

# EXERCISE 5

- 1) Write a shell script that takes a command line argument and reports on whether it is directory, a file, or something else.

```
#!/bin/bash
if [ -f $1 ]
then
echo "$1 is a File"
elif [ -d $1 ]
then
echo "$1 is a Directory"
else
echo "$1 is something else"
fi
```



```
\adeeshaya@adeeshaya-VirtualBox:~$ ls
calculator.sh  Documents  file2.txt  myfile.txt  new.txt  result  snap  VBoxLinuxAdditions.run
cat            Downloads  file3.txt  myscripts  Pictures  result.txt  Templates  Videos
Desktop       file1.txt  Music     new file.txt  Public  script1.sh  unique.txt  whatIsIt.sh
adeeshaya@adeeshaya-VirtualBox:~$ ./whatIsIt.sh script1.sh
script1.sh is a File
adeeshaya@adeeshaya-VirtualBox:~$ ./whatIsIt.sh Public
Public is a Directory
adeeshaya@adeeshaya-VirtualBox:~$ ./whatIsIt.sh Publics
Publics is something else
adeeshaya@adeeshaya-VirtualBox:~$
```

- 2) Write a shell script that computes the gross salary of a employee according to the following rules :
  - i) if basic salary is < 1500 then HRA =10% of the basic and DA =90% of the basic.
  - ii) If basic salary is >=1500 then HRA =Rs500 and DA=98% of the basic.

```
#!/bin/bash
read -p "Basic Salary:" basic
```

```

if [ $basic -lt 1500 ]
then
hra=$(bc <<< "0.10 * $basic")
da=$(bc <<< "0.90 * $basic")
elif [ $basic -ge 1500 ]
then
hra=500
da=$(bc <<< "0.98 * $basic")
fi
sal=$(bc <<< "$basic + $hra + $da")
echo "Gross Salary=$sal"

```

```

adeeshaya@adeeshaya-VirtualBox:~$ ./salary.sh
Basic Salary:500
Gross Salary=1000.00
adeeshaya@adeeshaya-VirtualBox:~$ ./salary.sh
Basic Salary:1500
Gross Salary=3470.00

```

- 3) Write a shell script that accepts two integers as its arguments and computes the value of first number raised to the power of the second number.

```

#!/bin/bash
read -p "Enter a" a
read -p "Enter b" b
#ans=$(bc <<< $a ** $b)
ans=$(( $a ** $b ))
echo $ans
#echo `expr $a + $b`

```

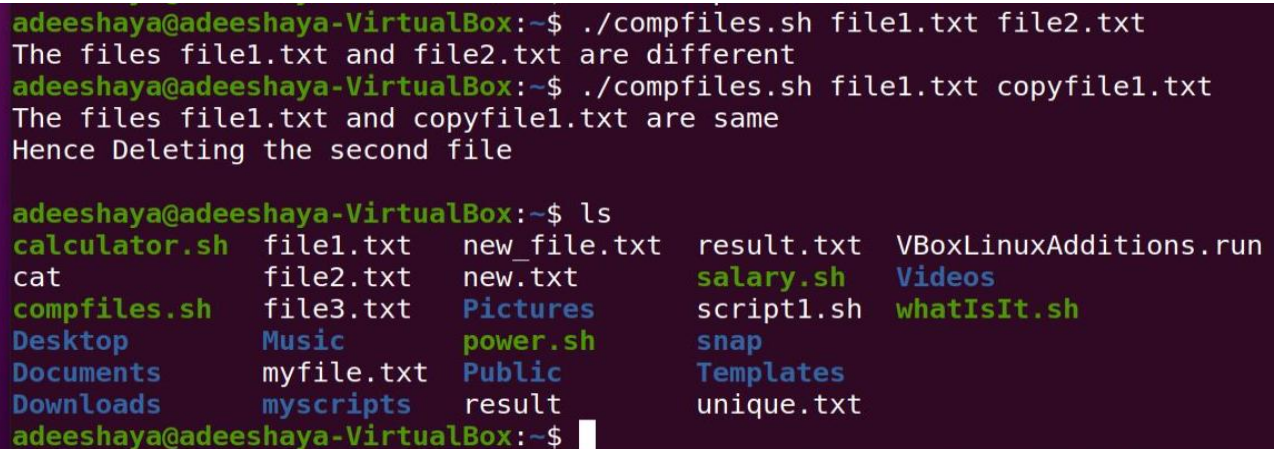
```

adeeshaya@adeeshaya-VirtualBox:~$ ./power.sh
Enter a6
Enter b3
216
adeeshaya@adeeshaya-VirtualBox:~$

```

- 4) Write a shell script which receives two file names as arguments. It should check whether the two file contents are same or not. If they are same then second file should be deleted.

```
#!/bin/bash
cmp -s $1 $2
a=$?
if [ $a -eq 1 ]
then
echo "The files $1 and $2 are different"
elif [ $a -eq 0 ]
then
echo -e "The files $1 and $2 are same\nHence Deleting
the second file\n"
rm $2
else
echo "Error"
fi
```



The screenshot shows a terminal window with the following content:

```
adeeshaya@adeeshaya-VirtualBox:~$ ./compfiles.sh file1.txt file2.txt
The files file1.txt and file2.txt are different
adeeshaya@adeeshaya-VirtualBox:~$ ./compfiles.sh file1.txt copyfile1.txt
The files file1.txt and copyfile1.txt are same
Hence Deleting the second file

adeeshaya@adeeshaya-VirtualBox:~$ ls
calculator.sh  file1.txt      new_file.txt  result.txt    VBoxLinuxAdditions.run
cat            file2.txt      new.txt       salary.sh     Videos
compfiles.sh  file3.txt      Pictures      script1.sh    whatIsIt.sh
Desktop       Music          power.sh     snap
Documents     myfile.txt     Public        Templates
Downloads     myscripts     result        unique.txt
adeeshaya@adeeshaya-VirtualBox:~$
```

- 5) Write a shell script for Calculator

```
#!/bin/bash
echo "Enter 2 numbers"
read a
read b
echo -e "Menu\n1.Add\n2.Sub\n3.Mult\n4.Div\n"
read -p "Enter choice" choice
```

```
if [ $choice -eq 1 ]
then
echo "Sum="`expr $a + $b`
elif [ $choice -eq 2 ]
then
echo "Difference="`expr $a - $b`
elif [ $choice -eq 3 ]
then
echo "Product="`expr $a \* $b`
elif [ $choice -eq 4 ]
then
echo "Quotient="`expr $a \/ $b`
fi
```

```
adeeshaya@adeeshaya-VirtualBox:~$ ./calculator.sh
Enter 2 numbers
2
6
Menu
1.Add
2.Sub
3.Mult
4.Div

Enter choice3
Product=12
adeeshaya@adeeshaya-VirtualBox:~$ ./calculator.sh
Enter 2 numbers
4
6
Menu
1.Add
2.Sub
3.Mult
4.Div

Enter choice1
Sum=10
adeeshaya@adeeshaya-VirtualBox:~$
```

```
adeeshaya@adeeshaya-VirtualBox:~$ ./calculator.sh
Enter 2 numbers
2
4
Menu
1.Add
2.Sub
3.Mult
4.Div

Enter choice2
Difference=-2
adeeshaya@adeeshaya-VirtualBox:~$ ./calculator.sh
Enter 2 numbers
8
4
Menu
1.Add
2.Sub
3.Mult
4.Div

Enter choice4
Quotient=2
```