Experiment No- 09

Aim: To Execute the following scripts using grep / sed commands

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Subject	Unix Lab
Lab Outcome	LO4: To Execute the following scripts using grep / sed commands
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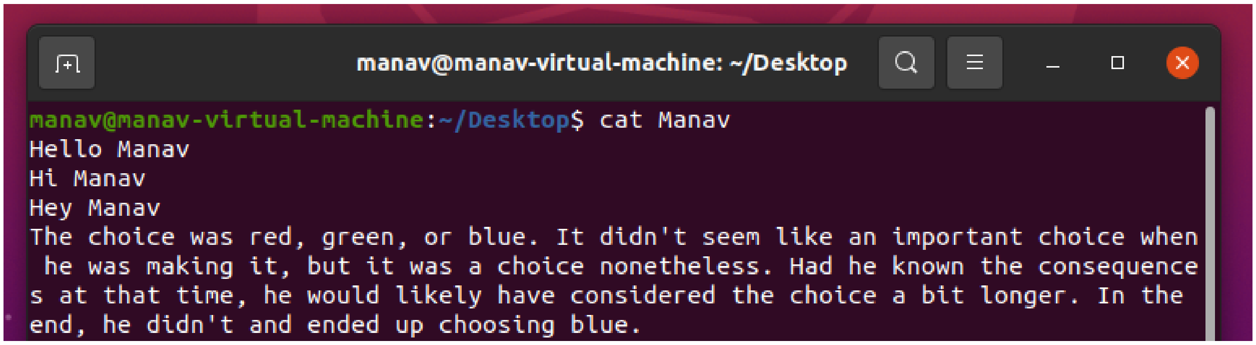
AIM: Execute the following scripts using grep / sed commands

THEORY:

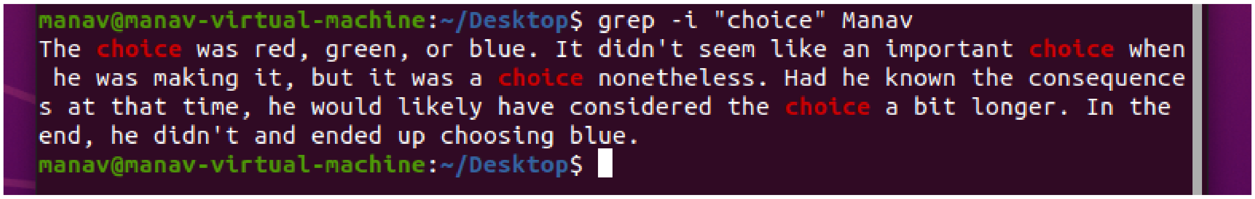
1. **grep:** grep stands for global regular expression print. It is a family of programs that is used to search the input file for all lines that match a specified regular expression and write them to the standard output file (monitor).
   There are several options available to the grep:
   c-Prints only a count of the number of lines matching the pattern.
   i- Ignores upper / lowercase in matching text.
   l- Prints a list of files that contain at least one line matching the pattern.
2. **egrep:** The egrep command belongs to the family of the grep command which is used for pattern searching in Linux. If you have used the grep command, egrep works the same as grep -E (grep Extended regex') does. Egrep scans a specific file, line to line, and prints the line(s) that contain the search string/regular expression.
3. **sed:** SED stands for stream editor and basically allows you to manipulate text files substituting, replacing, searching, inserting, deleting without opening the files. Moreover, SED enables us to use a regular expression to match the expression within the file and perform text manipulation.

