

Subject: Operating System	Subject Code:22516
Semester:5 <sup>th</sup> Semester	Course: Computer Engineering
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Experiment No:	12
Title of Experiment	Write a shell script to find out whether-given file exists?

## **XII. PRACTICAL RELATED QUESTIONS.**

### **1) What is the command to run the script.**

**Answer:** - Run the script using `./<filename>`

### **2) What are file test options with meaning?**

**Answer:** - The different file test operators are listed below.

- a: True if the file exists.
- b: True if it is block special.
- c: True if it is a character special file.
- d: True if file exists and is a directory.
- e: True if the file exists.
- f: True if the file exists and is a regular file.
- g: True if the file exists and its SGID bits is set.
- h: True if the file exists and is a symbolic link.

3) What will be the output of this command (file=ABC.txt)

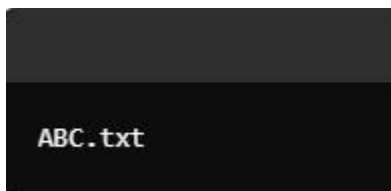
- a) `if [ ! -f "$file" ];then  
echo "$file"  
fi`
- b) `test -f "$file" || echo "$file"`
- c) `[ -f "$file" ] || echo "$file"`

Answer: -

- a) `if [ ! -f "$file" ];then  
echo "$file"  
fi`

Ans:-

If ABC.txt does not exist, this command will output:

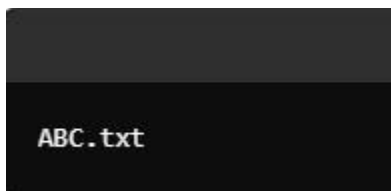


If ABC.txt exists, there will be **no output**.

- b) `test -f "$file" || echo "$file"`

Ans:-

If ABC.txt does not exist, this command will output:

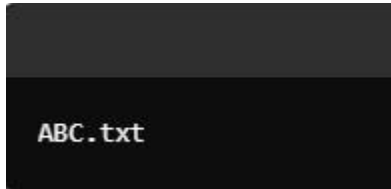


If ABC.txt exists, there will be **no output**.

c) `[-f "$file"] || echo "$file"`

**Ans:-**

If ABC.txt does not exist, this command will output:

A terminal window with a dark background. The text 'ABC.txt' is displayed in a light-colored font, representing the output of the command when the file does not exist.

```
ABC.txt
```

If ABC.txt exists, there will be **no output**.

### **XIII. EXERCISE.**

**1) Write a shell script to copy source file into destination file.**

**Answer: -**

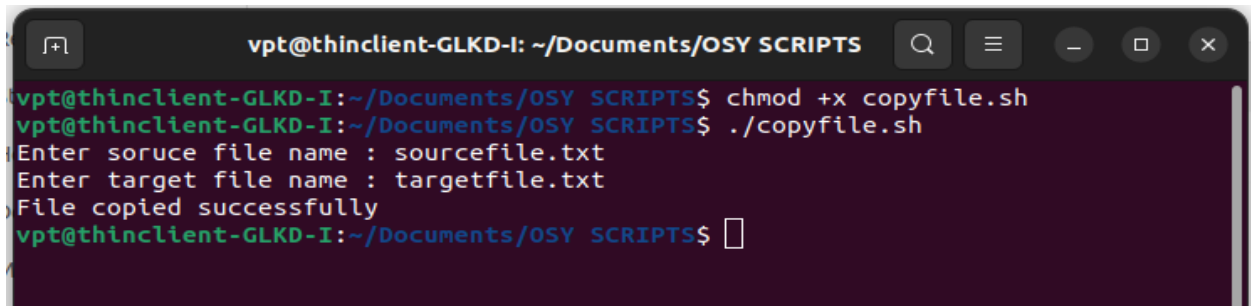
```
#!/bin/bash
echo -n "Enter source file name : "
read src
echo -n "Enter target file name : "
read targ

if [ ! -f $src ]
then
    echo "File $src does not exist"
    exit 1
elif [ -f $targ ]
then
    echo "File $targ exist, cannot overwrite"
    exit 2
fi

cp $src $targ

status=$?
if [ $status -eq 0 ]
then
    echo 'File copied successfully'
else
    echo 'Problem copying file'
fi
```

