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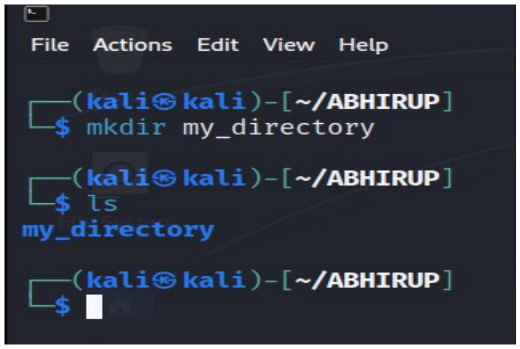
DIGITAL ASSESSMENT – 2 (27 ,28may)

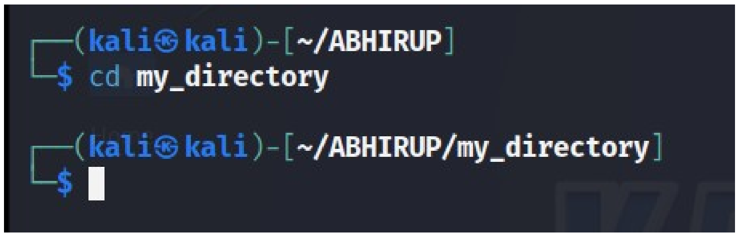
TASK1 . File and directory manipulation

1. Create a directory called "my_directory".
mkdir my_directory
ls



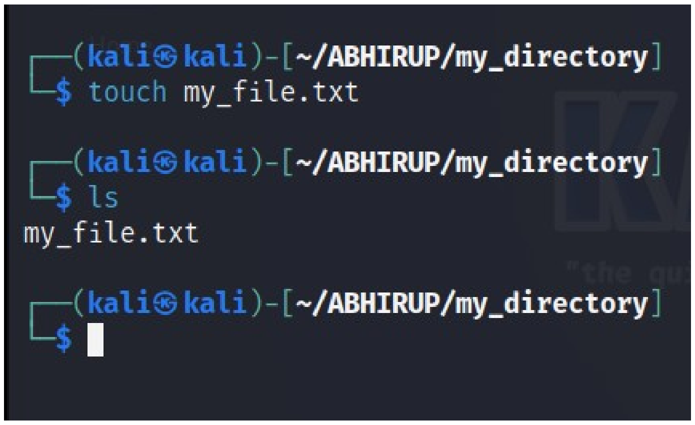
```
┌──(kali㉿kali)-[~/ABHIRUP]
└─$ mkdir my_directory

┌──(kali㉿kali)-[~/ABHIRUP]
└─$ ls
my_directory

┌──(kali㉿kali)-[~/ABHIRUP]
└─$ 
```

2. Navigate into the "my_directory".
cd my_directory



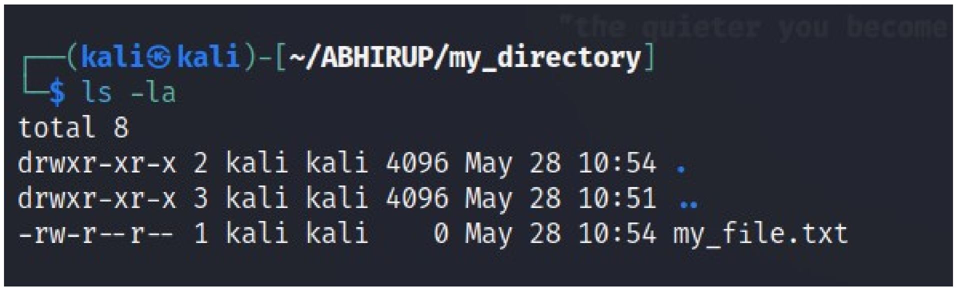
```
┌──(kali㉿kali)-[~/ABHIRUP]
└─$ cd my_directory

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ 
```

