

Subject: OSY	Subject Code:22516
Semester:5 th Semester	Course: Computer Engineering
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Experiment No:	13
Title of Experiment:	Write shell script to check and grant file permission

- **Practical Related Question**

1. What are permissions of a file?

Ans: File permissions refer to the control of actions that users are allowed to perform on a file, such as read, write, and execute.

2. How to assign permission to a file?

Ans:

1. File permissions refer to the control of actions that users are allowed to perform on a file, such as read, write, and execute.
2. Use the `chmod` command followed by the permission settings and the file name

3. What happens when exception is thrown by main method?

Ans: The main method should simply terminate if any exception occurs. The throws clause only states that the method throws a checked FileNotFoundException and the calling method should catch or rethrow it.

4. How to check permissions of all files and directories?

Ans: To check the permissions of all files and directories in a specific directory on a Unix-like system (Linux, macOS), you can use the `ls` command with the `-l`

5. What are the test commands to check the permission of a file?

Ans: The `test` command (or its synonym `[]`) allows you to check specific permissions

- **Program Code:**

1) Write a shell script to find out whether file has read write and execute permission.

Ans:

a) Code:

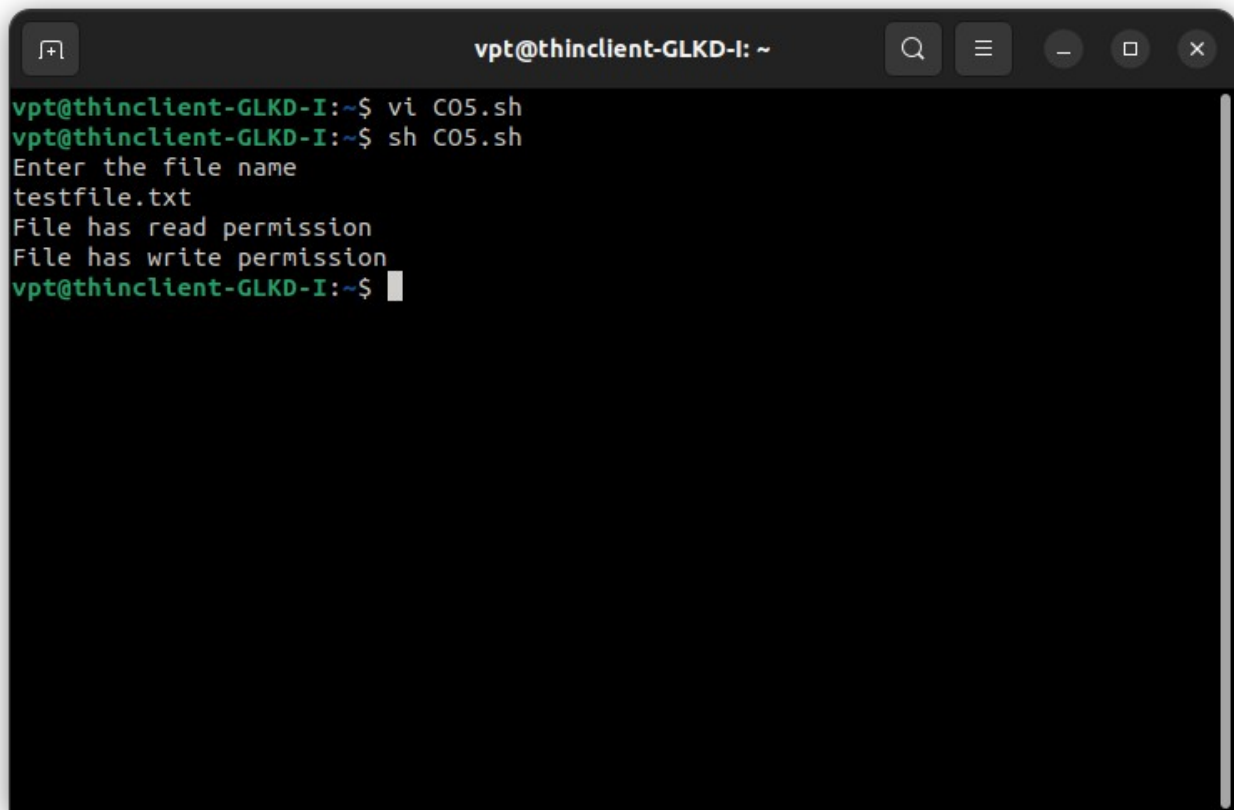
```
echo "Enter the file name"
read file1

if [ -r $file1 ]
then
echo "File has read permission"
fi

if [ -w $file1 ]
then
echo "File has write permission"
fi

if [ -x $file1 ]
then
echo "File has Execute permission"
fi
```

b) Output:



```
vpt@thinclient-GLKD-I: ~  
vpt@thinclient-GLKD-I:~$ vi C05.sh  
vpt@thinclient-GLKD-I:~$ sh C05.sh  
Enter the file name  
testfile.txt  
File has read permission  
File has write permission  
vpt@thinclient-GLKD-I:~$
```

