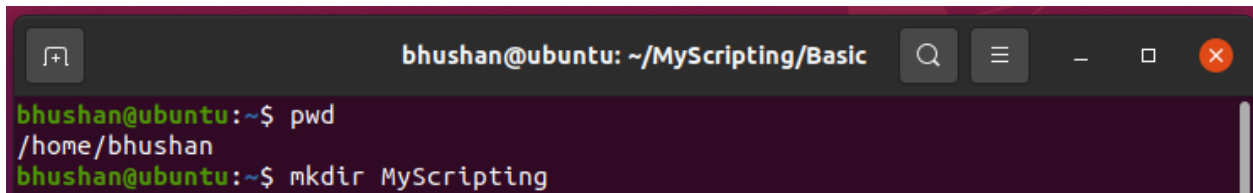


## Shell Scripts

### Assignment 1 - Use Case on Operations

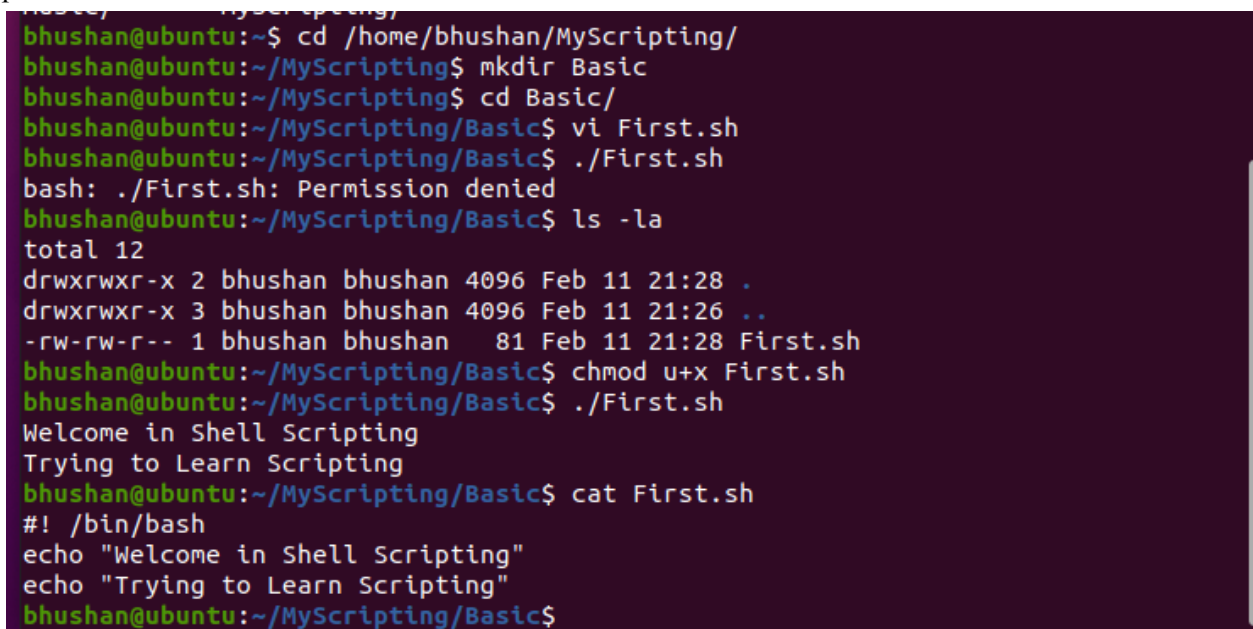
#### A] Sequential Operation

1) First create a directory inside home directory MyScripting and inside that directory create another directory Basic to store all the basic practice scripts.



```
bhushan@ubuntu: ~/MyScripting/Basic
bhushan@ubuntu:~$ pwd
/home/bhushan
bhushan@ubuntu:~$ mkdir MyScripting
```