3. Create an empty file called "my_file.txt".
touch my_file.txt
ls



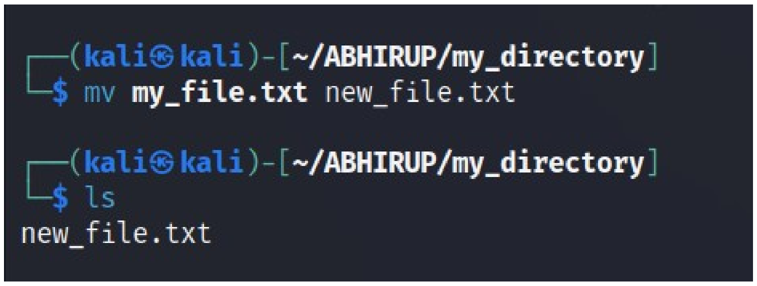
```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ touch my_file.txt

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ ls
my_file.txt

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ 
```

4. List all the files and directories in the current directory.
ls -la



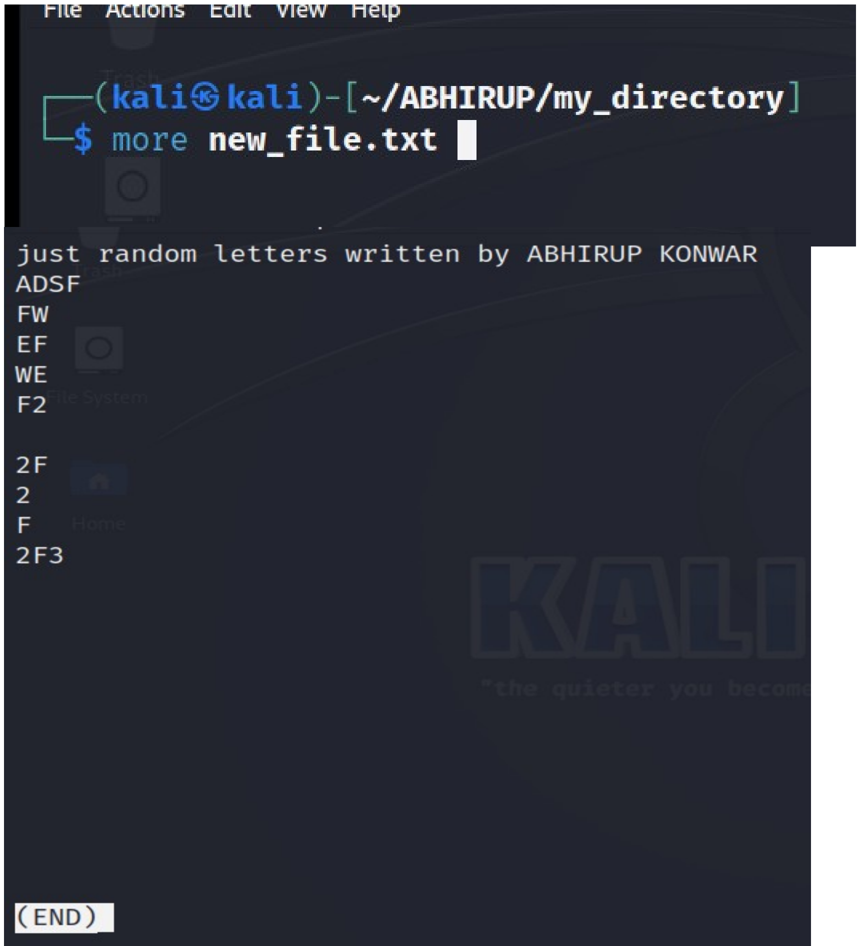
```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ ls -la
total 8
drwxr-xr-x 2 kali kali 4096 May 28 10:54 .
drwxr-xr-x 3 kali kali 4096 May 28 10:51 ..
-rw-r--r-- 1 kali kali    0 May 28 10:54 my_file.txt
```

