

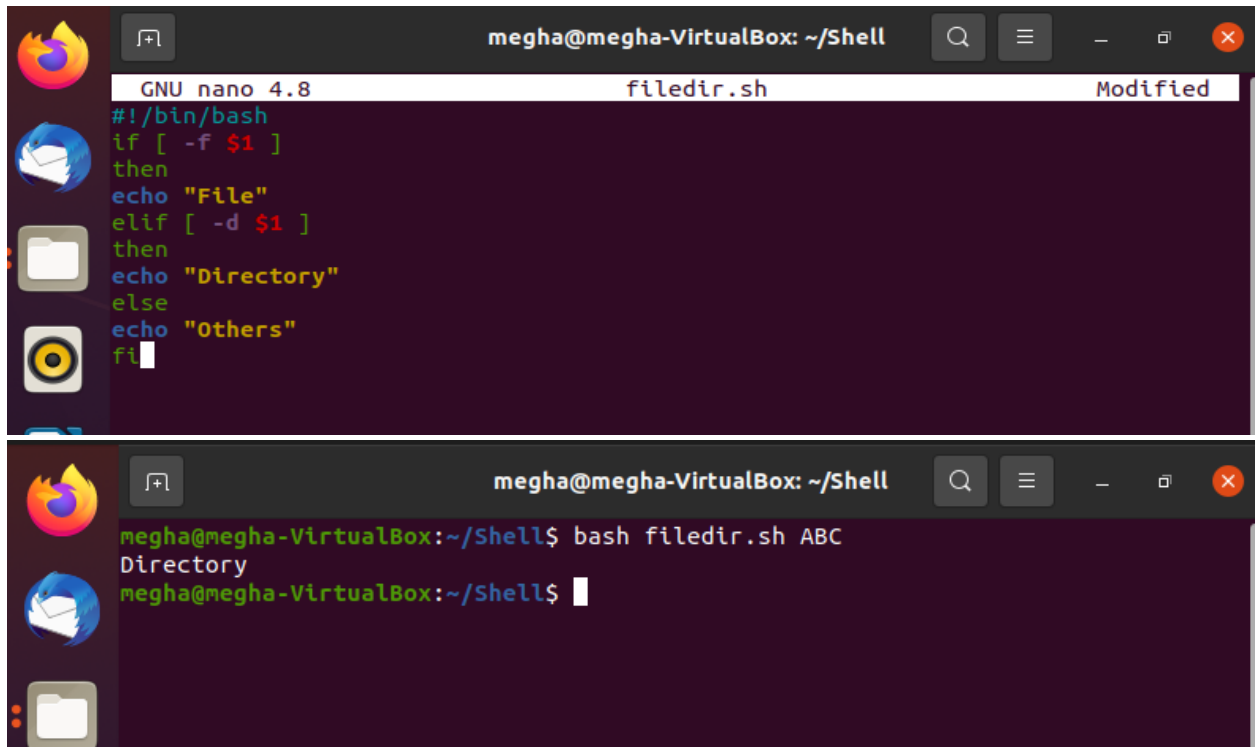
NSA LAB

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.

#open nano

nano filedir.sh



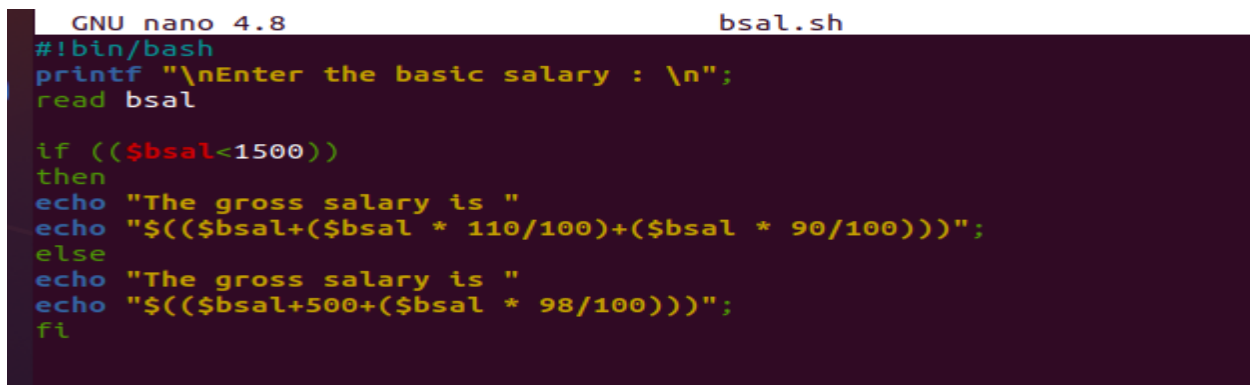
The first screenshot shows the nano text editor editing filedir.sh. The script content is as follows:

```
GNU nano 4.8 filedir.sh Modified
#!/bin/bash
if [ -f $1 ]
then
echo "File"
elif [ -d $1 ]
then
echo "Directory"
else
echo "Others"
fi
```

