

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

```
aiswariya@aiswariya-VirtualBox:~$ vim exercise5.sh
aiswariya@aiswariya-VirtualBox:~$ cat exercise5.sh
#!/bin/sh

if [ -d $1 ]
then
    echo "provided argument is a directory"
elif [ -f $1 ]
then
    echo "provided argument is a file"
else
    echo "provided argument is neither a directory nor a file"
fi

aiswariya@aiswariya-VirtualBox:~$ ./exercise5.sh Music
provided argument is a directory
aiswariya@aiswariya-VirtualBox:~$ ./exercise5.sh sample.txt
provided argument is a file
aiswariya@aiswariya-VirtualBox:~$ ./exercise5.sh samp
provided argument is neither a directory nor a file
aiswariya@aiswariya-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.

```

aishwariya@aishwariya-VirtualBox:~$ vim exercise5__1.sh
aishwariya@aishwariya-VirtualBox:~$ ./exercise5__1.sh
enter the basic salary2000
4460
aishwariya@aishwariya-VirtualBox:~$ ./exercise5__1.sh
enter the basic salary1200
2400
aishwariya@aishwariya-VirtualBox:~$ cat exercise5__1.sh
#!/bin/sh

read -p "enter the basic salary" basic
if [ $basic -lt 1500 ]
then
    hra=$((basic/100) * 10))
    da=$((basic/100) * 90))
    echo $(( basic + hra + da))
else
    hra=500
    da=$((basic/100) * 98))
    echo $((basic + hra + da))
fi

aishwariya@aishwariya-VirtualBox:~$

```

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.

```

aishwariya@aishwariya-VirtualBox:~$ cat exercise5__2.sh
#!/bin/bash
temp=$1
for ((i=1;i<=$2;i++ ))
do
    temp=$((temp*$1))
done
echo $temp

aishwariya@aishwariya-VirtualBox:~$ ./exercise5__2.sh 3 3
27
aishwariya@aishwariya-VirtualBox:~$ ./exercise5__2.sh 2 6
64
aishwariya@aishwariya-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.

```
aiswariya@aiswariya-VirtualBox:~$ cat exercise5__3.sh
#!/bin/bash

if cmp $1 $2
then
    echo "contents are same"
    rm $2
else
    echo "contents are different"
fi
aiswariya@aiswariya-VirtualBox:~$
```

```
aiswariya@aiswariya-VirtualBox:~$ cat sample1.txt
hai aishwarya
aiswariya@aiswariya-VirtualBox:~$ cat sample.txt
hai aishwarya
aiswariya@aiswariya-VirtualBox:~$ ./exercise5__3.sh sample.txt sample1.txt
contents are same
aiswariya@aiswariya-VirtualBox:~$ cat sample1.txt
cat: sample1.txt: No such file or directory
aiswariya@aiswariya-VirtualBox:~$ ./exercise5__3.sh sample.txt temp.txt
sample.txt temp.txt differ: byte 1, line 1
contents are different
aiswariya@aiswariya-VirtualBox:~$
```

## 5) Write a shell script for Calculator

```
#!/bin/bash
read -p "enter the first number" a
read -p "enter the second number" b
echo -e "1.addition\n2.substraction\n3.multiplication\n4.division\n5.exit point"
c=1
until [ $c -eq 5 ]
do
    read -p "enter your choice" c
    case $c in
        1)let re=$a+$b
            echo "$a+$b=$re" ;;
        2)let re=$a-$b
            echo "$a-$b=$re" ;;
        3)let re=$a*$b
            echo "$a*$b=$re" ;;
        4)let re=$a/$b
            echo "$a/$b=$re" ;;
        5)echo "exit point";;
        *)echo "invalid choice";;
    esac
done
```

```
aiswariya@aiswariya-VirtualBox:~$ ./exercise5__4.sh
enter the first number10
enter the second number2
1.addition
2.substraction
3.multiplication
4.division
5.exit point
enter your choice1
10+2=12
enter your choice2
10-2=8
enter your choice3
10*2=20
enter your choice4
10/2=5
enter your choice5
exit point
aiswariya@aiswariya-VirtualBox:~$
```