5. Rename "my_file.txt" to "new_file.txt".
mv my_file.txt new_file.txt
ls



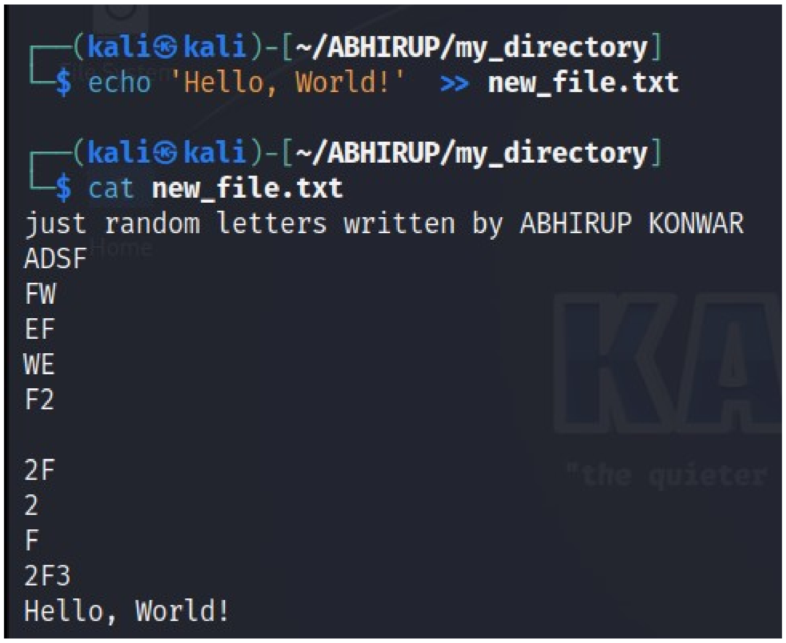
```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ mv my_file.txt new_file.txt

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ ls
new_file.txt
```

6. Display the content of "new_file.txt" using a pager tool of your choice.
more new_file.txt
(to display content of new_file.txt , I have added random words to it)



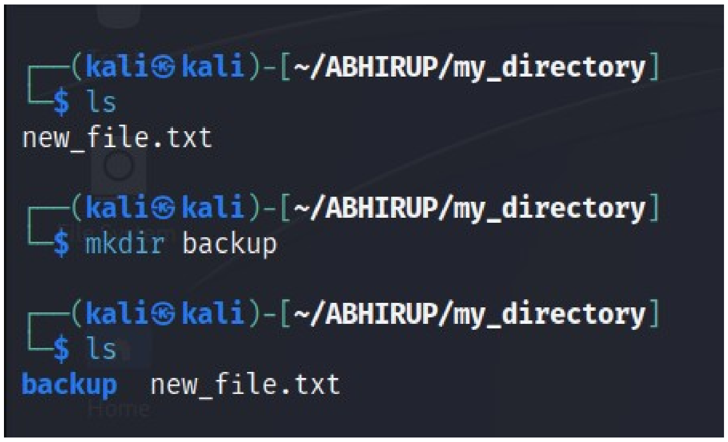
```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ more new_file.txt

just random letters written by ABHIRUP KONWAR
ADSF
FW
EF
WE
F2

2F
2
F
2F3

(END)
```

7. Append the text "Hello, World!" to "new_file.txt".
echo ‘Hello, World!’ >> new_file.txt



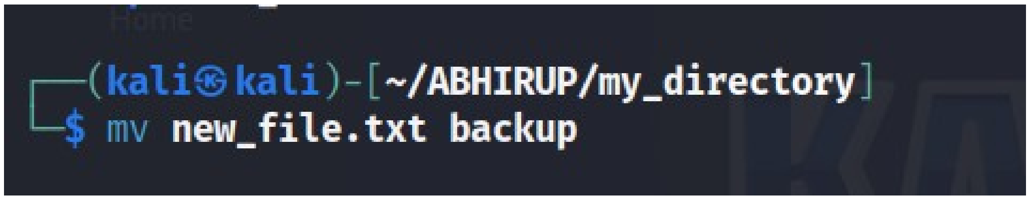
```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ echo 'Hello, World!'  >> new_file.txt

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ cat new_file.txt
just random letters written by ABHIRUP KONWAR
ADSF
FW
EF
WE
F2

2F
2
F
2F3
Hello, World!
```