When we first try to execute it we get permission denied error to overcome this we need to give execute permission to user.



```
bhushan@ubuntu:~$ cd /home/bhushan/MyScripting/
bhushan@ubuntu:~/MyScripting$ mkdir Basic
bhushan@ubuntu:~/MyScripting$ cd Basic/
bhushan@ubuntu:~/MyScripting/Basic$ vi First.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./First.sh
bash: ./First.sh: Permission denied
bhushan@ubuntu:~/MyScripting/Basic$ ls -la
total 12
drwxrwxr-x 2 bhushan bhushan 4096 Feb 11 21:28 .
drwxrwxr-x 3 bhushan bhushan 4096 Feb 11 21:26 ..
-rw-rw-r-- 1 bhushan bhushan  81 Feb 11 21:28 First.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x First.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./First.sh
Welcome in Shell Scripting
Trying to Learn Scripting
bhushan@ubuntu:~/MyScripting/Basic$ cat First.sh
#!/bin/bash
echo "Welcome in Shell Scripting"
echo "Trying to Learn Scripting"
bhushan@ubuntu:~/MyScripting/Basic$
```

2) How do we use variables in shell script?

```
bhushan@ubuntu:~/MyScripting/Basic$ vi Second.sh
bhushan@ubuntu:~/MyScripting/Basic$ cat Second.sh
#!/bin/bash
#How we use variable in shell script
name=Bhushan
age=28
echo $name $age
bhushan@ubuntu:~/MyScripting/Basic$ ls -la
total 16
drwxrwxr-x 2 bhushan bhushan 4096 Feb 11 22:19 .
drwxrwxr-x 3 bhushan bhushan 4096 Feb 11 21:26 ..
-rwxrw-r-- 1 bhushan bhushan  81 Feb 11 21:28 First.sh
-rw-rw-r-- 1 bhushan bhushan  87 Feb 11 22:19 Second.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x Second.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la
total 16
drwxrwxr-x 2 bhushan bhushan 4096 Feb 11 22:19 .
drwxrwxr-x 3 bhushan bhushan 4096 Feb 11 21:26 ..
-rwxrw-r-- 1 bhushan bhushan  81 Feb 11 21:28 First.sh
-rwxrw-r-- 1 bhushan bhushan  87 Feb 11 22:19 Second.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./Second.sh
Bhushan 28
bhushan@ubuntu:~/MyScripting/Basic$
```

3) How can Numerical expressions be calculated and stored in a variable?

With the help of following syntax below: **var=\$((expression))**

```
bhushan@ubuntu:~/MyScripting/Basic$ vi Third.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la
total 20
drwxrwxr-x 2 bhushan bhushan 4096 Feb 11 22:30 .
drwxrwxr-x 3 bhushan bhushan 4096 Feb 11 21:26 ..
-rwxrw-r-- 1 bhushan bhushan  81 Feb 11 21:28 First.sh
-rwxrw-r-- 1 bhushan bhushan  87 Feb 11 22:19 Second.sh
-rw-rw-r-- 1 bhushan bhushan  81 Feb 11 22:30 Third.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x Third.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la
total 20
drwxrwxr-x 2 bhushan bhushan 4096 Feb 11 22:30 .
drwxrwxr-x 3 bhushan bhushan 4096 Feb 11 21:26 ..
-rwxrw-r-- 1 bhushan bhushan  81 Feb 11 21:28 First.sh
-rwxrw-r-- 1 bhushan bhushan  87 Feb 11 22:19 Second.sh
-rwxrw-r-- 1 bhushan bhushan  81 Feb 11 22:30 Third.sh
```

```

bhushan@ubuntu:~/MyScripting/Basic$ ./Third.sh
ans -->8
ans1 -->5
3.14
bhushan@ubuntu:~/MyScripting/Basic$ cat Third.sh
#!/bin/bash
ans=$((3+5))
ans1=$((22/4))
echo "ans -->"$ans
echo "ans1 -->"$ans1
echo "scale=2;22/7" | bc

```

4) How do we take input from the user?