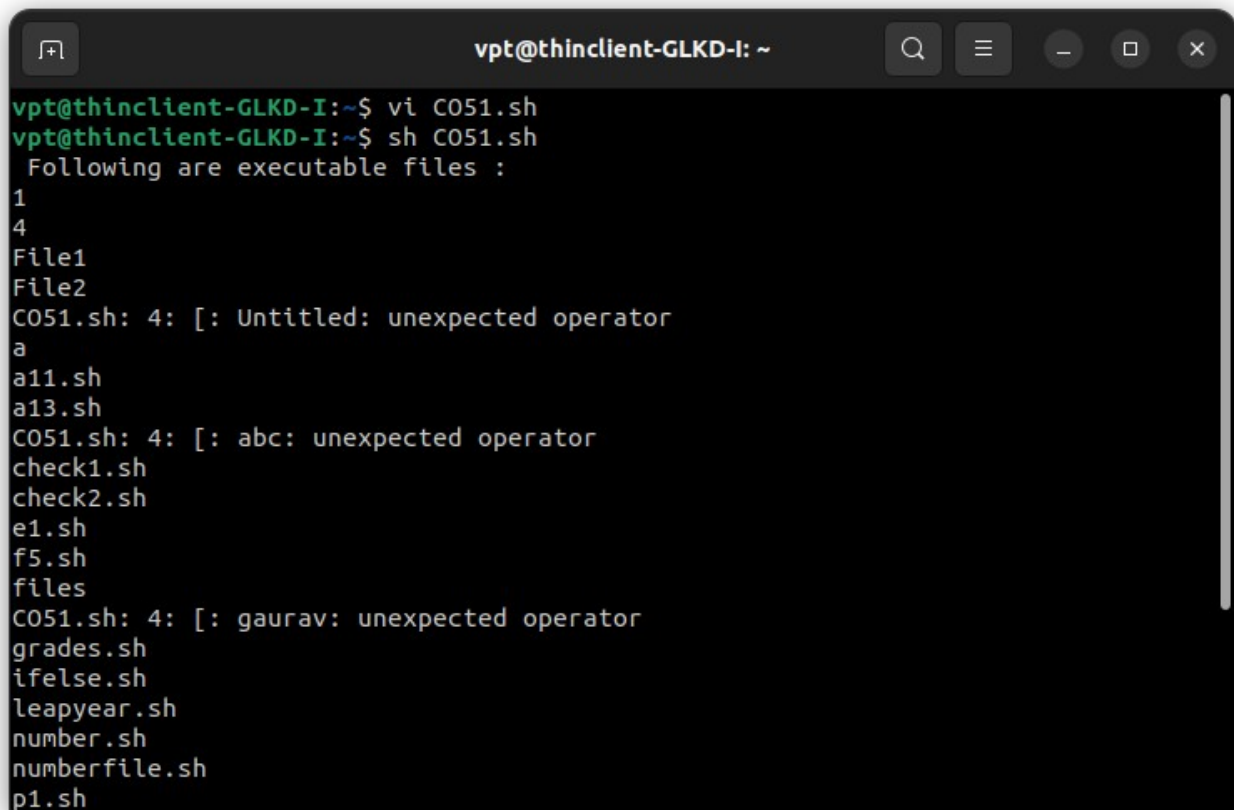
2) Write a shell script which displays the list of all executable files in the current working directory.

