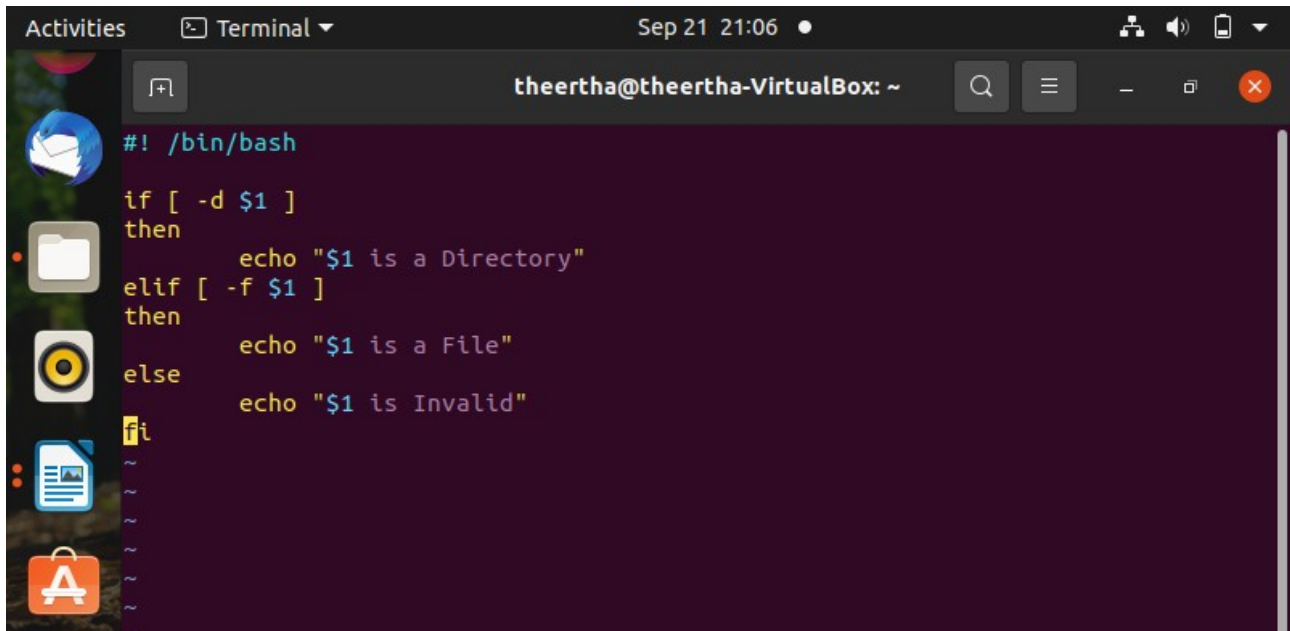
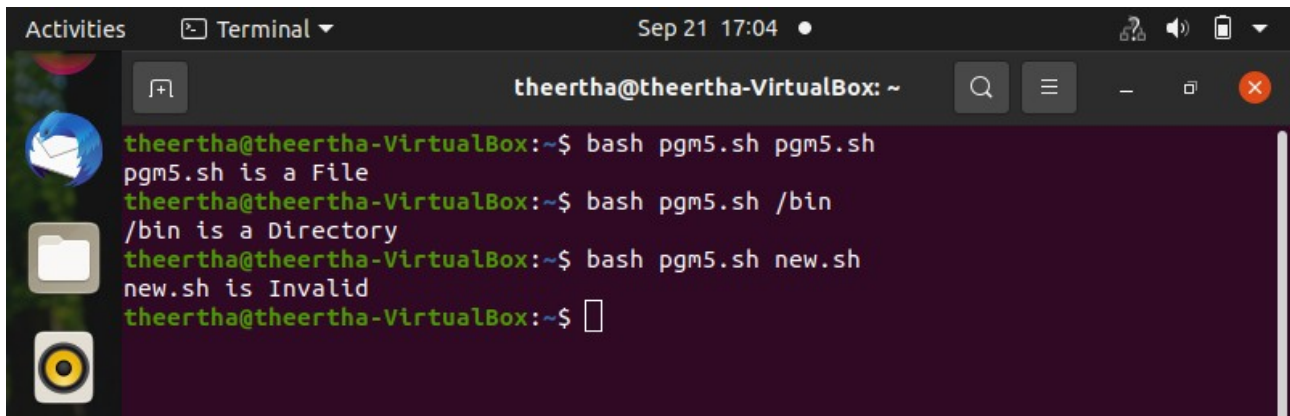


EXERCISE – 5

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



```
theertha@theertha-VirtualBox: ~  
#!/bin/bash  
  
if [ -d $1 ]  
then  
    echo "$1 is a Directory"  
elif [ -f $1 ]  
then  
    echo "$1 is a File"  
else  
    echo "$1 is Invalid"  
fi
```



```
theertha@theertha-VirtualBox:~$ bash pgm5.sh pgm5.sh  
pgm5.sh is a File  
theertha@theertha-VirtualBox:~$ bash pgm5.sh /bin  
/bin is a Directory  
theertha@theertha-VirtualBox:~$ bash pgm5.sh new.sh  
new.sh is Invalid  
theertha@theertha-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.

