

WEEK ASSESSMENT - 2

-By

Prasanna Kumar N

20BCE2121

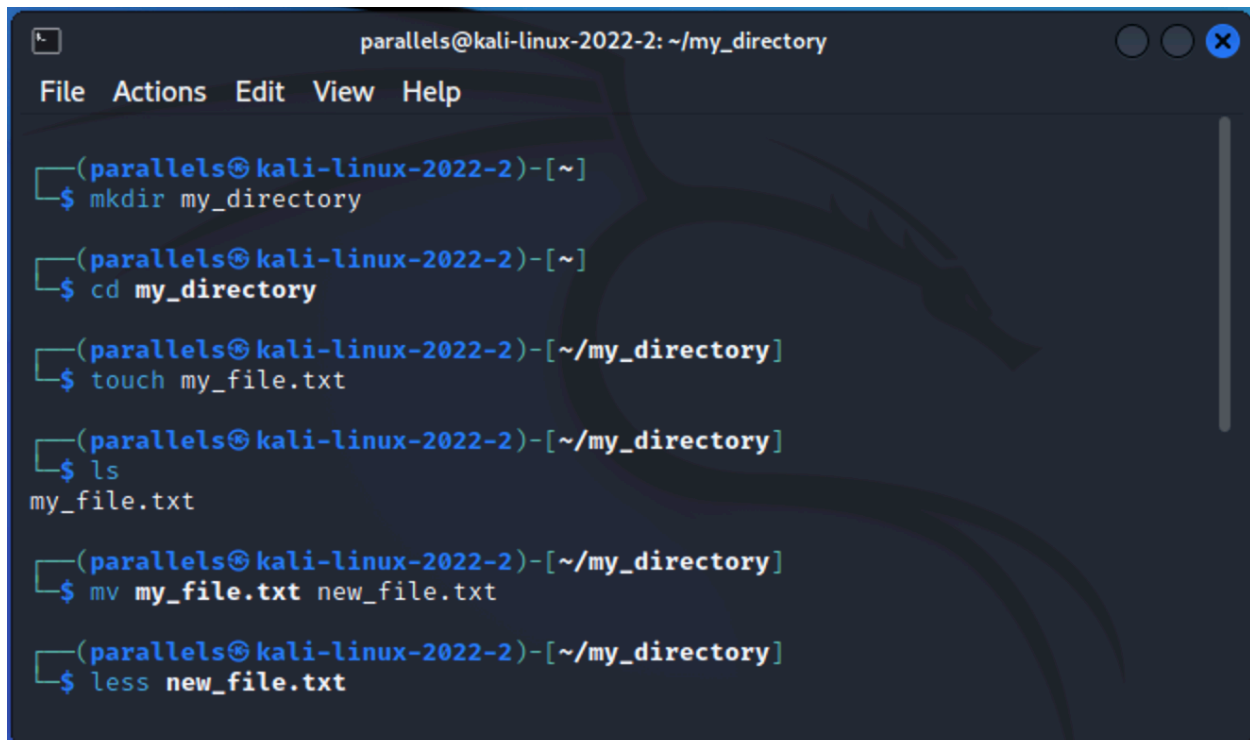
Branch: CSE(Core)