**Output:-**



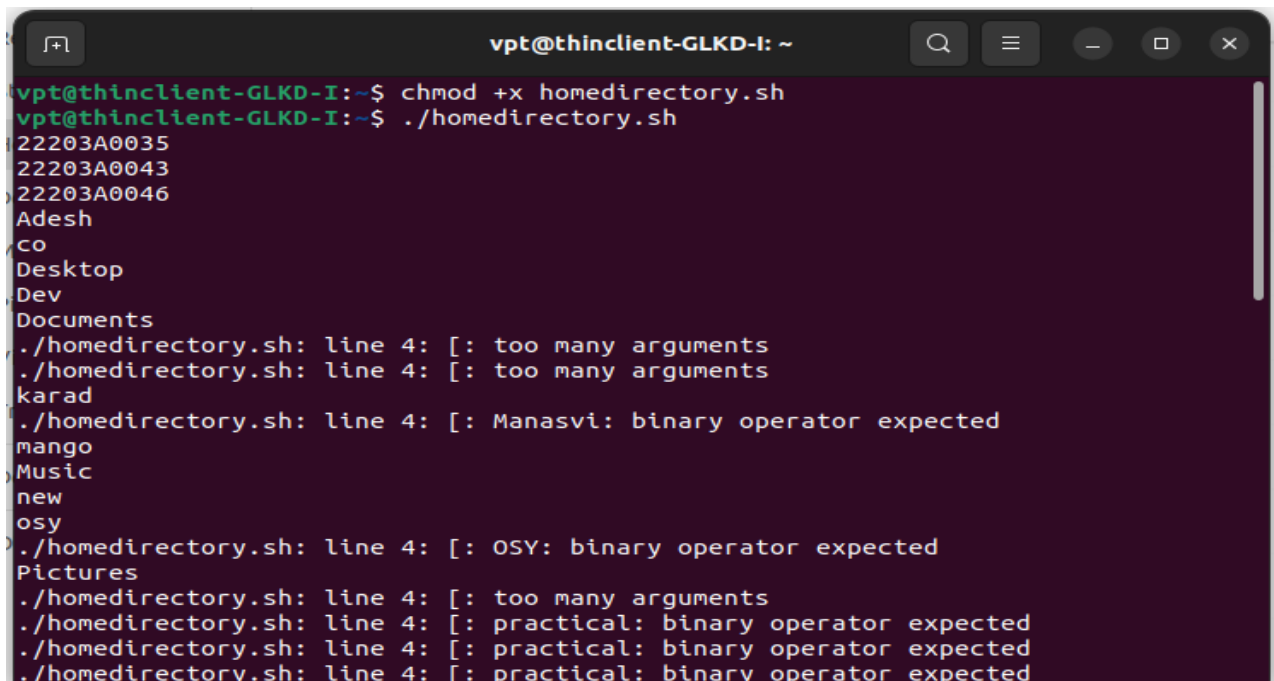
```
vpt@thinclient-GLKD-I: ~/Documents/OSY SCRIPTS
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$ chmod +x copyfile.sh
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$ ./copyfile.sh
Enter source file name : sourcefile.txt
Enter target file name : targetfile.txt
File copied successfully
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$
```

2) Write a shell script which displays list of all directories in your home directory?