```
Activities Terminal Sep 21 21:33
theertha@theertha-VirtualBox: ~
theertha@theertha-VirtualBox:~$ cat pgm5.2.sh
#!/bin/sh

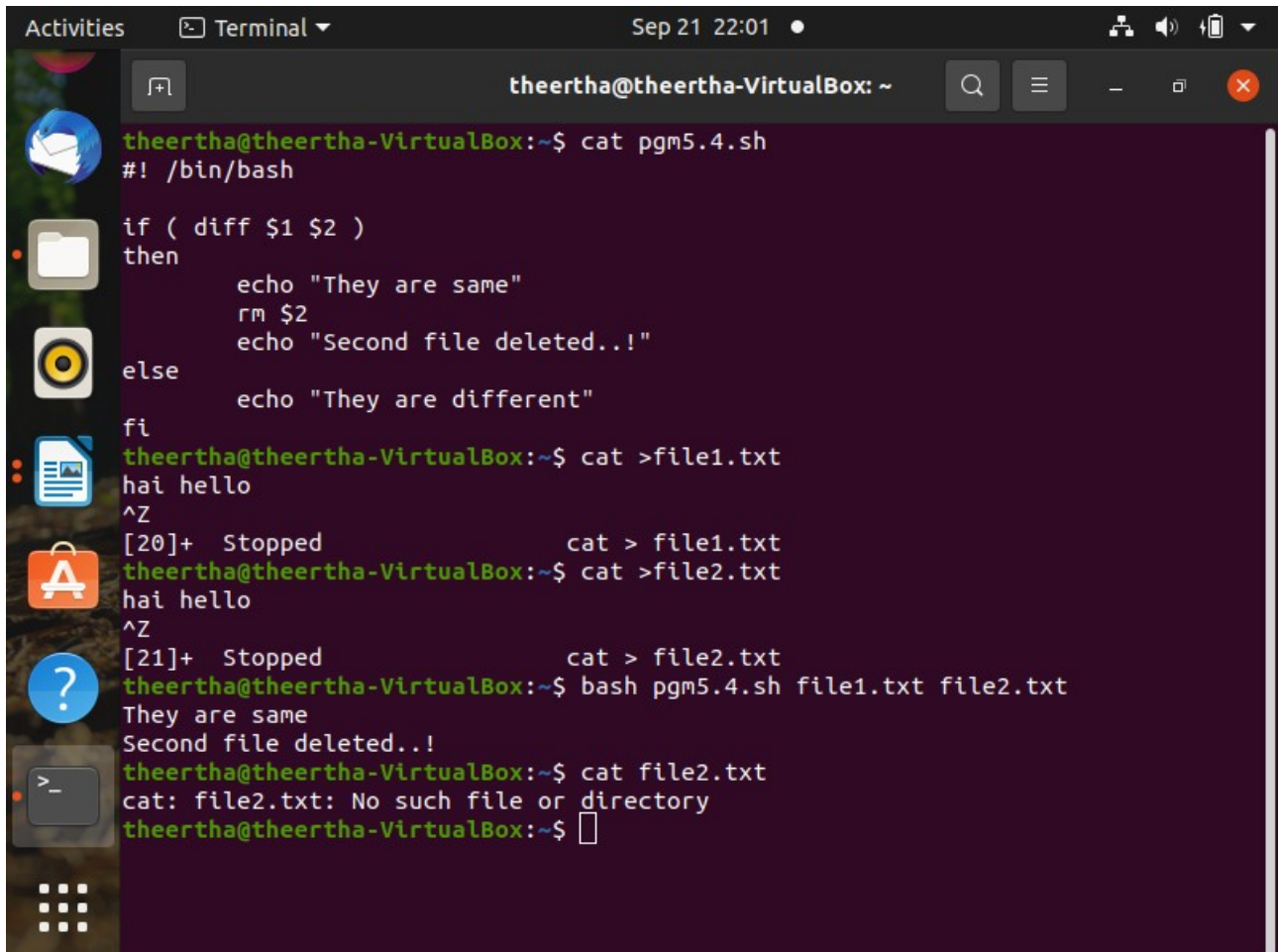
echo "Enter the salary :"
read salary
if [ $salary -lt 1500 ]
then
    HRA=$((salary/100) * 10))
    DA=$((salary/100) * 90))
    GS=$((HRA + DA + salary))
    echo "GROSS SALARY FOR $salary = $GS "
else
    HRA=500
    DA=$((salary/100) * 98))
    GS=$((HRA + DA + salary))
    echo "GROSS SALARY FRO $salary = $GS "
fi
theertha@theertha-VirtualBox:~$ bash pgm5.2.sh
Enter the salary :
3400
GROSS SALARY FRO 3400 = 7232
theertha@theertha-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.

```
Activities Terminal Sep 21 21:35
theertha@theertha-VirtualBox: ~
theertha@theertha-VirtualBox:~$ cat pgm5.3.sh
#!/bin/bash

p=$(( $1 ** $2 ))
echo " POWER = $p "
theertha@theertha-VirtualBox:~$ bash pgm5.3.sh 2 3
POWER = 8
theertha@theertha-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.

A screenshot of a terminal window titled 'theertha@theertha-VirtualBox: ~'. The terminal shows the user creating a script 'pgm5.4.sh' with a shebang and an if-then-else block using 'diff' to compare two files. The user then creates 'file1.txt' and 'file2.txt' both containing 'hai hello'. Finally, the user runs 'bash pgm5.4.sh file1.txt file2.txt', which outputs 'They are same' and 'Second file deleted..!'. A subsequent 'cat file2.txt' command results in an error: 'cat: file2.txt: No such file or directory'.