Vellore Institute of Technology, Vellore Campus

Assignment: Bash Shell Basics

Task 1: File and Directory Manipulation

1. Create a directory called "my_directory".
2. Navigate into the "my_directory".
3. Create an empty file called "my_file.txt".
4. List all the files and directories in the current directory.
5. Rename "my_file.txt" to "new_file.txt".
6. Display the content of "new_file.txt" using a pager tool of your choice.



```
parallels@kali-linux-2022-2: ~/my_directory
File Actions Edit View Help

(parallels@kali-linux-2022-2)-[~]
$ mkdir my_directory

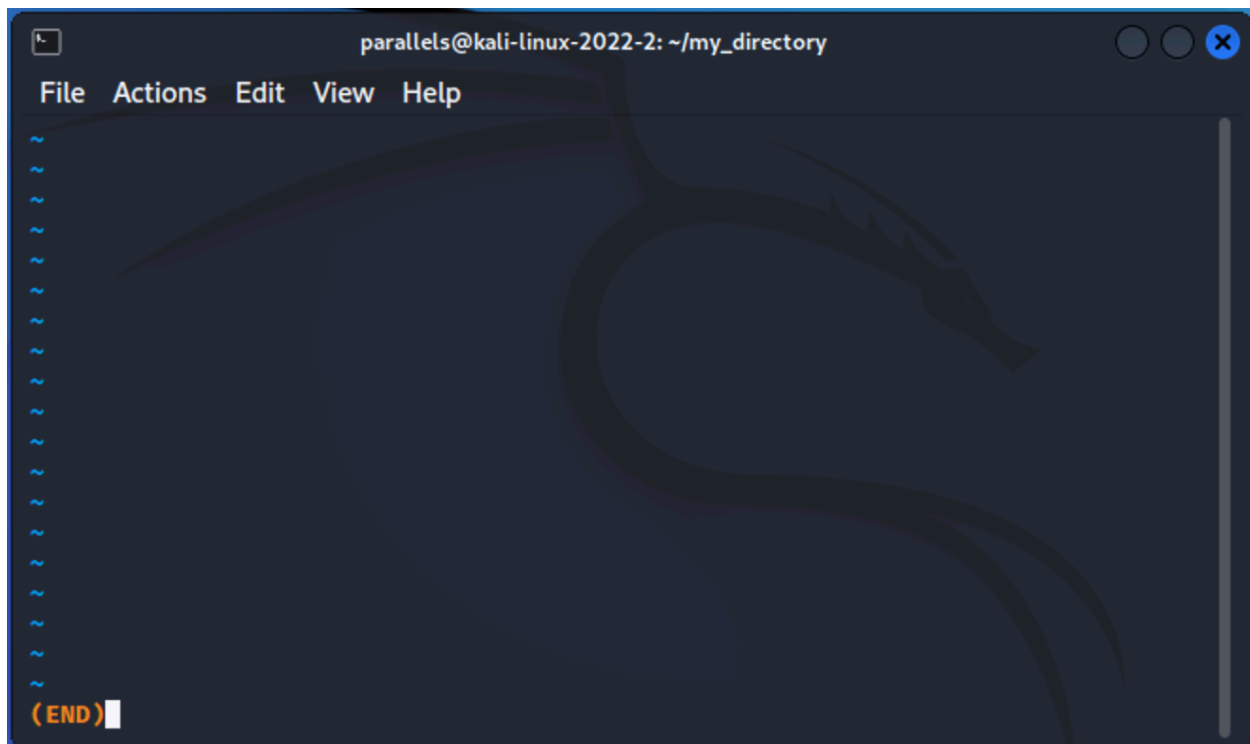
(parallels@kali-linux-2022-2)-[~]
$ cd my_directory

(parallels@kali-linux-2022-2)-[~/my_directory]
$ touch my_file.txt

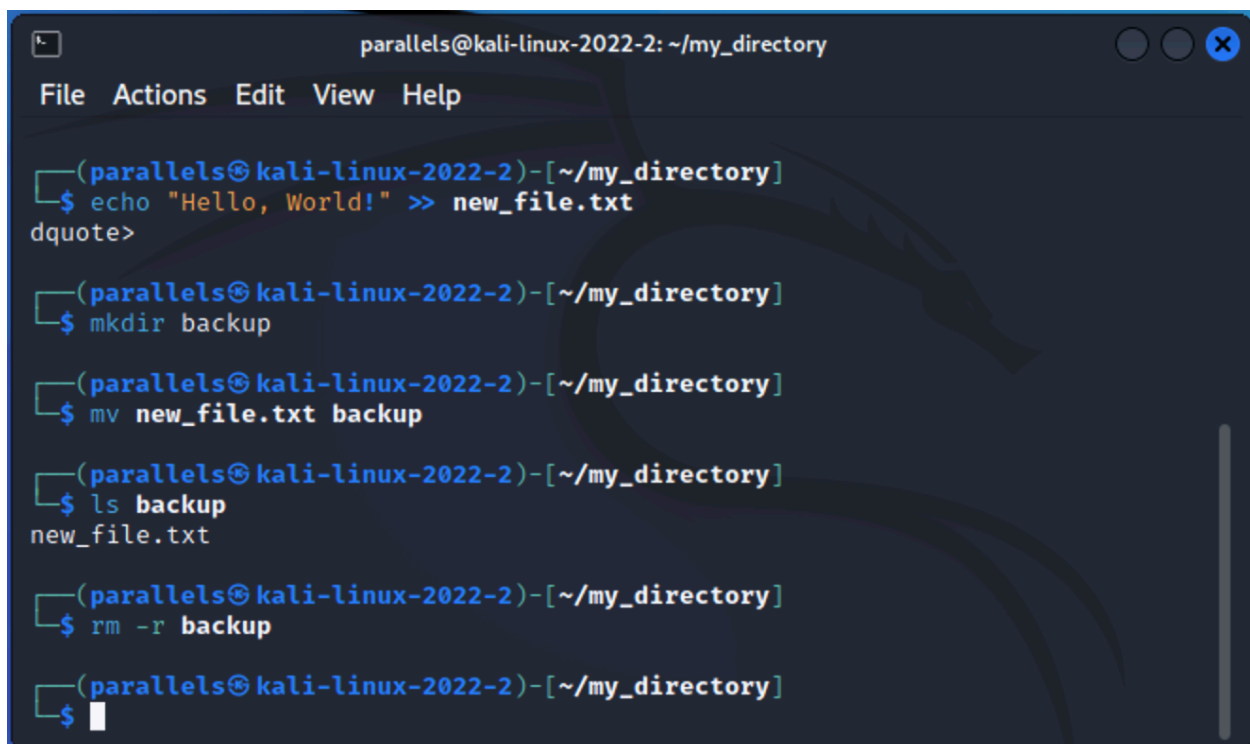
(parallels@kali-linux-2022-2)-[~/my_directory]
$ ls
my_file.txt

(parallels@kali-linux-2022-2)-[~/my_directory]
$ mv my_file.txt new_file.txt

(parallels@kali-linux-2022-2)-[~/my_directory]
$ less new_file.txt
```



7. Append the text "Hello, World!" to "new_file.txt".
8. Create a new directory called "backup" within "my_directory".
9. Move "new_file.txt" to the "backup" directory.
10. Verify that "new_file.txt" is now located in the "backup" directory.
11. Delete the "backup" directory and all its contents.



Task 2: Permissions and Scripting

- Create a new file called "my_script.sh".
- Edit "my_script.sh" using a text editor of your choice and add the following lines:

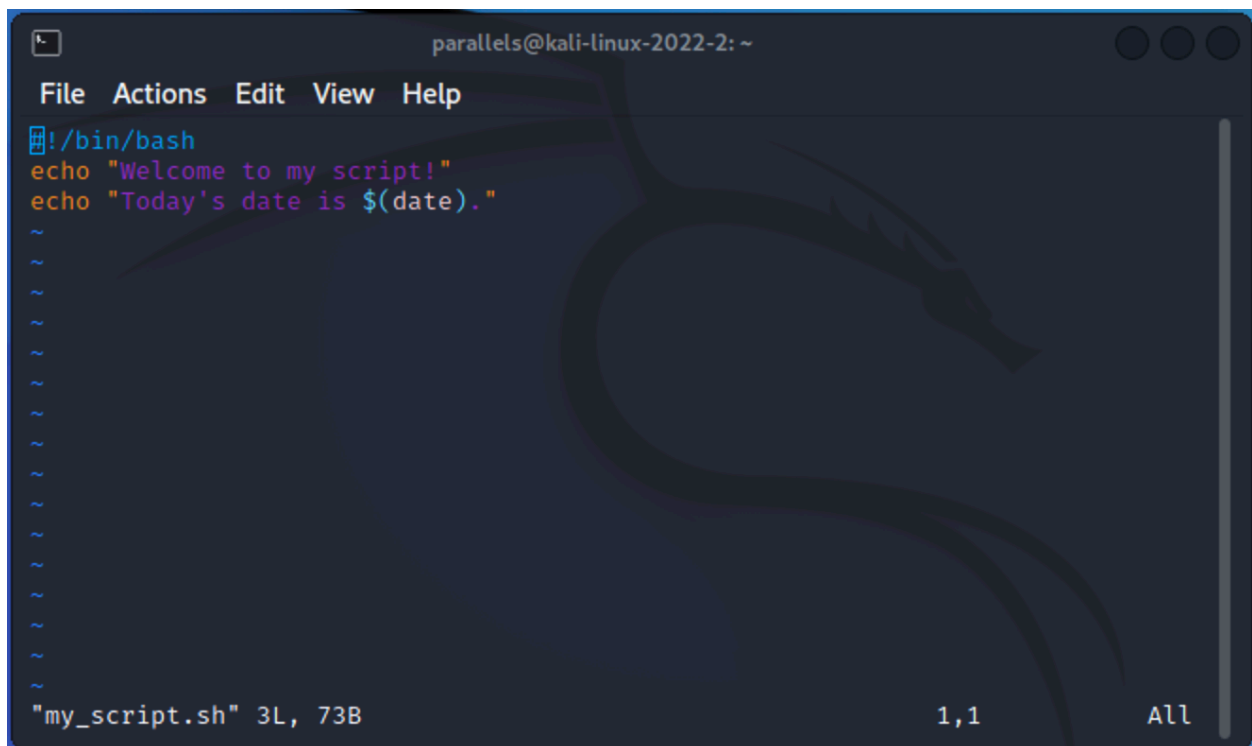
bash

#!/bin/bash

echo "Welcome to my script!"

echo "Today's date is \$(date)."

Save and exit the file.

A screenshot of a terminal window titled "parallels@kali-linux-2022-2: ~". The window shows a text editor with the following content:

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

 The status bar at the bottom indicates the file is "my_script.sh" with 3 lines and 73 bytes. The cursor is at line 1, column 1. The terminal has a dark blue background with a faint dragon logo.

- Make "my_script.sh" executable.
- Run "my_script.sh" and verify that the output matches the expected result.

```
parallels@kali-linux-2022-2: ~  
File Actions Edit View Help  
  
(parallels@kali-linux-2022-2)-[~]  
$ vim my_script.sh  
  
(parallels@kali-linux-2022-2)-[~]  
$ chmod +x my_script.sh  
  
(parallels@kali-linux-2022-2)-[~]  
$ ./my_script.sh  
Welcome to my script!  
Today's date is Sun May 28 09:18:15 PM IST 2023.  
  
(parallels@kali-linux-2022-2)-[~]  
$
```

Task 3: Command Execution and Pipelines

- List all the processes running on your system using the "ps" command.

```
parallels@kali-linux-2022-2: ~  
File Actions Edit View Help  
  
(parallels@kali-linux-2022-2)-[~]  
$ ps aux  
USER          PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND  
root           1   0.0  0.6 167608 13280 ?        Ss   18:52   0:02 /sbin/init  
root           2   0.0  0.0      0     0 ?        S    18:52   0:00 [kthreadd]  
root           3   0.0  0.0      0     0 ?        I<   18:52   0:00 [rcu_gp]  
root           4   0.0  0.0      0     0 ?        I<   18:52   0:00 [rcu_par_gp]  
root           5   0.0  0.0      0     0 ?        I<   18:52   0:00 [netns]  
root           7   0.0  0.0      0     0 ?        I<   18:52   0:00 [kworker/0:  
root           9   0.0  0.0      0     0 ?        I<   18:52   0:00 [mm_percpu_  
root          10   0.0  0.0      0     0 ?        I    18:52   0:00 [rcu_tasks_  
root          11   0.0  0.0      0     0 ?        I    18:52   0:00 [rcu_tasks_  
root          12   0.0  0.0      0     0 ?        S    18:52   0:00 [ksoftirqd/  
root          13   0.0  0.0      0     0 ?        I    18:52   0:02 [rcu_sched]  
root          14   0.0  0.0      0     0 ?        S    18:52   0:00 [migration/  
root          16   0.0  0.0      0     0 ?        S    18:52   0:00 [cpuhp/0]  
root          17   0.0  0.0      0     0 ?        S    18:52   0:00 [cpuhp/1]  
root          18   0.0  0.0      0     0 ?        S    18:52   0:00 [migration/  
root          19   0.0  0.0      0     0 ?        S    18:52   0:00 [ksoftirqd/  
root          21   0.0  0.0      0     0 ?        I<   18:52   0:00 [kworker/1:
```

- Use the "grep" command to filter the processes list and display only the processes with "bash" in their name.
- Use the "wc" command to count the number of lines in the filtered output.

```
parallels@kali-linux-2022-2: ~  
File Actions Edit View Help  
root      39614  0.0  0.0      0      0 ?        I   21:14   0:00 [kworker/0:  
root      40363  0.0  0.0      0      0 ?        I   21:17   0:00 [kworker/u4  
root      40961  0.0  0.0      0      0 ?        I   21:19   0:00 [kworker/0:  
root      41843  0.0  0.0      0      0 ?        I   21:22   0:00 [kworker/u4  
paralle+  42093  0.5  0.7  40056 14832 ?        S   21:23   0:00 /usr/bin/xf  
paralle+  42094  9.5  5.0 492728 101748 ?        Rl  21:23   0:00 /usr/bin/qt  
paralle+  42097  4.0  0.2  10108  5592 pts/0    Ss  21:23   0:00 /usr/bin/zs  
paralle+  42112  0.0  0.1   9756  2852 pts/0    R+  21:23   0:00 ps aux  
  
(parallels@kali-linux-2022-2)-[~]  
$ ps aux | grep bash  
paralle+  42135  0.0  0.0   5972  1904 pts/0    S+  21:23   0:00 grep --colo  
r=auto bash  
  
(parallels@kali-linux-2022-2)-[~]  
$ ps aux | grep bash | wc -l  
1  
  
(parallels@kali-linux-2022-2)-[~]  
$
```