

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:

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

2. Creating first script using touch command:

```
sejalpawar@ubuntu:~$ touch testing_script
sejalpawar@ubuntu:~$ ls
Desktop  Documents  Downloads  Music  number.txt  Pictures  Public  Templates  testing_script  Videos
sejalpawar@ubuntu:~$
```

- Writing script:

```
#!/bin/bash

echo Sejal Ravindra Pawar
~
```

- Running script:

```
sejalpawar@ubuntu:~$ ./testing_script
bash: ./testing_script: Permission denied
sejalpawar@ubuntu:~$ chmod u+x testing_script
sejalpawar@ubuntu:~$ ls -ltr testing_script
-rwxrw-r-- 1 sejalpawar sejalpawar 39 May 13 07:35 testing_script
sejalpawar@ubuntu:~$ ./testing_script
Sejal Ravindra Pawar
sejalpawar@ubuntu:~$
```

3. Removing script:

```
sejalpawar@ubuntu:~$ rm *testing_script
sejalpawar@ubuntu:~$ ls -ltr testing_script
ls: cannot access 'testing_script': No such file or directory
sejalpawar@ubuntu:~$
```

4. Creating script using vi and executing it:

- Creating script:

```
sejalpawar@ubuntu:~$ vi sample.sh
```

- Writing into script:

```
#!/bin/bash

echo Sejal Pawar
```

- Executing script:

```
sejalpawar@ubuntu:~$ vi sample.sh
sejalpawar@ubuntu:~$ chmod u+x sample.sh
sejalpawar@ubuntu:~$ ./sample.sh
Sejal Pawar
sejalpawar@ubuntu:~$
```

5. Input from user:

- Creating script:

```
sejalpawar@ubuntu:~$ vi input.sh
```

- Writing into script:

```
#!/bin/bash

echo What should I call you?
read name
echo Hello $name

~
```

- Executing script:

```
sejalpawar@ubuntu:~$ vi input.sh
sejalpawar@ubuntu:~$ chmod u+x input.sh
sejalpawar@ubuntu:~$ ./input.sh
What should I call you?
Sejal Pawar
Hello Sejal Pawar
sejalpawar@ubuntu:~$
```

6. If-else:

- Creating script:

```
sejalpawar@ubuntu:~$ vi ifelse.sh
```

- Writing into script:

```
#!/bin/bash

echo Enter Your Age:
read age

if [ $age -ge 18 ]
then
    echo You can get driving license
else
    echo You will not get driving license
fi

~
```

- Executing script:

```
sejalpawar@ubuntu:~$ vi ifelse.sh
sejalpawar@ubuntu:~$ chmod u+x ifelse.sh
sejalpawar@ubuntu:~$ ./ifelse.sh
Enter Your Age:
24
You can get driving license
sejalpawar@ubuntu:~$ ./ifelse.sh
Enter Your Age:
8
You will not get driving license
sejalpawar@ubuntu:~$
```

7. Case Condition:

- Creating script:

```
sejalpawar@ubuntu:~$ vi switch_case.sh
```

- Writing into script:

```
#!/bin/bash

echo Select any option
echo 1= Show username
echo 2 = Show Date
echo 3 = Show current directory

read choice

case $choice in
    1)whoami;;
    2)date;;
    3)pwd;;
    *) echo Select valid input
esac
~
~
```

- Executing script:

```
sejalpawar@ubuntu:~$ vi switch_case.sh
sejalpawar@ubuntu:~$ chmod u+x switch_case.sh
sejalpawar@ubuntu:~$ ./switch_case.sh
Select any option
1= Show username
2 = Show Date
3 = Show current directory
1
sejalpawar
sejalpawar@ubuntu:~$ ./switch_case.sh
Select any option
1= Show username
2 = Show Date
3 = Show current directory
2
Sat 13 May 2023 07:54:55 AM PDT
sejalpawar@ubuntu:~$ ./switch_case.sh
Select any option
1= Show username
2 = Show Date
3 = Show current directory
3
/home/sejalpawar
sejalpawar@ubuntu:~$
```

8. For Loop:

- Creating script:

```
sejalpawar@ubuntu:~$ vi for_loop.sh
```

- Writing into script:

```
#!/bin/bash

for num in {1..8}
do
    echo Number is $num
done

for friends in Prajakta Megha Swarali Shruti
do
    echo $friends is my friend.
done
```

- Executing script:

```
sejalpawar@ubuntu:~$ vi for_loop.sh
sejalpawar@ubuntu:~$ chmod u+x for_loop.sh
sejalpawar@ubuntu:~$ ./for_loop.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
Prajakta is my friend.
Megha is my friend.
Swarali is my friend.
Shruti is my friend.
sejalpawar@ubuntu:~$
```

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