying files.

Syntax: $cp [options] source_file destination-file

Example: $cp f1 f2

OUTPUT:

$cat f1

This is GRIET

$cat f2

This is GRIET

It will copy the contents of f1 to f2

Options:

a)**-f**: Force copy by removing the destination file if needed.

Syntax: $cp -f source_file destination-file

Example:$cp -f f1 f2

OUTPUT:$cat f1

This is CSE

$cat f2

This is GRIET

b)**-i**: Ask the confirmation to overwrite.

Syntax: $cp -i source_file destination-file

Example:$cp -i f1 f2

c)**-b**:It creates backup files before overriding.

Syntax: $cp -b source_file destination-file

Example:$cp -b f1 f2

Output :

```
griet@griet-desktop: ~
griet@griet-desktop:~$ cat >file27

^Z
[2]+  Stopped                 cat > file27
griet@griet-desktop:~$ cp file34 file27
griet@griet-desktop:~$ cat file27
hello
hi
bye
bye
welcome
home
happy
christmas
diwali
holi
dussera
onam
griet@griet-desktop:~$ _
```

$rm: Used to remove files (or) directories

Syntax: $rm [options] filename

Example:$rm f1

OUTPUT:

f1 is deleted

Options:

a)**-f**: ignores non existing files, never prompt

Syntax: $rm -f filename

Example: $rm -f myfile.txt

OUTPUT:Removes file myfile.txt

b)**-r**: Removes all files in directory and directory itself

Syntax: $rm -r filename

Example: $rm -r mydirectory

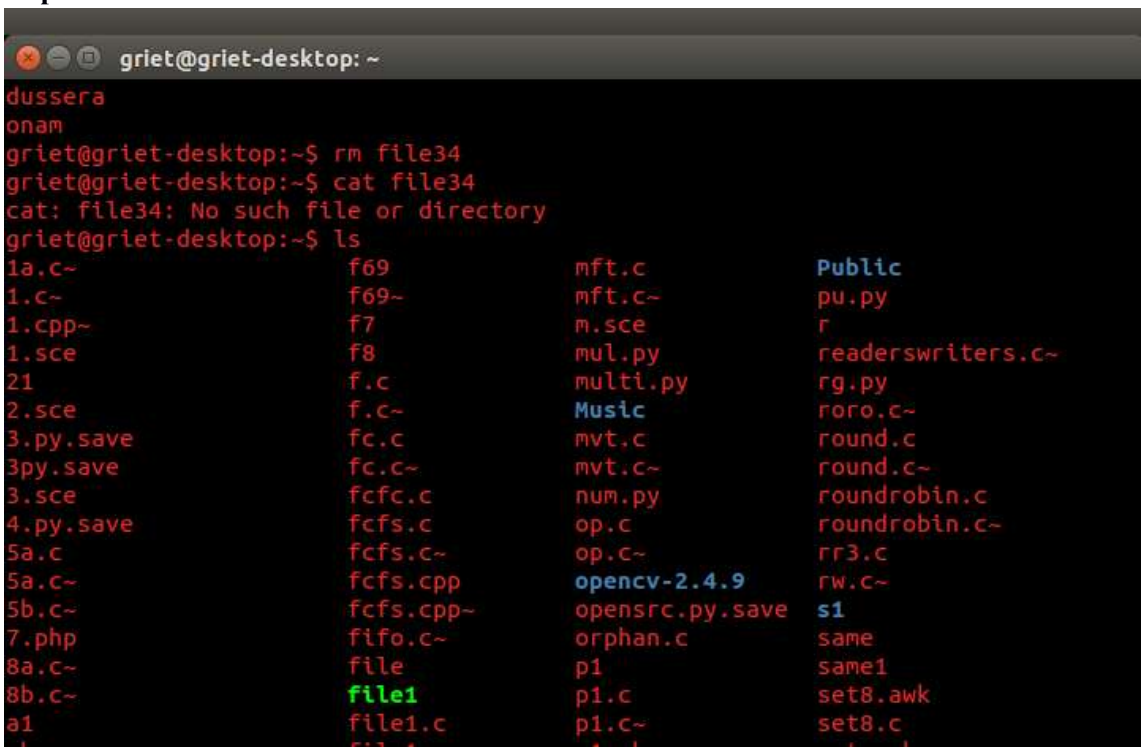
OUTPUT: Removes directory mydirectory and all files in it.

c)**-i**: prompts before every removal.