**Answer: -**

```
#!/bin/bash
for file in *
do
    if [ -d $file ]; then
        echo "$file"
    fi
done
```

**Output:-**



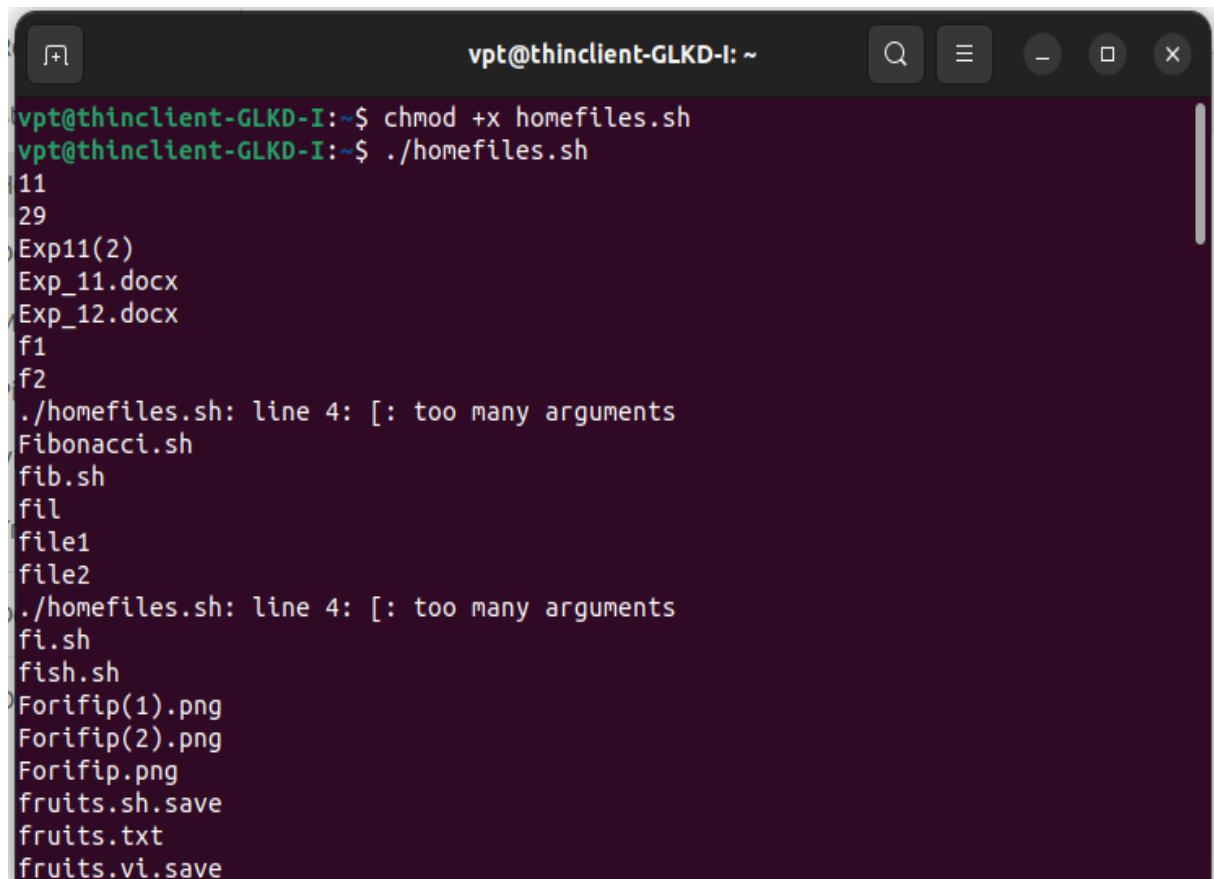
```
vpt@thinclient-GLKD-I: ~
vpt@thinclient-GLKD-I:~$ chmod +x homedirectory.sh
vpt@thinclient-GLKD-I:~$ ./homedirectory.sh
22203A0035
22203A0043
22203A0046
Adesh
co
Desktop
Dev
Documents
./homedirectory.sh: line 4: [: too many arguments
./homedirectory.sh: line 4: [: too many arguments
karad
./homedirectory.sh: line 4: [: Manasvi: binary operator expected
mango
Music
new
osy
./homedirectory.sh: line 4: [: OSY: binary operator expected
Pictures
./homedirectory.sh: line 4: [: too many arguments
./homedirectory.sh: line 4: [: practical: binary operator expected
./homedirectory.sh: line 4: [: practical: binary operator expected
./homedirectory.sh: line 4: [: practical: binary operator expected
```

3) Write a shell script which displays list of all files in your home directory?

**Answer: -**

```
#!/bin/bash
for file in *
do
    if [ -f $file ]; then
        echo "$file"
    fi
done
```

**Output:-**

A terminal window titled 'vpt@thinclient-GLKD-I: ~' with standard window controls. The terminal shows the following commands and output:

```
vpt@thinclient-GLKD-I:~$ chmod +x homefiles.sh
vpt@thinclient-GLKD-I:~$ ./homefiles.sh
11
29
Exp11(2)
Exp_11.docx
Exp_12.docx
f1
f2
./homefiles.sh: line 4: [: too many arguments
Fibonacci.sh
fib.sh
fil
file1
file2
./homefiles.sh: line 4: [: too many arguments
fi.sh
fish.sh
Forifip(1).png
Forifip(2).png
Forifip.png
fruits.sh.save
fruits.txt
fruits.vi.save
```

- 4) Write a file handling program. First check whether it is file or directory, then if it is file the program should ask user for choices of copying, removing and renaming files. Use case statement.