Ans:

a) Code:

```
echo " Following are executable files : "  
for file1 in *  
do  
if [ -x $file1 ] && [ ! -d $file1 ]  
then  
echo $file1  
fi  
done
```

b) Output:



```
vpt@thinclient-GLKD-I: ~  
vpt@thinclient-GLKD-I:~$ vi C051.sh  
vpt@thinclient-GLKD-I:~$ sh C051.sh  
Following are executable files :  
1  
4  
File1  
File2  
C051.sh: 4: [: Untitled: unexpected operator  
a  
a11.sh  
a13.sh  
C051.sh: 4: [: abc: unexpected operator  
check1.sh  
check2.sh  
e1.sh  
f5.sh  
files  
C051.sh: 4: [: gaurav: unexpected operator  
grades.sh  
ifelse.sh  
leapyear.sh  
number.sh  
numberfile.sh  
p1.sh
```

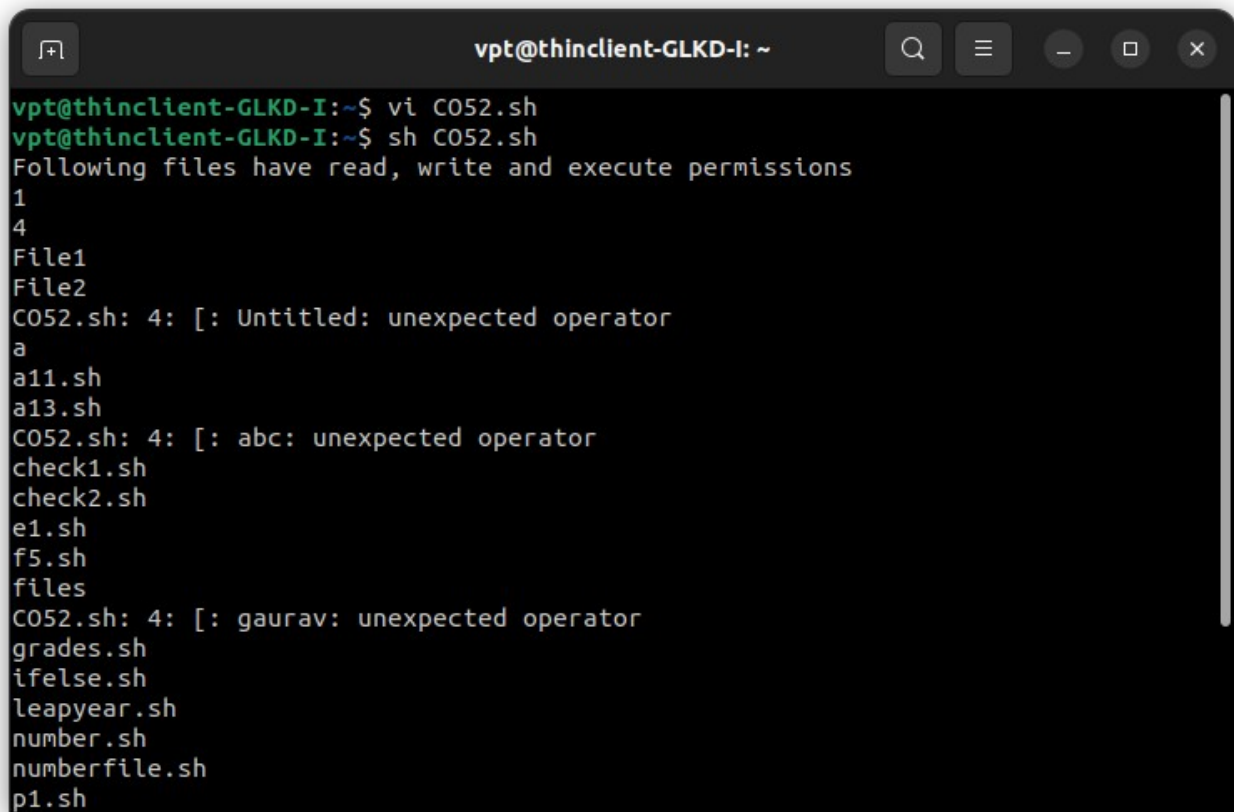
3) Write a shell script which displays a list of all the files in the current directory to which has read, write, and execute permissions.

Ans:

a) Code:

```
echo "Following files have read, write and execute permissions "  
for file1 in *  
do  
if [ -r $file1 ] && [ -w $file1 ] && [ -x $file1 ] && [ ! -d $file1 ];  
then  
echo "$file1"  
fi  
done
```

b) Output:



```
vpt@thinclient-GLKD-I: ~  
vpt@thinclient-GLKD-I:~$ vi C052.sh  
vpt@thinclient-GLKD-I:~$ sh C052.sh  
Following files have read, write and execute permissions  
1  
4  
File1  
File2  
C052.sh: 4: [: Untitled: unexpected operator  
a  
a11.sh  
a13.sh  
C052.sh: 4: [: abc: unexpected operator  
check1.sh  
check2.sh  
e1.sh  
f5.sh  
files  
C052.sh: 4: [: gaurav: unexpected operator  
grades.sh  
ifelse.sh  
leapyear.sh  
number.sh  
numberfile.sh  
p1.sh
```

4) Write a shell script which accepts a filename and assigns it all the permissions.