Firstly , seeing the contents of file:



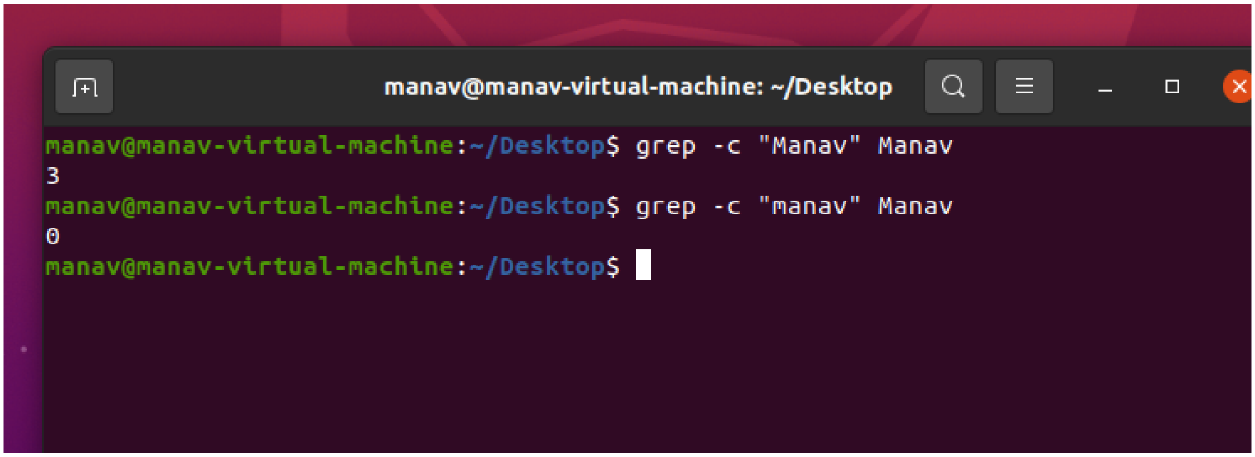
```
manav@manav-virtual-machine:~/Desktop$ cat Manav
Hello Manav
Hi Manav
Hey Manav
The choice was red, green, or blue. It didn't seem like an important choice when
 he was making it, but it was a choice nonetheless. Had he known the consequence
s at that time, he would likely have considered the choice a bit longer. In the
end, he didn't and ended up choosing blue.
```

Searching the word the choice in the file:



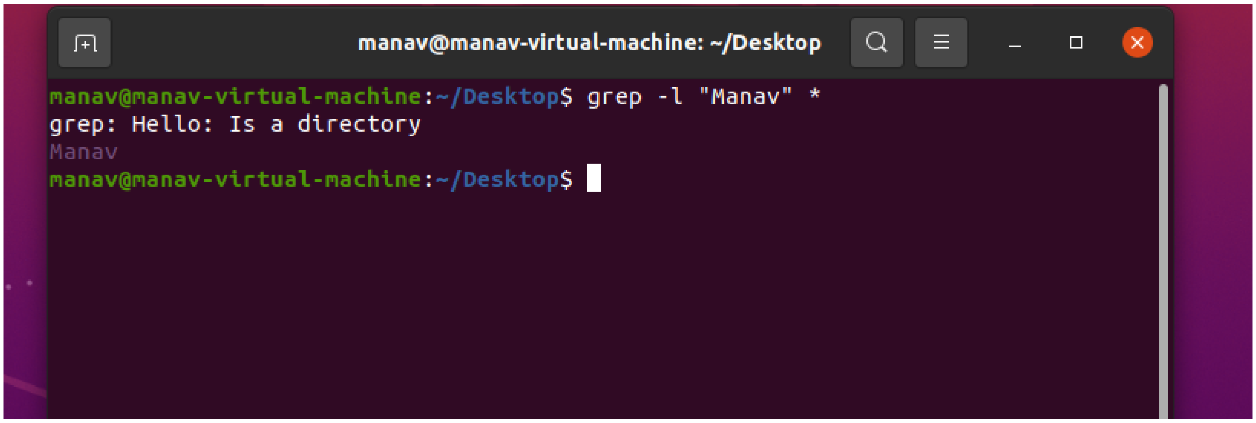
```
manav@manav-virtual-machine:~/Desktop$ grep -i "choice" Manav
The choice was red, green, or blue. It didn't seem like an important choice when
 he was making it, but it was a choice nonetheless. Had he known the consequence
s at that time, he would likely have considered the choice a bit longer. In the
end, he didn't and ended up choosing blue.
manav@manav-virtual-machine:~/Desktop$ 
```

