

Experiment No. 10

Aim: Introduction to Shell programming: .sh files, simple shell scripts, execution of shell scripts, Arithmetic operations.

1. How to check your shell:

```
manish28@ubuntu:~$ echo $0
bash
manish28@ubuntu:~$
```

2. Creating first script using touch command:

```
manish28@ubuntu:~$ touch test_script
manish28@ubuntu:~$ ls
dead.letter Desktop Documents Downloads manish.txt mj.txt Music Pictures Public sent snap Templates test_script Videos
manish28@ubuntu:~$
```

- Writing script:

```
#!/bin/bash

echo Manish
~
```

- Running script:

```
manish28@ubuntu:~$ ls -ltr test_script
-rw-rw-r-- 1 manish28 manish28 25 May 13 04:14 test_script
manish28@ubuntu:~$ ./test_script
bash: ./test_script: Permission denied
manish28@ubuntu:~$ chmod u+x test_script
manish28@ubuntu:~$ ls -ltr test_script
-rwxrw-r-- 1 manish28 manish28 25 May 13 04:14 test_script
manish28@ubuntu:~$ ./test_script
Manish
manish28@ubuntu:~$
```

3. Removing script:

```
manish28@ubuntu:~$ rm *test_script
```

4. Creating script using vi and executing it:

- Creating script:

```
manish28@ubuntu:~$ vi output.sh
```

- Writing into script:

```
#!/bin/bash
```

```
echo manish
```

- Executing script:

```
manish28@ubuntu:~$ chmod u+x output.sh
```

```
manish28@ubuntu:~$ ls output.sh
```

```
output.sh
```

```
manish28@ubuntu:~$ ./output.sh
```

```
manish
```

```
manish28@ubuntu:~$
```

5. Input for user:

- Creating script:

```
manish28@ubuntu:~$ vi user_input
```

- Writing into script:

```
#!/bin/bash
```

```
echo Whats your name?
```

```
read name
```

```
echo Hii $name
```

- Executing script:

```
manish28@ubuntu:~$ vi user_input
manish28@ubuntu:~$ chmod u+x user_input
manish28@ubuntu:~$ ./user_input
Whats your name?
manish
Hiii manish
manish28@ubuntu:~$
```

6. If-else:

- Creating script:

```
manish28@ubuntu:~$ vi if_else.sh
```

- Writing into script:

```
#!/bin/bash

echo Enter number
read num

if [ $num -ge 20 ]
then
    echo Number is greater than 20
else
    echo Number is less than 20
fi
~
```

- Executing script:

```
manish28@ubuntu:~$ vi if_else.sh
manish28@ubuntu:~$ chmod u+x if_else.sh
manish28@ubuntu:~$ ./if_else.sh
Enter number
28
Number is greater than 20
manish28@ubuntu:~$ ./if_else.sh
Enter number
9
Number is less than 20
manish28@ubuntu:~$
```

7. Case Condition:

- Creating script:

```
manish28@ubuntu:~$ vi case_script.sh
```

- Writing into script:

```
#!/bin/bash

echo Press any option
echo 1=Show Date
echo 2= list files in Download
echo 3 = show current path

read choice
case $choice in
    1)date;;
    2)ls -ltr Downloads;;
    3)pwd;;
    *) echo Invalid Input
esac
```

- Executing script:

```
manish28@ubuntu:~$ chmod u+x case_script.sh
manish28@ubuntu:~$ ./case_script.sh
Press any option
1=Show Date
2= list files in Download
3 = show current path
1
Sat 13 May 2023 05:28:44 AM PDT
manish28@ubuntu:~$ ./case_script.sh
Press any option
1=Show Date
2= list files in Download
3 = show current path
2
total 4
drwxrwxr-x 5 manish28 manish28 4096 May  9 02:11 manish
manish28@ubuntu:~$ ./case_script.sh
Press any option
1=Show Date
2= list files in Download
3 = show current path
3
/home/manish28
manish28@ubuntu:~$ ./case_script.sh
Press any option
1=Show Date
2= list files in Download
3 = show current path
5
Invalid Input
manish28@ubuntu:~$
```

8. For Loop:

- Creating script:

```
manish28@ubuntu:~$ vi forloop.sh
```

- Writing into script:

```
#!/bin/bash

for num in {1..9}
do
    echo Number is $num
done

for gym in Chest Tricep Back Bicep Shoulder Legs
do
    echo We workout for $gym in GYM
done

~
```

- Executing script:

```
manish28@ubuntu:~$ chmod u+x forloop.sh
manish28@ubuntu:~$ ./forloop.sh
Number is 1
Number is 2
Number is 3
Number is 4
Number is 5
Number is 6
Number is 7
Number is 8
Number is 9
We workout for Chest in GYM
We workout for Tricep in GYM
We workout for Back in GYM
We workout for Bicep in GYM
We workout for Shoulder in GYM
We workout for Legs in GYM
manish28@ubuntu:~$ █
```

Practical Performance (4)	Writeup & Oral (4)	Attendance (2)	Total (10)