**Answer: -**

```
echo "Enter the file name"
read file1
if [ -f $file1 ]; then
    echo "It is a file"
elif [ -d $file1 ]; then
    echo "It is a Directory!";
else
    echo "File or Directory does not exist!";
    exit 1
fi

echo -e "1) Copy"
#!/bin/bash
echo -e "2) Remove"
echo -e "3) Rename"
read ch
case $ch in
1)
    echo -n "Enter target file name : "
    read targ
    if [ -f $targ ]
    then
        echo "File $targ exist, cannot overwrite"
        exit 2
    fi

    cp $file1 $targ

    status=$?

    if [ $status -eq 0 ]
    then
        echo 'File copied successfully'
    else
        echo 'Problem copying file'
    fi;;
```

2)

```
rm -i $file1;;
```

3)

```
echo -n "Enter new file Name : "
```

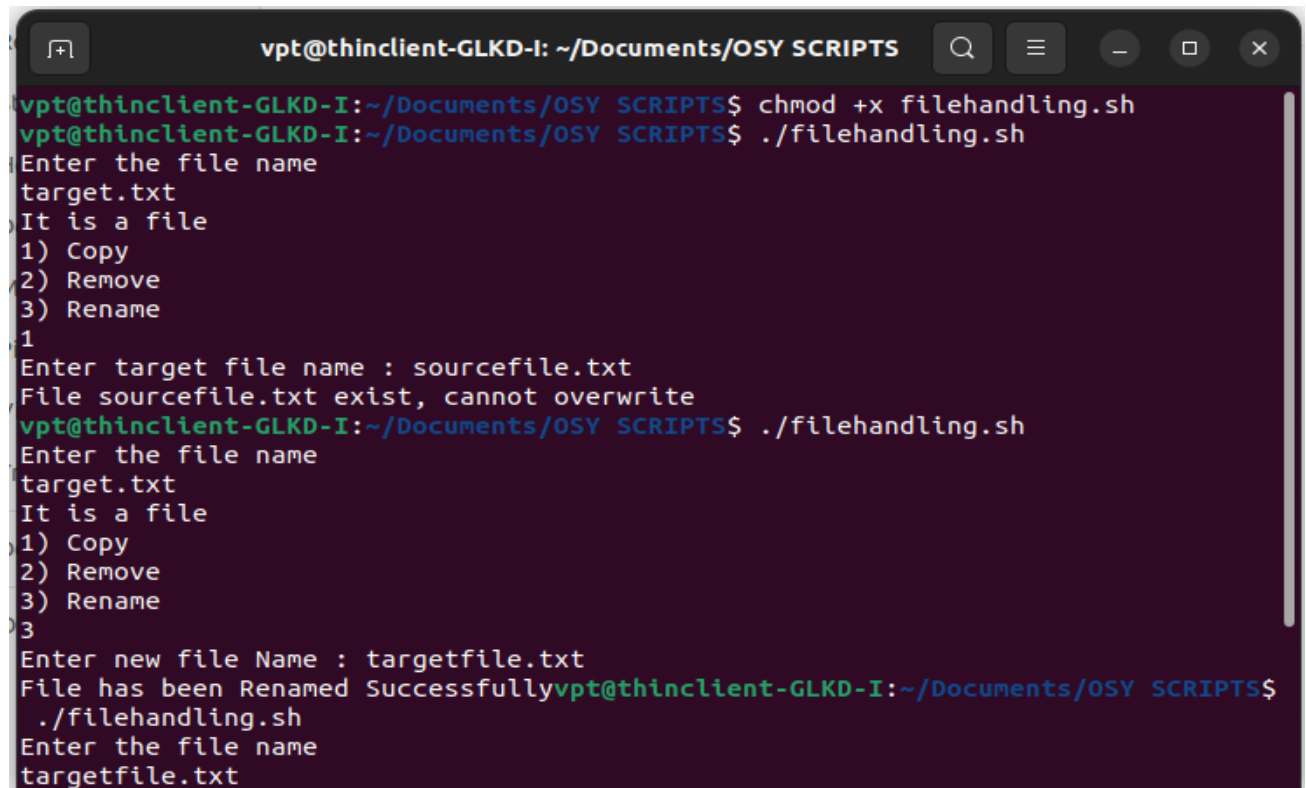
```
read file2
```

```
mv $file1 $file2
```

```
echo -n "File has been Renamed Successfully";;
```