The second screenshot shows the terminal execution of the script. The user runs `bash filedir.sh ABC`, and the output is `Directory`.

```
megha@megha-VirtualBox: ~/Shell
megha@megha-VirtualBox:~/Shell$ bash filedir.sh ABC
Directory
megha@megha-VirtualBox:~/Shell$
```

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.



The screenshot shows the nano text editor editing bsal.sh. The script content is as follows:

```
GNU nano 4.8 bsal.sh
#!/bin/bash
printf "\nEnter the basic salary : \n";
read bsal

if (($bsal<1500))
then
echo "The gross salary is "
echo "$(($bsal+($bsal * 110/100)+($bsal * 90/100)))";
else
echo "The gross salary is "
echo "$(($bsal+500+($bsal * 98/100)))";
fi
```

```

megha@megha-VirtualBox:~/Shell$ nano bsal.sh
megha@megha-VirtualBox:~/Shell$ bash bsal.sh

Enter the basic salary :
1600
The gross salary is
3668
megha@megha-VirtualBox:~/Shell$

```

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.

```

GNU nano 4.8                                     pow.sh
#!/bin/bash

read -p "Enter the first number: " a
read -p "Enter the second number: " b
echo "The result is: $((a**b))"

megha@megha-VirtualBox:~/Shell$ nano pow.sh
megha@megha-VirtualBox:~/Shell$ bash pow.sh
Enter the first number: 2
Enter the second number: 3
The result is: 8
megha@megha-VirtualBox:~/Shell$

```

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.

```

GNU nano 4.8                                     files.sh
#!/bin/bash
echo "Enter first file:";
read a;
echo "Enter second file:";
read b;

if ( diff $a $b )
then
    echo "Files are same";
    if ( rm $b )
    then
        echo "File deleted";
    fi
else
    echo "Files are not same";
fi

```

```

megha@megha-VirtualBox:~/Shell$ cat file1.txt
megha
megha@megha-VirtualBox:~/Shell$ cat file3.txt
megha
megha@megha-VirtualBox:~/Shell$ bash files.sh
Enter first file:
file1.txt
Enter second file:
file3.txt
Files are same
File deleted
megha@megha-VirtualBox:~/Shell$ cat file3.txt
cat: file3.txt: No such file or directory
megha@megha-VirtualBox:~/Shell$

```

5. Write a shell script for Calculator

```

GNU nano 4.8                                calc.sh
#!/bin/bash
read -p "Enter first number: " a
read -p "Enter second number: " b
echo "1.Find Sum"
echo "2.Find Difference"
echo "3.Find Product"
echo "4.Find Quotient"
echo "5.Quit"
until [ $choice -eq 5 ]
do
read -p "Enter your choice: " choice
case $choice in
1)echo "Sum is $((a+b))";;
2)echo "Difference is $((a-b))";;
3)echo "Product is $((a*b))";;
4)echo "Quotient is $((a/b))";;
5)echo "Quit";;
*)echo "Invalid choice";;
esac
done

megha@megha-VirtualBox:~/Shell$ nano calc.sh
megha@megha-VirtualBox:~/Shell$ bash calc.sh
Enter first number: 6
Enter second number: 3
1.Find Sum
2.Find Difference
3.Find Product
4.Find Quotient
5.Quit
calc.sh: line 9: [: -eq: unary operator expected
Enter your choice: 1
Sum is 9
Enter your choice: 2
Difference is 3
Enter your choice: 3
Product is 18
Enter your choice: 4
Quotient is 2
Enter your choice: 5
Quit
megha@megha-VirtualBox:~/Shell$

```