Ans:

a) Code:

```
echo "Enter the file name: "  
read file1  
  
if [ -d $file1 ]  
then  
echo "$file1 is a directory"  
exit 1  
elif [ ! -f $file1 ]  
then  
echo "$file1 does not exists "  
exit 2
```

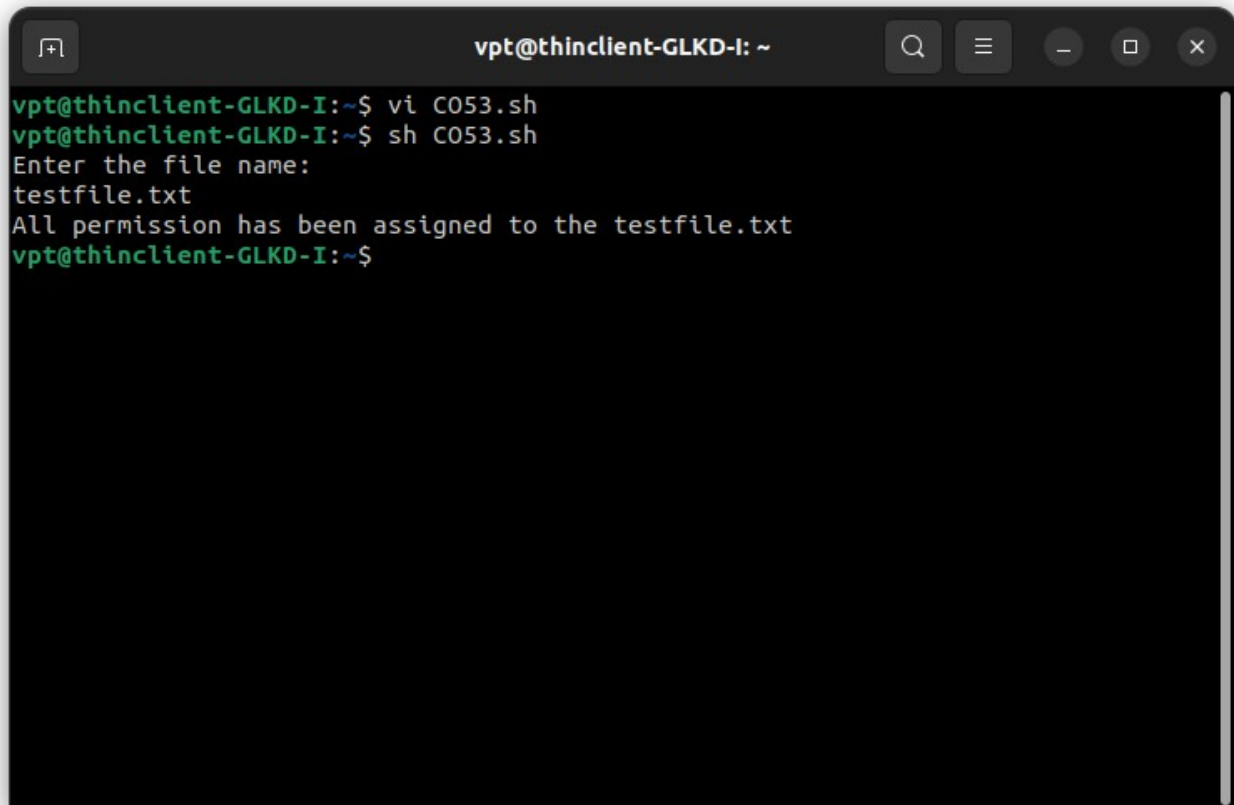
else

chmod 777 \$file1

echo "All permission has been assigned to the \$file1 "

fi

b) Output:

A terminal window titled 'vpt@thinclient-GLKD-I: ~' with standard window controls. The terminal shows a user running a script 'C053.sh' using 'vi' and 'sh'. The script prompts for a file name, the user enters 'testfile.txt', and the script outputs 'All permission has been assigned to the testfile.txt'.

```
vpt@thinclient-GLKD-I:~$ vi C053.sh
vpt@thinclient-GLKD-I:~$ sh C053.sh
Enter the file name:
testfile.txt
All permission has been assigned to the testfile.txt
vpt@thinclient-GLKD-I:~$
```