8. Create a new directory called "backup" within "my_directory".
ls
mkdir backup
ls



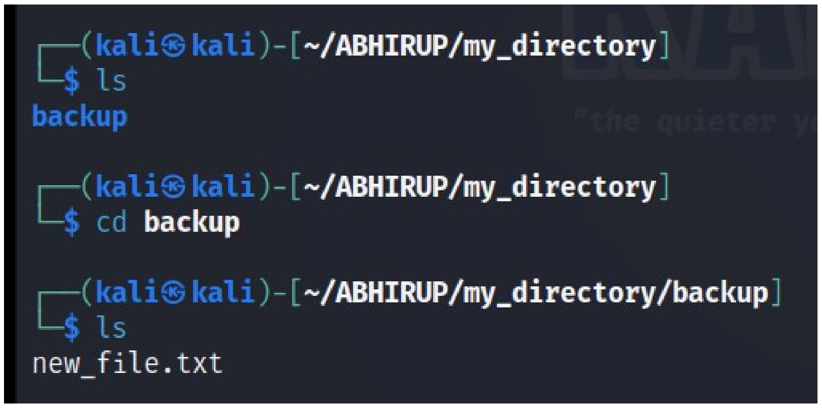
```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ ls
new_file.txt

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ mkdir backup

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ ls
backup  new_file.txt
```

9. Move "new_file.txt" to the "backup" directory.
mv new_file.txt backup



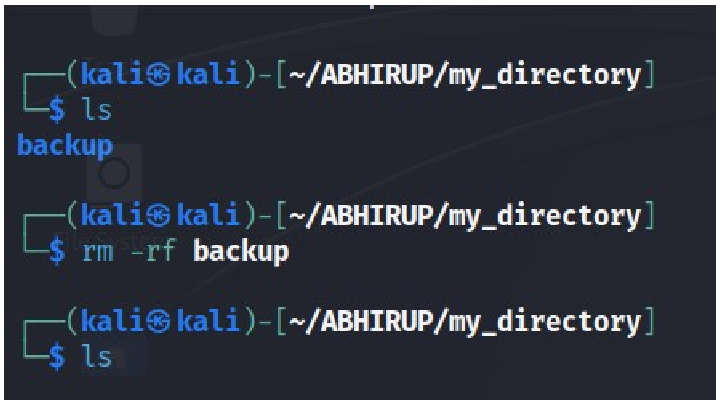
```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ mv new_file.txt backup
```

10. Verify that "new_file.txt" is now located in the "backup" directory.
ls
cd backup
ls



```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ ls
backup

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ cd backup

┌──(kali㉿kali)-[~/ABHIRUP/my_directory/backup]
└─$ ls
new_file.txt
```

11. Delete the "backup" directory and all its contents.
ls
rm -rf backup
ls

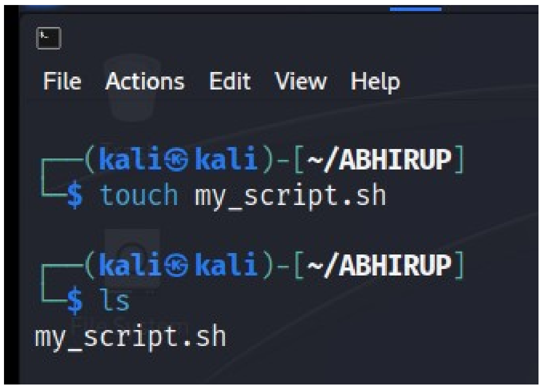


```
┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ ls
backup

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ rm -rf backup

┌──(kali㉿kali)-[~/ABHIRUP/my_directory]
└─$ ls
```

r : recursive (remove directories and their contents recursively)
f: force (ignore non-existent file , never prompt)