With the help of following syntax:- **read -p "message" variable\_name**

Where,

**read** → is used to input from the user

**- p** → is used to prompt the user with custom message

**“message”** → is the user defined message or custom message that is to be displayed run time

**var\_name** → is the name of a variable which is used to store the imputed value.

```

bhushan@ubuntu:~/MyScripting/Basic$ vi Fourth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Fourth.sh
-rw-rw-r-- 1 bhushan bhushan  47 Feb 11 22:57 Fourth.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x Fourth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Fourth.sh
-rwxrw-r-- 1 bhushan bhushan  47 Feb 11 22:57 Fourth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./Fourth.sh
Enter your name:
bhushan
bhushan@ubuntu:~/MyScripting/Basic$ vi Fourth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./Fourth.sh
Enter your name:
bhushan
Inputted name is bhushan
bhushan@ubuntu:~/MyScripting/Basic$ cat Fourth.sh
#!/bin/bash
echo "Enter your name:"
read name
echo "Inputted name is "$name
bhushan@ubuntu:~/MyScripting/Basic$

```

```

bhushan@ubuntu:~/MyScripting/Basic$ vi Fifth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Fifth.sh
-rw-rw-r-- 1 bhushan bhushan  75 Feb 11 23:01 Fifth.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x Fifth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Fifth.sh
-rwxrw-r-- 1 bhushan bhushan  75 Feb 11 23:01 Fifth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./Fi
Fifth.sh First.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./Fifth.sh
Enter your name:bhushan
Inputted name is bhushan
bhushan@ubuntu:~/MyScripting/Basic$ cat Fifth.sh
#!/bin/bash
read -p "Enter your name:" name
echo "Inputted name is "$name
bhushan@ubuntu:~/MyScripting/Basic$

```

5) Create a file Sixth.sh i.e script file and make a directory, 2 files and display permission details.

```
bhushan@ubuntu:~/MyScripting/Basic$ vi sixth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep sixth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep sixth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls
1 Fifth.sh First.sh Fourth.sh Second.sh sixth.sh Third.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep sixth.sh
-rw-rw-r-- 1 bhushan bhushan 73 Feb 11 23:07 sixth.sh
bhushan@ubuntu:~/MyScripting/Basic$ cat sixth.sh
#!/bin/bash
mkdir Logical
touch File{1..3}.sh
chmod u+x File2.sh
ls -la

bhushan@ubuntu:~/MyScripting/Basic$ ./sixth.sh
bash: ./sixth.sh: Permission denied
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x sixth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./sixth.sh
total 40
drwxrwxr-x 3 bhushan bhushan 4096 Feb 11 23:10 .
drwxrwxr-x 3 bhushan bhushan 4096 Feb 11 21:26 ..
-rw-rw-r-- 1 bhushan bhushan 106 Feb 11 22:46 1
-rwxrw-r-- 1 bhushan bhushan 75 Feb 11 23:01 Fifth.sh
-rw-rw-r-- 1 bhushan bhushan 0 Feb 11 23:10 File1.sh
-rwxrw-r-- 1 bhushan bhushan 0 Feb 11 23:10 File2.sh
-rw-rw-r-- 1 bhushan bhushan 0 Feb 11 23:10 File3.sh
-rwxrw-r-- 1 bhushan bhushan 81 Feb 11 21:28 First.sh
-rwxrw-r-- 1 bhushan bhushan 76 Feb 11 22:59 Fourth.sh
drwxrwxr-x 2 bhushan bhushan 4096 Feb 11 23:10 Logical
-rwxrw-r-- 1 bhushan bhushan 87 Feb 11 22:19 Second.sh
-rwxrw-r-- 1 bhushan bhushan 73 Feb 11 23:07 sixth.sh
-rwxrw-r-- 1 bhushan bhushan 82 Feb 11 22:48 Third.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls
1 File1.sh File3.sh Fourth.sh Second.sh Third.sh
Fifth.sh File2.sh First.sh Logical sixth.sh
bhushan@ubuntu:~/MyScripting/Basic$ cd ..
bhushan@ubuntu:~/MyScripting$ cd Basic/Logical/
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls
```

## Conditional Operation

1) Simple if

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ vi Simpleif.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la | grep Simpleif.sh
-rw-rw-r-- 1 bhushan bhushan 145 Feb 11 23:35 Simpleif.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ chmod u+x Simpleif.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la | grep Simpleif.sh
-rwxrw-r-- 1 bhushan bhushan 145 Feb 11 23:35 Simpleif.sh
```

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ vi Simpleif.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./Simpleif.sh
Enter the value of first no:23
Enter the value of second no:12
x is greater than y
bhushan@ubuntu:~/MyScripting/Basic/Logical$ cat Simpleif.sh
#!/bin/bash
read -p "Enter the value of first no:" x
read -p "Enter the value of second no:" y
if(($x>$y))
then
    echo "x is greater than y"
fi
```