```
theertha@theertha-VirtualBox:~$ cat pgm5.4.sh
#!/bin/bash

if ( diff $1 $2 )
then
    echo "They are same"
    rm $2
    echo "Second file deleted..!"
else
    echo "They are different"
fi

theertha@theertha-VirtualBox:~$ cat >file1.txt
hai hello
^Z
[20]+  Stopped                  cat > file1.txt
theertha@theertha-VirtualBox:~$ cat >file2.txt
hai hello
^Z
[21]+  Stopped                  cat > file2.txt
theertha@theertha-VirtualBox:~$ bash pgm5.4.sh file1.txt file2.txt
They are same
Second file deleted..!

theertha@theertha-VirtualBox:~$ cat file2.txt
cat: file2.txt: No such file or directory
theertha@theertha-VirtualBox:~$
```

5) Write a shell script for Calculator.

```
Activities Terminal Sep 21 22:45
theertha@theertha-VirtualBox: ~
theertha@theertha-VirtualBox:~$ cat pgm5.5.sh
#!/bin/bash
echo "1.ADD 2.SUBTRACT 3.MULTIPLICATION 4.DIVISION 5.EXIT"
read -p "Enter your choice :" ch
while [ $ch != '5' ]
do
    echo "Enter first number :"
    read a
    echo "Enter second number :"
    read b
    case $ch in
        "1")s=$(( $a + $b ));;
        "2")s=$(( $a - $b ));;
        "3")s=$(( $a * $b ));;
        "4")s=$(( $a / $b ));;
        *)echo "Invalid option"
    esac
    echo "RESULT = $s"
    echo "1.ADD 2.SUBTRACT 3.MULTIPLICATION 4.DIVISION 5.EXIT"
    read -p "Enter your choice :" ch
done
theertha@theertha-VirtualBox:~$
```

```
Activities Terminal Sep 21 22:47
theertha@theertha-VirtualBox: ~
done
theertha@theertha-VirtualBox:~$ bash pgm5.5.sh
1.ADD 2.SUBTRACT 3.MULTIPLICATION 4.DIVISION 5.EXIT
Enter your choice :1
Enter first number :
5
Enter second number :
7
RESULT = 12
1.ADD 2.SUBTRACT 3.MULTIPLICATION 4.DIVISION 5.EXIT
Enter your choice :2
Enter first number :
6
Enter second number :
4
RESULT = 2
1.ADD 2.SUBTRACT 3.MULTIPLICATION 4.DIVISION 5.EXIT
Enter your choice :3
Enter first number :
3
Enter second number :
6
RESULT = 18
1.ADD 2.SUBTRACT 3.MULTIPLICATION 4.DIVISION 5.EXIT
Enter your choice :4
Enter first number :
15
Enter second number :
5
RESULT = 3
1.ADD 2.SUBTRACT 3.MULTIPLICATION 4.DIVISION 5.EXIT
Enter your choice :5
theertha@theertha-VirtualBox:~$
```