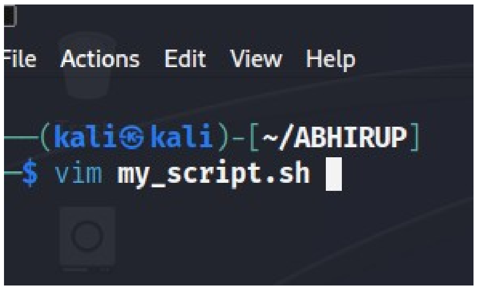
TASK 2 : PERMISSIONS AND SCRIPTING

1.Create a new file called “my_script.sh”
touch my_script.sh
ls

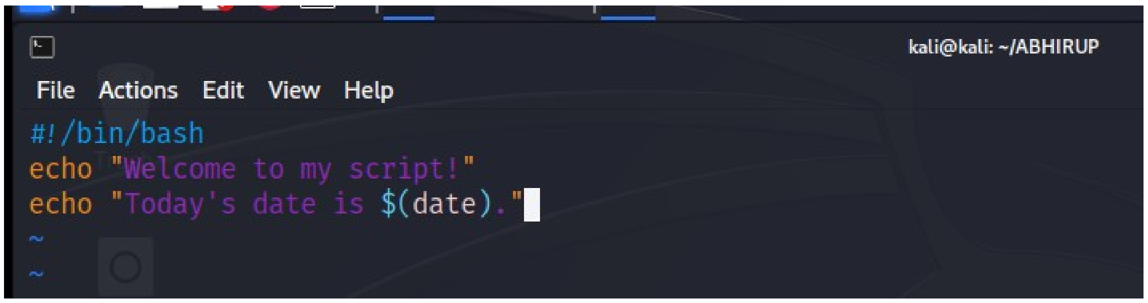


```
┌──(kali㉿kali)-[~/ABHIRUP]
└─$ touch my_script.sh

┌──(kali㉿kali)-[~/ABHIRUP]
└─$ ls
my_script.sh
```

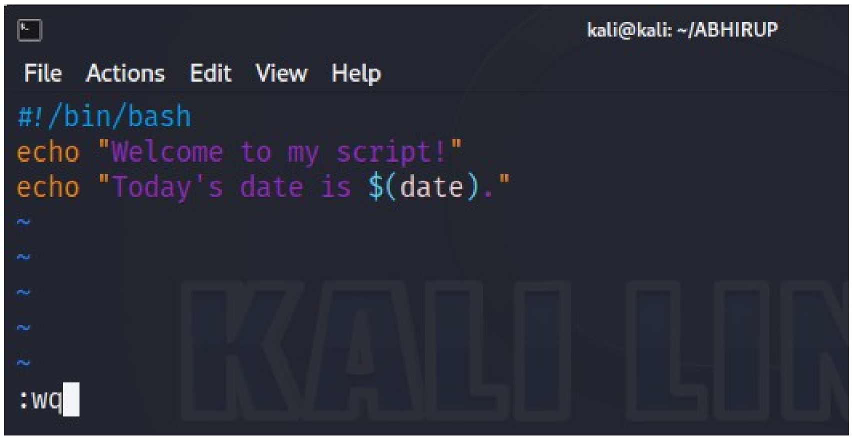
2. Edit my_script.sh using any text editor , add the given lines, make it executable , and run.
vim my_script.sh
#!/bin/bash
echo “Welcome to my script!”
echo “Today’s date is $(date).”



```
──(kali㉿kali)-[~/ABHIRUP]
─$ vim my_script.sh
```



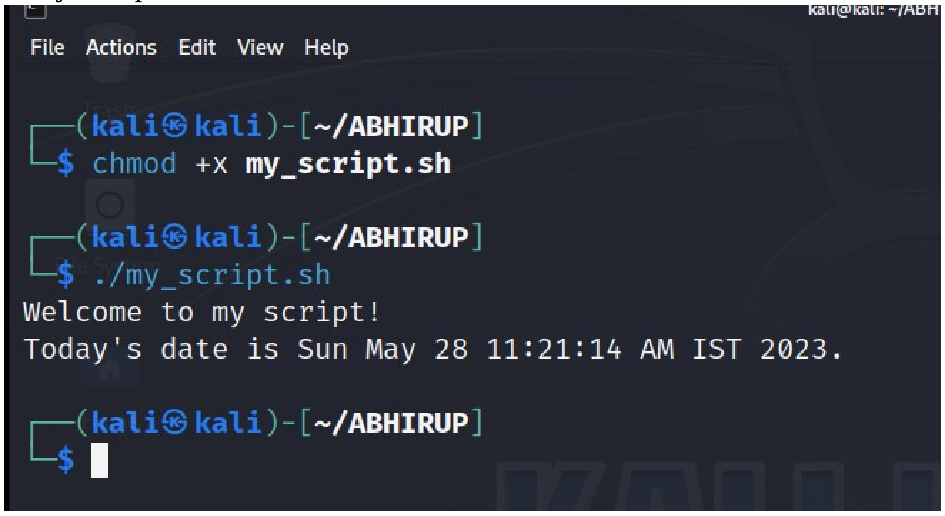
```
#!/bin/bash
echo "Welcome to my script!"
echo "Today's date is $(date)."
~
~
```



```
#!/bin/bash
echo "Welcome to my script!"
echo "Today's date is $(date)."
~
~
~
~
~
:wq
```