## 2) if...then...else...fi statements

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ vi Ifelse.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la
total 20
drwxrwxr-x 2 bhushan bhushan 4096 Feb 11 23:52 .
drwxrwxr-x 3 bhushan bhushan 4096 Feb 11 23:10 ..
-rw-rw-r-- 1 bhushan bhushan 145 Feb 11 23:44 1
-rw-rw-r-- 1 bhushan bhushan 0 Feb 11 23:42 12
-rw-rw-r-- 1 bhushan bhushan 0 Feb 11 23:37 12]
-rw-rw-r-- 1 bhushan bhushan 162 Feb 11 23:52 Ifelse.sh
-rwxrw-r-- 1 bhushan bhushan 145 Feb 11 23:44 Simpleif.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ chmod u+x Ifelse.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la | grep Ifelse.sh
-rwxrw-r-- 1 bhushan bhushan 162 Feb 11 23:52 Ifelse.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ cat Ifelse.sh
#!/bin/bash
read -p "Enter the value of x:" x
read -p "Enter the value of y:" y
if(($x>$y))
then
    echo"x is greater than y"
else
    echo "y is greater thann x"
fi
```

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./Ifelse.sh
Enter the value of x:23
Enter the value of y:12
x is greater than y
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./Ifelse.sh
Enter the value of x:23
Enter the value of y:45
y is greater thann x
bhushan@ubuntu:~/MyScripting/Basic/Logical$
```

### 3) if..then..else..if..then..fi..fi..(Nested if)

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ vi Ifelsenested.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la | grep Ifelsenested.sh
-rw-rw-r-- 1 bhushan bhushan 344 Feb 12 05:22 Ifelsenested.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ cat Ifelsenested.sh
#!/bin/bash
read -p "Enter the value of a:" a
read -p "Enter the value of b:" b
read -p "Enter the value of c:" c
if(($a>$b))
then
    if(($a>$b))
    then
        echo "a is greater than b and c"
    else
        echo "c is greater than a and b"
    fi
else
    if(($b>$c))
    then
        echo "b is greater than a and c"
    else
        echo "c is greater than a and b"
    fi
fi
bhushan@ubuntu:~/MyScripting/Basic/Logical$ chmod u+x Ifelsenested.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./Ifelsenested.sh
Enter the value of a:10
Enter the value of b:20
Enter the value of c:5
b is greater than a and c
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./Ifelsenested.sh
Enter the value of a:10
Enter the value of b:20
Enter the value of c:30
c is greater than a and b
bhushan@ubuntu:~/MyScripting/Basic/Logical$
```

### 4) if ....then...elif...then....fi

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ vi Ifelse ladder.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la | grep Ifelse ladder.sh
-rw-rw-r-- 1 bhushan bhushan 168 Feb 12 05:31 Ifelse ladder.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ chmod u+x Ifelse ladder
chmod: cannot access 'Ifelse ladder': No such file or directory
bhushan@ubuntu:~/MyScripting/Basic/Logical$ chmod u+x Ifelse ladder.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la | grep Ifelse ladder.sh
-rwxrwxr-- 1 bhushan bhushan 168 Feb 12 05:31 Ifelse ladder.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ cat Ifelse ladder.sh
#!/bin/bash
read -p "Enter the value of n:" n
if(($n>0))
then
    echo "a is positive number"
elif (($n<0))
then
    echo "b is negative number"
else
    echo "n is Zero"
fi
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./Ifelse ladder.sh
Enter the value of n:5
a is positive number
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./Ifelse ladder.sh
Enter the value of n:-8
b is negative number
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./Ifelse ladder.sh
Enter the value of n:0
n is Zero
bhushan@ubuntu:~/MyScripting/Basic/Logical$
```