Syntax: $rm -i filename

Example: $rm -i bak.c

Output:



$mv: mv stands for move. mv is used to move one or more files or directories from one place to another in file system like UNIX. It has two distinct functions:
(i) It rename a file or folder.
(ii) It moves group of files to different directory.
No additional space is consumed on a disk during renaming. This command normally works silently means no prompt for confirmation.
Syntax:
mv [Option] source destination

```
griet@griet-desktop:~$ mv file27 file54
griet@griet-desktop:~$ cat file54
hello
hi
bye
bye
welcome
home
happy
christmas
diwali
holi
dussera
onam
griet@griet-desktop:~$ _
```

$chmod: To change directory permissions in Linux, use the following:

1. chmod +rwx filename to add permissions.
2. chmod -rwx directoryname to remove permissions.
3. chmod +x filename to allow executable permissions.
4. chmod -wx filename to take out write and executable permissions.

Output:

```
griet@griet-desktop: ~
chmod: cannot access 'file27': No such file or directory
griet@griet-desktop:~$ chmod 777 file22
griet@griet-desktop:~$ ls -long
total 956
-rw-rw-r--  1  950 Feb 16  2019 1a.c~
-rw-rw-r--  1 1047 Jan 31  2019 1.c~
-rw-rw-r--  1  265 Feb 12  2019 1.cpp~
-rw-rw-r--  1  115 Oct 26  2019 1.sce
```

```
griet@griet-desktop: ~
rw-rw-r--  1  735 Dec 17  2019 fc.c
rw-rw-r--  1  735 Dec 17  2019 fc.c~
rw-rw-r--  1  498 May  8  2019 fcfc.c
rw-rw-r--  1  802 May  8  2019 fcfs.c
rw-rw-r--  1  802 May  8  2019 fcfs.c~
rw-rw-r--  1  851 May  6  2019 fcfs.cpp
rw-rw-r--  1  850 May  6  2019 fcfs.cpp~
rw-rw-r--  1  583 Apr  9  2019 fifo.c~
rw-rw-r--  1    0 Mar 12 13:32 file
rwxrwxrwx  1   72 Nov  6  2019 file1
rw-rw-r--  1  513 Feb 25 14:11 file1.c
rw-rw-r--  1  511 Feb 25 14:09 file1.c~
rw-rw-r--  1    1 Nov  4  2019 file1.tst
rw-rw-r--  1   18 Nov  4  2019 file1.txt
rwxrwxrwx  1   72 Mar 12 12:44 file22
rw-rw-r--  1   16 Nov  4  2019 file2.txt
rw-rw-r--  1    5 Jul  3  2019 file3
rw-rw-r--  1   18 Nov  4  2019 file3.txt
rw-rw-r--  1   72 Mar 12 12:46 file44
rw-rw-r--  1   26 Nov  4  2019 file4.txt
rw-rw-r--  1   72 Mar 12 13:35 file54
rw-rw-r--  1   85 Sep 26  2019 filename.pyy
rw-rw-r--  1   83 Sep 26  2019 file.py
rw-rw-r--  1   82 Sep 26  2019 file.py.save
```

$ps(Process Status):

This command is used to display the attributes of a process.

Syntax: $ps

Example: $ps

Output: PID TTY TIME CMD

644	01	10:30:00	bash
643	02	10:31:00	ps

Options:

-f: detailed listing which shows parent of every process,use(-f)->(full) option.

Example: $ps –f

Output:

UID PID PPID C STIME TTY TIME CMD

Sumid 291 1 0 10:24:36 console 0:00 –bash

-u:it displays processes of a user.

