

## CYBERSECURITY & ETHICAL HACKING

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### ASSESSMENT – 2

#### File and Directory Manipulation

1. Create a directory called "my\_directory".

`mkdir my_directory`

`ls`

```
revanth@revanth-VirtualBox:~$ mkdir my_directory
revanth@revanth-VirtualBox:~$ ls
archive1.tar  Documents      main.zip       os             Public
cyber         Downloads      Music          passwd.gz      Templates
Desktop       file1.txt.save my_directory   Pictures       Videos
revanth@revanth-VirtualBox:~$
```

2. Navigate into the "my\_directory".

`cd my_directory`

```
revanth@revanth-VirtualBox:~$ cd my_directory
revanth@revanth-VirtualBox:~/my_directory$
```

3. Create an empty file called "my\_file.txt".

`touch my_file.txt`

`ls`

```
revanth@revanth-VirtualBox:~/my_directory$ touch my_file.txt
revanth@revanth-VirtualBox:~/my_directory$ ls
my_file.txt
revanth@revanth-VirtualBox:~/my_directory$
```

4. List all the files and directories in the current directory.

`ls -la`

```
revanth@revanth-VirtualBox:~/my_directory$ ls -la
total 8
drwxrwxr-x  2 revanth revanth 4096 May 29 16:44 .
drwxr-xr-x 20 revanth revanth 4096 May 29 16:43 ..
-rw-rw-r--  1 revanth revanth   0 May 29 16:44 my_file.txt
revanth@revanth-VirtualBox:~/my_directory$
```

5.Rename "my\_file.txt" to "new\_file.txt".

```
mv my_file.txt new_file.txt
```

```
ls
```

```
revanth@revanth-VirtualBox:~/my_directory$ mv my_file.txt new_file.txt
revanth@revanth-VirtualBox:~/my_directory$ ls
new_file.txt
revanth@revanth-VirtualBox:~/my_directory$
```

6.Display the content of "new\_file.txt" using a pager tool of your choice.

```
more new_file.txt
```

```
revanth@revanth-VirtualBox:~/my_directory$ more new_file.txt
revanth@revanth-VirtualBox:~/my_directory$
revanth@revanth-VirtualBox:~/my_directory$ cd
```

7.Append the text "Hello, World!" to "new\_file.txt".

```
echo 'Hello, World!' >> new_file.txt
```

```
revanth@revanth-VirtualBox:~/my_directory$ cd my_directory
revanth@revanth-VirtualBox:~/my_directory$ echo 'hello,world!' >> new_file.txt
revanth@revanth-VirtualBox:~/my_directory$ cat new_file.txt
hello,world!
revanth@revanth-VirtualBox:~/my_directory$
```

8.Create a new directory called "backup" within "my\_directory".

```
ls
```

```
mkdir backup
```

```
ls
```

```
revanth@revanth-VirtualBox:~/my_directory$ ls
new_file.txt
revanth@revanth-VirtualBox:~/my_directory$ mkdir backup
revanth@revanth-VirtualBox:~/my_directory$ ls
backup  new_file.txt
revanth@revanth-VirtualBox:~/my_directory$
```

9.Move "new\_file.txt" to the "backup" directory.

```
mv new_file.txt backup
```

```
revanth@revanth-VirtualBox:~/my_directory$ mv new_file.txt backup
revanth@revanth-VirtualBox:~/my_directory$
```

10. Verify that "new\_file.txt" is now located in the "backup" directory.

ls

cd backup

ls

```
revanth@revanth-VirtualBox:~/my_directory$ ls
backup
revanth@revanth-VirtualBox:~/my_directory$ cd backup
revanth@revanth-VirtualBox:~/my_directory/backup$ ls
new_file.txt
revanth@revanth-VirtualBox:~/my_directory/backup$
```

11. Delete the "backup" directory and all its contents.

ls

rm -rf backup

ls

```
revanth@revanth-VirtualBox:~/my_directory$ ls
backup
revanth@revanth-VirtualBox:~/my_directory$ rm -rf backup
revanth@revanth-VirtualBox:~/my_directory$ ls
```

r is for recursive - remove directories and their contents recursively.

f is for force - ignore non-existent file, never prompt.

## PERMISSIONS AND SCRIPTING

1. Create a new file called "my\_script.sh".

touch my\_script.sh

ls

```
revanth@revanth-VirtualBox:~/my_directory$ touch my_script.sh
revanth@revanth-VirtualBox:~/my_directory$ ls
my_script.sh
revanth@revanth-VirtualBox:~/my_directory$
```

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)."

```
revanth@revanth-VirtualBox:~/my_directory$ vim my_script.sh
```

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

w - save changes made to the file

q - exit Vim

chmod +x my\_script.sh

./my\_script.sh

```
revanth@revanth-VirtualBox:~/my_directory$ chmod +x my_script.sh
revanth@revanth-VirtualBox:~/my_directory$ ./my_script.sh
revanth@revanth-VirtualBox:~/my_directory$
```

## COMMAND EXECUTION AND PIPELINES

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

ps aux - used to display a detailed list of all running processes on a Linux or Unix system.

```
revanth@revanth-VirtualBox:~/my_directory$ ps aux
```

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
root	1	0.0	0.5	102036	11424	?	Ss	15:20	0:03	/sbin/init sp
root	2	0.0	0.0	0	0	?	S	15:20	0:00	[kthreadd]
root	3	0.0	0.0	0	0	?	I<	15:20	0:00	[rcu_gp]
root	4	0.0	0.0	0	0	?	I<	15:20	0:00	[rcu_par_gp]
root	6	0.0	0.0	0	0	?	I<	15:20	0:00	[kworker/0:0H
root	7	0.0	0.0	0	0	?	I	15:20	0:00	[kworker/0:1-
root	9	0.0	0.0	0	0	?	I<	15:20	0:00	[mm_percpu_wq
root	10	0.0	0.0	0	0	?	S	15:20	0:00	[rcu_tasks_ru
root	11	0.0	0.0	0	0	?	S	15:20	0:00	[rcu_tasks_tr
root	12	0.0	0.0	0	0	?	S	15:20	0:01	[ksoftirqd/0]
root	13	0.0	0.0	0	0	?	I	15:20	0:04	[rcu_sched]
root	14	0.0	0.0	0	0	?	S	15:20	0:00	[migration/0]
root	15	0.0	0.0	0	0	?	S	15:20	0:00	[idle_inject/
root	16	0.0	0.0	0	0	?	S	15:20	0:00	[cpuhp/0]
root	17	0.0	0.0	0	0	?	S	15:20	0:00	[kdevtmpfs]
root	18	0.0	0.0	0	0	?	I<	15:20	0:00	[netns]

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)

```
revanth@revanth-VirtualBox:~$ ps aux | grep bash
revanth      1946  0.0  0.2 10616  5076 pts/0    Ss   18:07   0:00 bash
```

3. Use the "wc" command to count the number of lines in the filtered output.

ps aux | grep bash | wc -l - (wc used to count the number of lines in the filtered output)

```
revanth@revanth-VirtualBox:~$ ps aux | grep bash | wc -l
```