### 3) Logical Operations

#### 1) Logical OR (||)

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ vi LogAnd.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la | grep LogAnd.sh
-rw-rw-r-- 1 bhushan bhushan 187 Feb 12 05:50 LogAnd.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ chmod u+x LogAnd.sh
```

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ vi LogAnd.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ cat LogAnd.sh
#!/bin/bash
read -p "Enter First Value:" n1
read -p "Enter Second Value:" n2
if(((n1<10)||($n2>20)))
then
    echo "Atleast one condition is true"
else
    echo "Both Conditions are failed"
fi

bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./LogAnd.sh
Enter First Value:5
Enter Second Value:3
Atleast one condition is true
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./LogAnd.sh
Enter First Value:12
Enter Second Value:50
Atleast one condition is true
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./LogAnd.sh
Enter First Value:11
Enter Second Value:5
Both Conditions are failed
bhushan@ubuntu:~/MyScripting/Basic/Logical$
```

#### 2) Logical AND(&&)

```
bhushan@ubuntu:~/MyScripting/Basic/Logical$ vi LogOr.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ls -la | grep LogOr.sh
-rw-rw-r-- 1 bhushan bhushan 190 Feb 12 06:01 LogOr.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ chmod u+x LogOr.sh
bhushan@ubuntu:~/MyScripting/Basic/Logical$ cat LogOr.sh
#!/bin/bash
read -p "Enter First Value:" n1
read -p "Enter Second Value:" n2
if(((n1<10)&&($n2>20)))
then
    echo "Both Conditions are true"
else
    echo "Atleast one condition are failed"
fi

bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./LogOr.sh
Enter First Value:11
Enter Second Value:4
Atleast one condition are failed
bhushan@ubuntu:~/MyScripting/Basic/Logical$ ./LogOr.sh
Enter First Value:3
Enter Second Value:40
Both Conditions are true
bhushan@ubuntu:~/MyScripting/Basic/Logical$
```



## Some Extra Codes related to file in Scripting

1) Create a directory in /home/bhushan/MyScripting/Basic named Extra. Display the Basic Directory files size as well as the last line in the file. Add a line at the last.

```
bhushan@ubuntu:~/MyScripting/Basic$ vi One.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep One.sh
-rw-rw-r-- 1 bhushan bhushan 324 Feb 12 06:23 One.sh
bhushan@ubuntu:~/MyScripting/Basic$ cat One.sh
#!/bin/bash
cd /home/bhushan/MyScripting/
mkdir Extra
cd /home/bhushan/MyScripting/Basic
echo "Size of the files in Directory:"
ls -lh
echo "Last line of the file:"
tail -n 1 ShellIntro.txt
echo "Adding a new Line in File:"
echo -n "There are 2 types of Linux shell Graphical Shell and Command Line Shell!">>ShellIntro.txt

bhushan@ubuntu:~/MyScripting/Basic$ ./One.sh
bash: ./One.sh: Permission denied
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x One.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./One.sh
Size of the files in Directory:
total 44K
-rw-rw-r-- 1 bhushan bhushan 106 Feb 11 22:46 1
drwxrwxr-x 2 bhushan bhushan 4.0K Feb 12 05:46 Conditional
-rwxrw-r-- 1 bhushan bhushan 75 Feb 11 23:01 Fifth.sh
-rw-rw-r-- 1 bhushan bhushan 0 Feb 11 23:10 File1.sh
-rwxrw-r-- 1 bhushan bhushan 0 Feb 11 23:10 File2.sh
-rw-rw-r-- 1 bhushan bhushan 0 Feb 11 23:10 File3.sh
-rwxrw-r-- 1 bhushan bhushan 81 Feb 11 21:28 First.sh
-rwxrw-r-- 1 bhushan bhushan 76 Feb 11 22:59 Fourth.sh
drwxrwxr-x 2 bhushan bhushan 4.0K Feb 12 06:01 Logical
-rwxrw-r-- 1 bhushan bhushan 324 Feb 12 06:23 One.sh
-rwxrw-r-- 1 bhushan bhushan 87 Feb 11 22:19 Second.sh
-rw-rw-r-- 1 bhushan bhushan 798 Feb 12 06:20 ShellIntro.txt
-rwxrw-r-- 1 bhushan bhushan 73 Feb 11 23:07 sixth.sh
-rwxrw-r-- 1 bhushan bhushan 82 Feb 11 22:48 Third.sh
Last line of the file:
For this reason, GNU/Unix Linux Shell is stronger than the Windows shell.
Adding a new Line in File:
bhushan@ubuntu:~/MyScripting/Basic$
```