Example: $ps –u sumit

Output: PID TTY TIME CMD

378	?	00:05	xsun
403	?	00:00	xsession

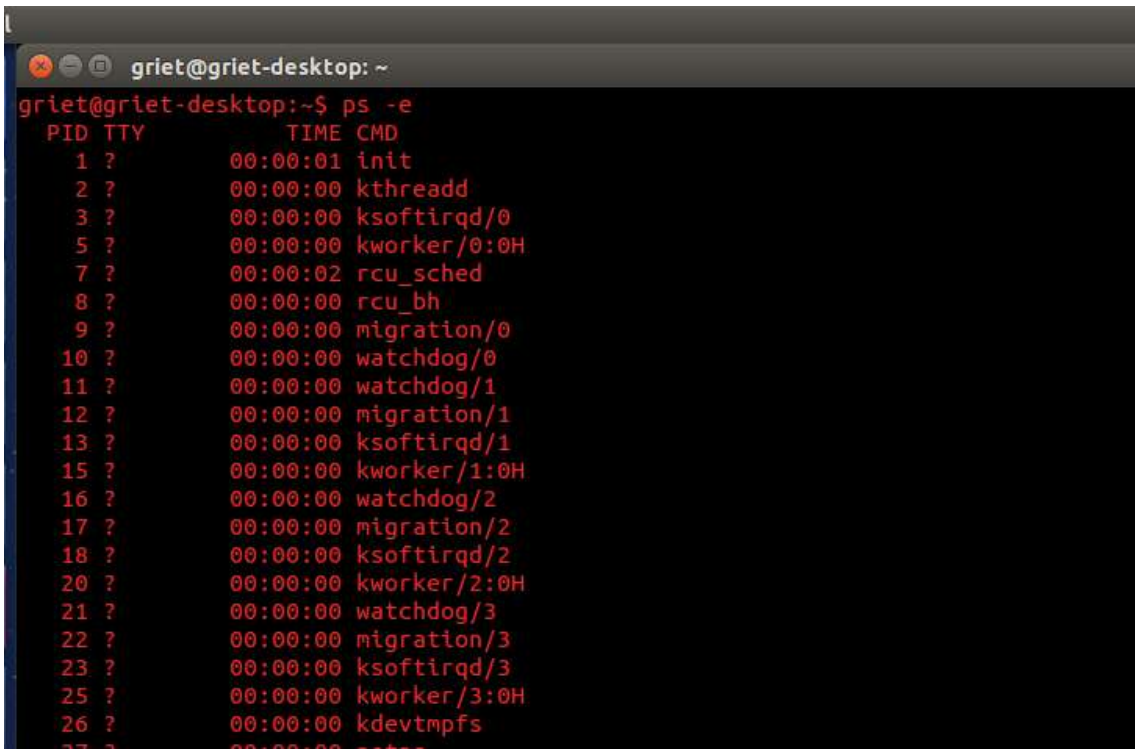
-a: displaying all user processes.

Example: $ps –a

Output : PID TTY TIME CMD

662	pts/01	00:00:00	ksh
705	pts/02	00:00:00	sh

Output:



$kill: This command is used to kill the process i.e; stop or terminate a process.(by administrator)**Syntax:** $kill <pid>

Example: $kill 644

Output: The process gets terminated.

Task 2

Task: Write programs using shell programming and use of vi editor

Program:

Essential Vi Commands

- Open a file:

```
vi filename
```

- To go into edit mode:

```
press ESC and type I
```

- To go into command mode:

```
press ESC
```

- To save a file

```
press ESC and type :w fileName
```

- To save a file and quit:

```
press ESC and type :wq
```

OR

```
press ESC and type :x
```

- To jump to a line:

```
press ESC and type :the line number
```

- To Search for a string:

```
Press ESC and type /wordToSearch
```

- To quit vi:

```
Press ESC and type :q
```

Save the following into a file called hello.sh:

```
#!/bin/bash
echo "Hello, World!"
echo "Knowledge is power."
```

Save and close the file. You can run the script as follows:

```
./hello.sh
```

Saving and Running Your Script

The command ./hello.sh displayed an error message on the screen. It will not run script since you've not set execute permission for your script hello.sh. To execute this program, type the following command:

```
chmod +x hello.sh
./hello.sh
```

Output: