

## **ASSIGNMENT - 2**

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### **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.
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.

#### **COMMANDS**

```
(chiranjibi@kali)-[~]
$ mkdir my_directory

(chiranjibi@kali)-[~]
$ cd my_directory

(chiranjibi@kali)-[~/my_directory]
$ touch my_file.txt
File System
(chiranjibi@kali)-[~/my_directory]
$ ls
my_file.txt
Home
(chiranjibi@kali)-[~/my_directory]
$ mv my_file.txt new_file.txt
Home
(chiranjibi@kali)-[~/my_directory]
$ echo "hello, world!" >> new_file.txt
```

```
(chiranjibi@kali)-[~]
$ mkdir backup

(chiranjibi@kali)-[~]
$ mv new_file.txt backup/
mv: cannot stat 'new_file.txt': No such file or directory

(chiranjibi@kali)-[~]
$ ls backup/

(chiranjibi@kali)-[~]
$ rm -r backup

(chiranjibi@kali)-[~]
$
```

## 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.**

- Make "my\_script.sh" executable.
- Run "my\_script.sh" and verify that the output matches the expected result.

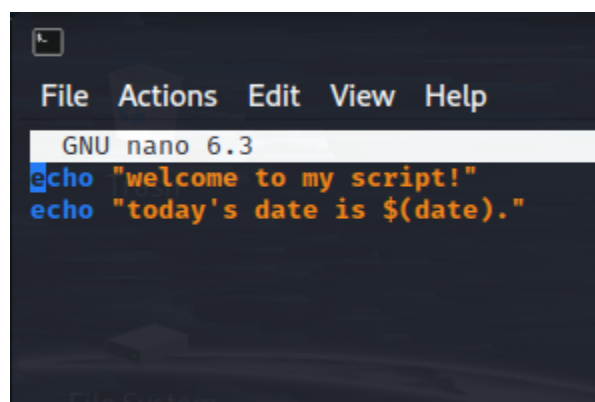
```
(chiranjibi@kali)-[~]
$ touch my_script.sh
Home
(chiranjibi@kali)-[~]
$ less new_file.txt
new_file.txt: No such file or directory

(chiranjibi@kali)-[~]
$ nano my_script.sh
hulk-master
(chiranjibi@kali)-[~]
$ chmod +x my_script.sh
(chiranjibi@kali)-[~]
$ ./my_script.sh
./my_script.sh: 1: welcome: not found
./my_script.sh: 3: Syntax error: Unterminated quoted string

(chiranjibi@kali)-[~]
$ nano my_script.sh
(chiranjibi@kali)-[~]
$ ./my_script.sh
welcome to my script!
today's date is Sun May 28 07:46:49 AM EDT 2023.

(chiranjibi@kali)-[~]
$
```

NANO



The screenshot shows the nano text editor interface. At the top, there is a menu bar with 'File', 'Actions', 'Edit', 'View', and 'Help'. Below the menu bar, it says 'GNU nano 6.3'. The main editing area contains two lines of text: 'echo "welcome to my script!"' and 'echo "today's date is \$(date)."'.

### Task 3: Command Execution and Pipelines

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

```
File Actions Edit View Help
└─$
(chiranjibi@kali)-[~]
└─$ ps aux
USER          PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.2 102104 12164 ?        Ss   04:47   0:01 /sbin/init splash
root           2  0.0  0.0      0     0 ?        S    04:47   0:00 [kthreadd]
root           3  0.0  0.0      0     0 ?        I<   04:47   0:00 [rcu_gp]
root           4  0.0  0.0      0     0 ?        I<   04:47   0:00 [rcu_par_gp]
root           5  0.0  0.0      0     0 ?        I<   04:47   0:00 [netns]
root           7  0.0  0.0      0     0 ?        I<   04:47   0:00 [kworker/0:0H-events_highpri]
root           9  0.0  0.0      0     0 ?        I<   04:47   0:00 [kworker/0:1H-events_highpri]
root          10  0.0  0.0      0     0 ?        I<   04:47   0:00 [mm_percpu_wq]
root          11  0.0  0.0      0     0 ?        I    04:47   0:00 [rcu_tasks_kthread]
root          12  0.0  0.0      0     0 ?        I    04:47   0:00 [rcu_tasks_rude_kthread]
root          13  0.0  0.0      0     0 ?        I    04:47   0:00 [rcu_tasks_trace_kthread]
root          14  0.0  0.0      0     0 ?        S    04:47   0:00 [ksoftirqd/0]
root          15  0.0  0.0      0     0 ?        I    04:47   0:05 [rcu_preempt]
root          16  0.0  0.0      0     0 ?        S    04:47   0:00 [migration/0]
root          18  0.0  0.0      0     0 ?        S    04:47   0:00 [cpuhp/0]
root          20  0.0  0.0      0     0 ?        S    04:47   0:00 [kdevtmpfs]
root          21  0.0  0.0      0     0 ?        I<   04:47   0:00 [inet_frag_wq]
root          22  0.0  0.0      0     0 ?        S    04:47   0:00 [kauditd]
root          23  0.0  0.0      0     0 ?        S    04:47   0:00 [khungtaskd]
root          24  0.0  0.0      0     0 ?        S    04:47   0:00 [oom_reaper]
root          25  0.0  0.0      0     0 ?        I<   04:47   0:00 [writeback]
root          26  0.0  0.0      0     0 ?        S    04:47   0:00 [kcompactd0]
root          27  0.0  0.0      0     0 ?        SN   04:47   0:00 [ksmd]
root          28  0.0  0.0      0     0 ?        SN   04:47   0:00 [khugepaged]
root          29  0.0  0.0      0     0 ?        I<   04:47   0:00 [kintegrityd]
root          30  0.0  0.0      0     0 ?        I<   04:47   0:00 [kblockd]
root          31  0.0  0.0      0     0 ?        I<   04:47   0:00 [blkcg_punt_bio]
root          32  0.0  0.0      0     0 ?        I<   04:47   0:00 [tpm_dev_wq]
root          33  0.0  0.0      0     0 ?        I<   04:47   0:00 [edac-poller]
root          34  0.0  0.0      0     0 ?        I<   04:47   0:00 [devfreq_wq]
```

```
C:\Users\chira>ipco
(chiranjibi@kali)-[~]
$ ps aux | grep bash
chiranj+  48386  0.0  0.0  6348  2160 pts/1    S+   07:48   0:00 grep --color=auto bash

(chiranjibi@kali)-[~]
$ ps aux | grep bash | wc -l
wc: invalid option -- '1'
Try 'wc --help' for more information.

(chiranjibi@kali)-[~]
$ ps aux | grep bash | wc -l
1

(chiranjibi@kali)-[~]
$
```