2) Moving file from home to backup directory

```
bhushan@ubuntu:/home$ cd bhushan/MyScripting/Basic/
bhushan@ubuntu:~/MyScripting/Basic$ vi Two.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Two.sh
-rw-rw-r-- 1 bhushan bhushan 219 Feb 12 06:35 Two.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x Two.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Two.sh
-rwxrw-r-- 1 bhushan bhushan 219 Feb 12 06:35 Two.sh

bhushan@ubuntu:~/MyScripting/Basic$ cat Two.sh
#!/bin/bash
echo "Moving ShellIntro.txt to a backup folder"
echo "Files before copying: "
ls /home/backup
sudo mv /home/bhushan/MyScripting/Basic/ShellIntro.txt /home/backup/
echo "Files after copying: "
ls /home/backup

bhushan@ubuntu:~/MyScripting/Basic$ ./Two.sh
Copying ShellIntro.txt to a backup folder
Files before copying:
Files after copying:
ShellIntro.txt
```



### Script 1) Check Whether File exists or not.

```
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Three.sh
-rw-rw-r-- 1 bhushan bhushan 138 Feb 12 07:08 Three.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x Three.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Three.sh
-rwxrwx-r-- 1 bhushan bhushan 138 Feb 12 07:08 Three.sh
```

```
bhushan@ubuntu:~/MyScripting/Basic$ cat Three.sh
#!/bin/bash
FILE="/home/bhushan/MyScripting/Basic/One.sh"
if test -f "$FILE";
then
    echo "File Present!"
else
    echo "File is not present"
fi
bhushan@ubuntu:~/MyScripting/Basic$ ./Three.sh
File Present!
```

### Script 2) Check whether Directory Exists or not.

```
bhushan@ubuntu:~/MyScripting/Basic$ vi Four.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Four.sh
-rw-rw-r-- 1 bhushan bhushan 139 Feb 12 07:26 Four.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x Four.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Four.sh
-rwxrwx-r-- 1 bhushan bhushan 139 Feb 12 07:26 Four.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./Four
Four.sh      Fourth.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./Four.sh
./Four.sh: line 3: -d: command not found
Directory is not Present
bhushan@ubuntu:~/MyScripting/Basic$ vi Four.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./Four.sh
Directory is Present
bhushan@ubuntu:~/MyScripting/Basic$
```

### Script 3) Check file is readable , writable and executable while exists.

```
bhushan@ubuntu:~/MyScripting/Basic$ vi FileOpt.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep FileOpt.sh
-rw-rw-r-- 1 bhushan bhushan 501 Feb 12 07:35 FileOpt.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u+x FileOpt.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep FileOpt.sh
-rwxrwx-r-- 1 bhushan bhushan 501 Feb 12 07:35 FileOpt.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./FileOpt.sh
File exists!
File is readable.
File is writable.
File is executable.
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Two.sh
-rwxrwx-r-- 1 bhushan bhushan 220 Feb 12 06:56 Two.sh
bhushan@ubuntu:~/MyScripting/Basic$ chmod u-x Two.sh
bhushan@ubuntu:~/MyScripting/Basic$ ls -la | grep Two.sh
-rw-rw-r-- 1 bhushan bhushan 220 Feb 12 06:56 Two.sh
bhushan@ubuntu:~/MyScripting/Basic$ ./FileOpt.sh
File exists!
File is readable.
File is writable.
File is executable.
bhushan@ubuntu:~/MyScripting/Basic$ ./FileOpt.sh
File exists!
File is readable.
File is writable.
File is executable.
bhushan@ubuntu:~/MyScripting/Basic$
```

```
bhushan@ubuntu:~/MyScripting/Basic$ cat FileOpt.sh
#!/bin/bash
FILE="/home/bhushan/MyScripting/Basic/Two.sh"
if [ -e $file ]
then
    echo "File exists!"

    # check readable
    if [ -r $file ]
    then
        echo "File is readable."
    else
        echo "File is not readable."
    fi

    # check writable
    if [ -w $file ]
    then
        echo "File is writable."
    else
        echo "File is not writable."
    fi

    # check executable
    if [ -x $file ]
    then
        echo "File is executable."
    else
        echo "File is not executable."
    fi
else
    echo "File does not exists!"
fi
```