w : save changes made to the file
q : exit Vim

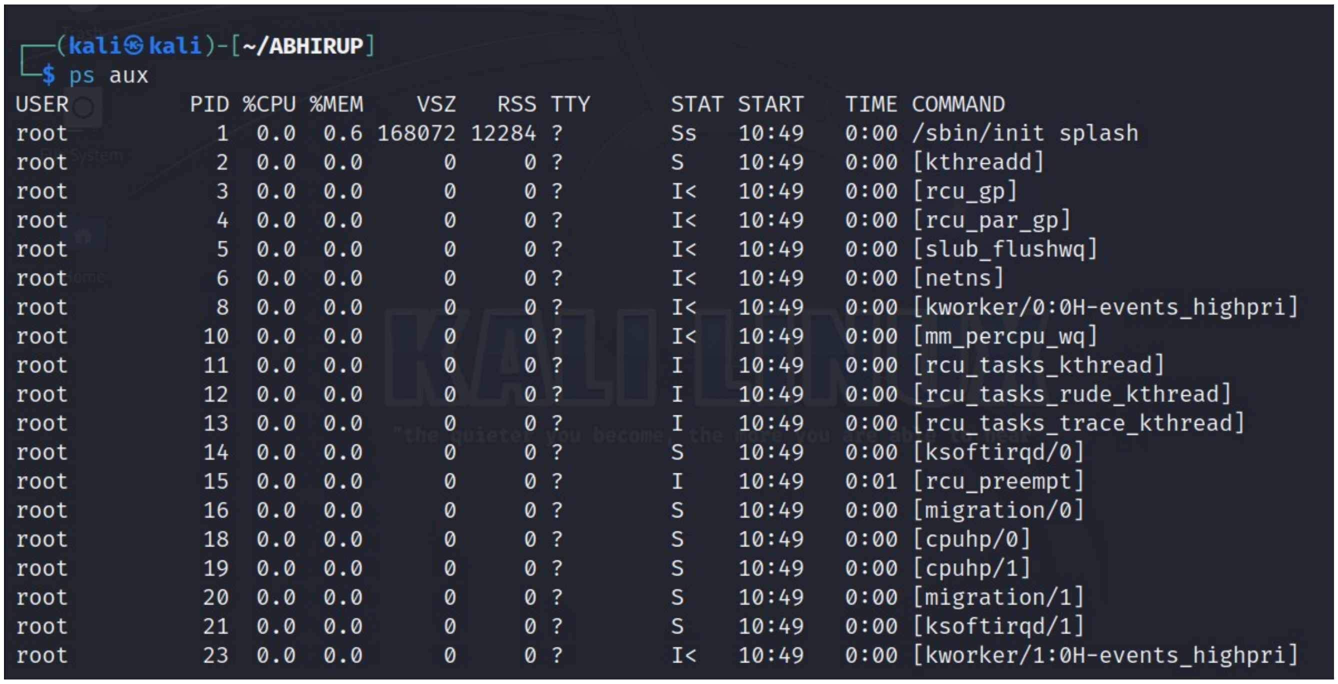
chmod +x my_script.sh
./my_script.sh



```
┌──(kali㉿kali)-[~/ABHIRUP]
└─$ chmod +x my_script.sh

┌──(kali㉿kali)-[~/ABHIRUP]
└─$ ./my_script.sh
Welcome to my script!
Today's date is Sun May 28 11:21:14 AM IST 2023.

┌──(kali㉿kali)-[~/ABHIRUP]
└─$ 
```

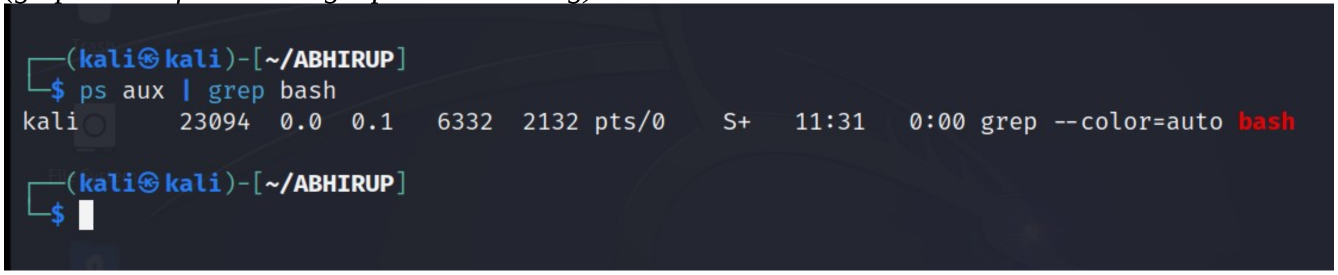
TASK 3 : COMMAND EXECUTION AND PIPELINES

1. List all the processes running on your system using the "ps" command.
ps aux
The ps aux command is used to display a detailed list of all running processes on a Linux or Unix system.



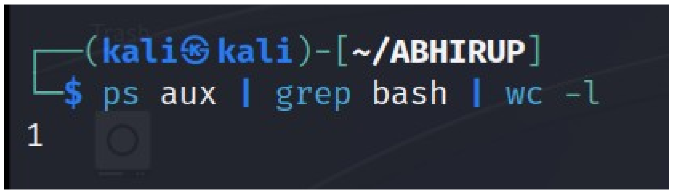
```
┌──(kali㉿kali)-[~/ABHIRUP]
└─$ ps aux
USER         PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.6 168072 12284 ?        Ss   10:49   0:00 /sbin/init splash
root           2  0.0  0.0      0     0 ?        S    10:49   0:00 [kthreadd]
root           3  0.0  0.0      0     0 ?        I<   10:49   0:00 [rcu_gp]
root           4  0.0  0.0      0     0 ?        I<   10:49   0:00 [rcu_par_gp]
root           5  0.0  0.0      0     0 ?        I<   10:49   0:00 [slub_flushwq]
root           6  0.0  0.0      0     0 ?        I<   10:49   0:00 [netns]
root           8  0.0  0.0      0     0 ?        I<   10:49   0:00 [kworker/0:0H-events_highpri]
root          10  0.0  0.0      0     0 ?        I<   10:49   0:00 [mm_percpu_wq]
root          11  0.0  0.0      0     0 ?        I    10:49   0:00 [rcu_tasks_kthread]
root          12  0.0  0.0      0     0 ?        I    10:49   0:00 [rcu_tasks_rude_kthread]
root          13  0.0  0.0      0     0 ?        I    10:49   0:00 [rcu_tasks_trace_kthread]
root          14  0.0  0.0      0     0 ?        S    10:49   0:00 [ksoftirqd/0]
root          15  0.0  0.0      0     0 ?        I    10:49   0:01 [rcu_preempt]
root          16  0.0  0.0      0     0 ?        S    10:49   0:00 [migration/0]
root          18  0.0  0.0      0     0 ?        S    10:49   0:00 [cpuhp/0]
root          19  0.0  0.0      0     0 ?        S    10:49   0:00 [cpuhp/1]
root          20  0.0  0.0      0     0 ?        S    10:49   0:00 [migration/1]
root          21  0.0  0.0      0     0 ?        S    10:49   0:00 [ksoftirqd/1]
root          23  0.0  0.0      0     0 ?        I<   10:49   0:00 [kworker/1:0H-events_highpri]
```

2.Use the "grep" command to filter the processes list and display only the processes with "bash" in their name.
ps aux | grep bash
(grep is used for matching a pattern or string)



```
┌──(kali㉿kali)-[~/ABHIRUP]
└─$ ps aux | grep bash
kali       23094  0.0  0.1   6332  2132 pts/0    S+   11:31   0:00 grep --color=auto bash

┌──(kali㉿kali)-[~/ABHIRUP]
└─$ 
```

3.Use the "wc" command to count the number of lines in the filtered output.
ps aux | grep bash | wc -l



```
┌──(kali㉿kali)-[~/ABHIRUP]
└─$ ps aux | grep bash | wc -l
1
```