esac

**Output:-**

A terminal window titled 'vpt@thinclient-GLKD-I: ~/Documents/OSY SCRIPTS' with search, menu, and window control icons. The terminal shows the following sequence of commands and output:

```
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$ chmod +x filehandling.sh
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$ ./filehandling.sh
Enter the file name
target.txt
It is a file
1) Copy
2) Remove
3) Rename
1
Enter target file name : sourcefile.txt
File sourcefile.txt exist, cannot overwrite
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$ ./filehandling.sh
Enter the file name
target.txt
It is a file
1) Copy
2) Remove
3) Rename
3
Enter new file Name : targetfile.txt
File has been Renamed Successfullyvpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$
./filehandling.sh
Enter the file name
targetfile.txt
```



```
vpt@thinclient-GLKD-I: ~/Documents/OSY SCRIPTS
3) Rename
1
Enter target file name : sourcefile.txt
File sourcefile.txt exist, cannot overwrite
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$ ./filehandling.sh
Enter the file name
target.txt
It is a file
1) Copy
2) Remove
3) Rename
3
Enter new file Name : targetfile.txt
File has been Renamed Successfullyvpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$
./filehandling.sh
Enter the file name
targetfile.txt
It is a file
1) Copy
2) Remove
3) Rename
2
rm: remove regular file 'targetfile.txt'? y
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$
```

5) Write a script to copy source file into destination file.

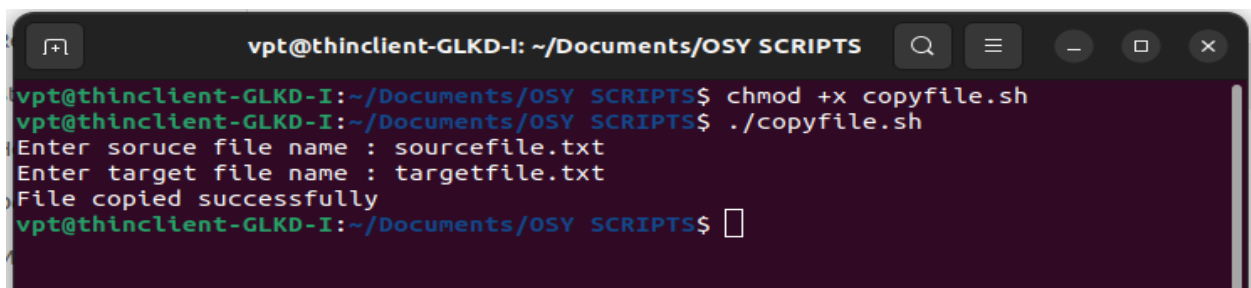
**Answer: -**

```
#!/bin/bash
echo -n "Enter source file name : "
read src
echo -n "Enter target file name : "
read targ

if [ ! -f $src ]
then
echo "File $src does not exist"
exit 1
elif [ -f $targ ]
then
echo "File $targ exist, cannot overwrite"
exit 2
fi
cp $src $targ

status=$?
if [ $status -eq 0 ]
then
echo 'File copied successfully'
else
echo 'Problem copying file'
fi
```

**Output:-**

A terminal window titled 'vpt@thinclient-GLKD-I: ~/Documents/OSY SCRIPTS' with standard window controls. The terminal shows the following commands and output:

```
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$ chmod +x copyfile.sh
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$ ./copyfile.sh
Enter source file name : sourcefile.txt
Enter target file name : targetfile.txt
File copied successfully
vpt@thinclient-GLKD-I:~/Documents/OSY SCRIPTS$
```

## CONCLUSION:

We have successfully completed shell script to find out whether given file exists. In this practical we have studied checking if a file exists. The commonly used file operators are -e and -f.