To count occurrences of given word in a particular file (case-sensitive):



```
manav@manav-virtual-machine:~/Desktop$ grep -c "Manav" Manav
3
manav@manav-virtual-machine:~/Desktop$ grep -c "manav" Manav
0
manav@manav-virtual-machine:~/Desktop$ 
```

Checked for files having given word in it and printing it:



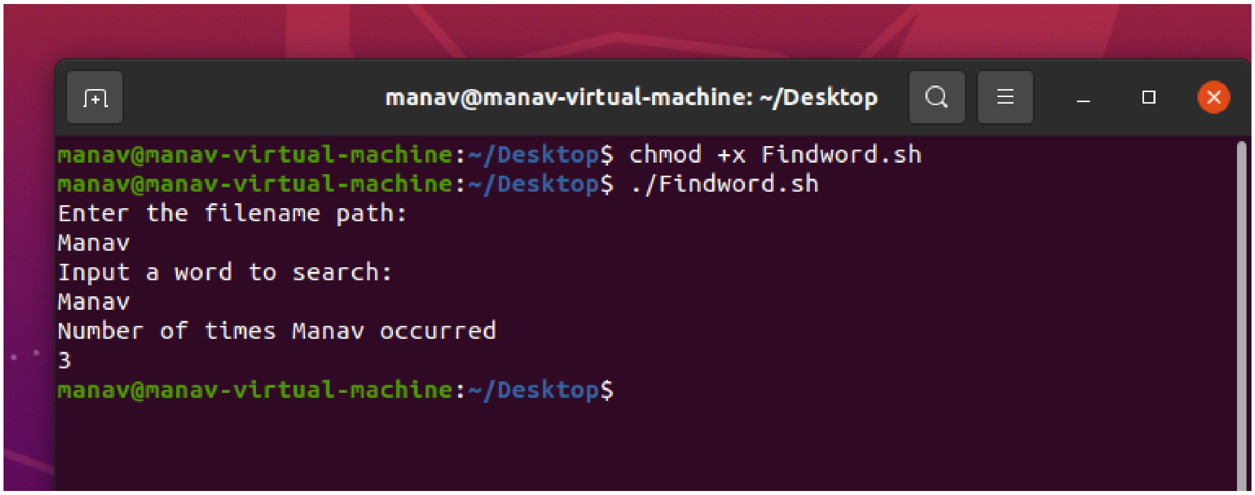
```
manav@manav-virtual-machine:~/Desktop$ grep -l "Manav" *
grep: Hello: Is a directory
Manav
manav@manav-virtual-machine:~/Desktop$ 
```

(i) Write a script using grep command to find the number of words character, words and lines in a file.

Script:

```
#!/bin/bash
echo "Enter the filename path: "
read filename
echo "Input a word to search: "
read word1
echo "Number of times $word1 occurred "
grep -c -i $word1 $filename
```

Output:



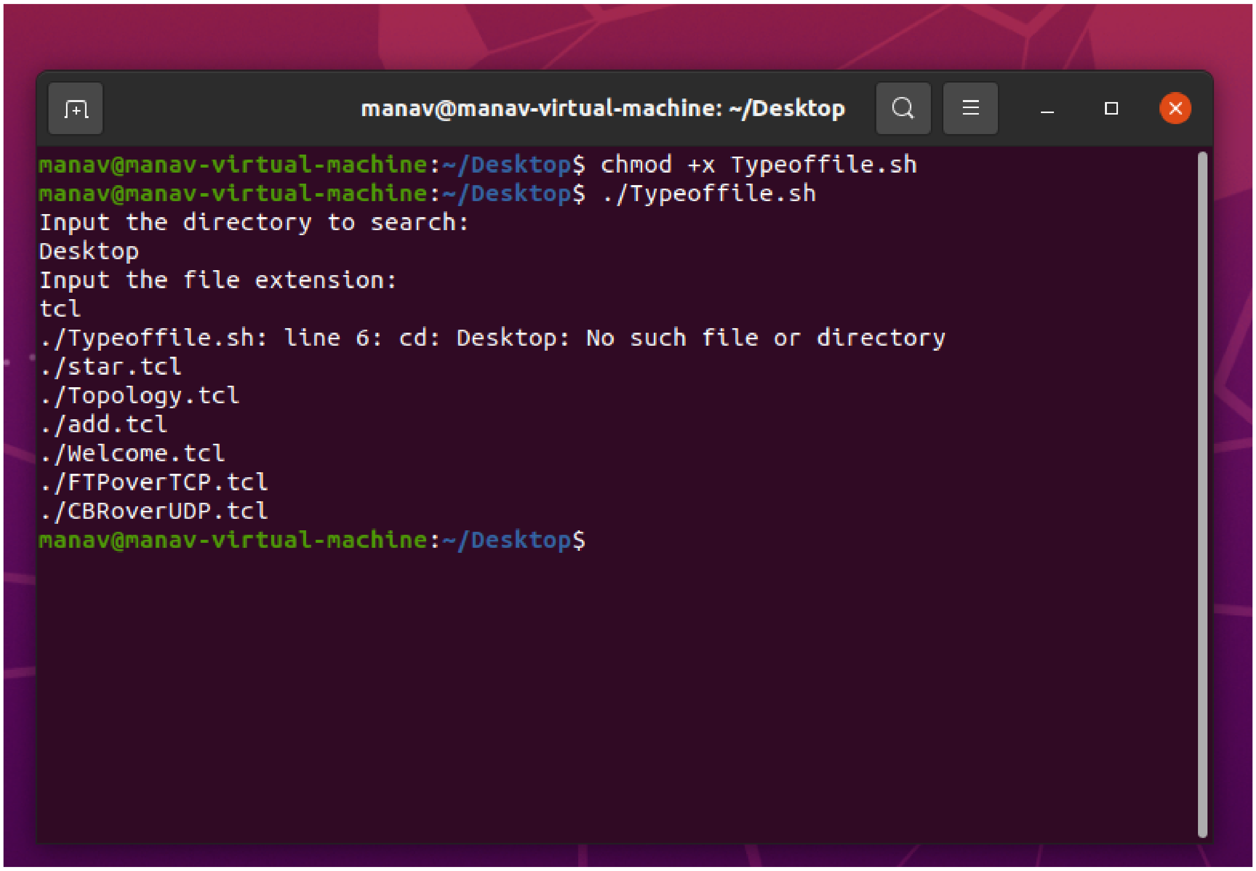
```
manav@manav-virtual-machine:~/Desktop$ chmod +x Findword.sh
manav@manav-virtual-machine:~/Desktop$ ./Findword.sh
Enter the filename path:
Manav
Input a word to search:
Manav
Number of times Manav occurred
3
manav@manav-virtual-machine:~/Desktop$
```

(ii) Write a script using egrep command to display a list of specific types of files in the directory.

Script:

```
#!/bin/bash
echo "Input the directory to search: "
read dirname
echo "Input the file extension: "
read fileext
cd $dirname
find | egrep $fileext
```

Output:



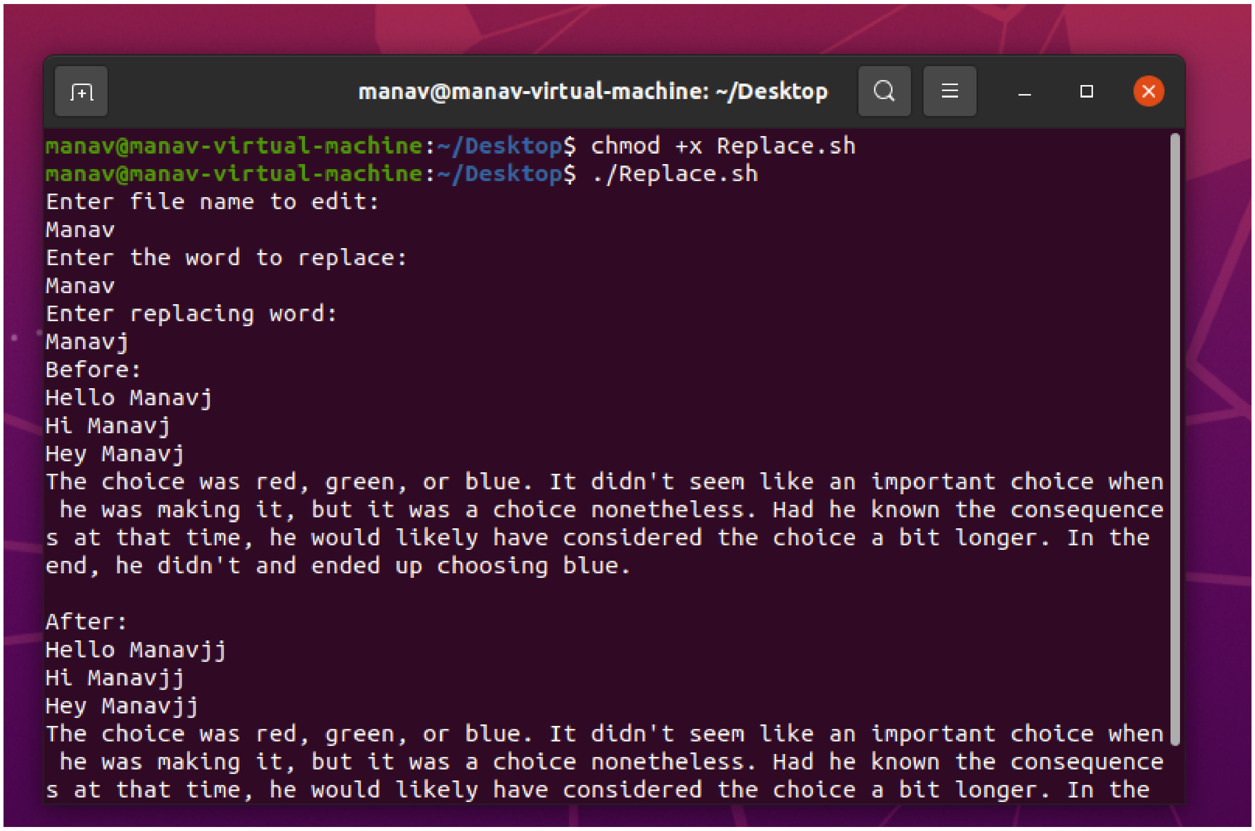
```
manav@manav-virtual-machine:~/Desktop$ chmod +x Typeoffile.sh
manav@manav-virtual-machine:~/Desktop$ ./Typeoffile.sh
Input the directory to search:
Desktop
Input the file extension:
tcl
./Typeoffile.sh: line 6: cd: Desktop: No such file or directory
./star.tcl
./Topology.tcl
./add.tcl
./Welcome.tcl
./FTPoverTCP.tcl
./CBRoverUDP.tcl
manav@manav-virtual-machine:~/Desktop$
```

(iii) Write a script using sed command to replace all occurrences of particular word in a given file.

Script:

```
#!/bin/bash
echo "Enter file name to edit: "
read filename
echo "Enter the word to replace: "
read repword
echo "Enter replacing word: "
read newword
echo "Before: "
cat $filename
echo
sed -i "s/$repword/$newword/g" $filename
echo "After: "
cat $filename
```

Output:



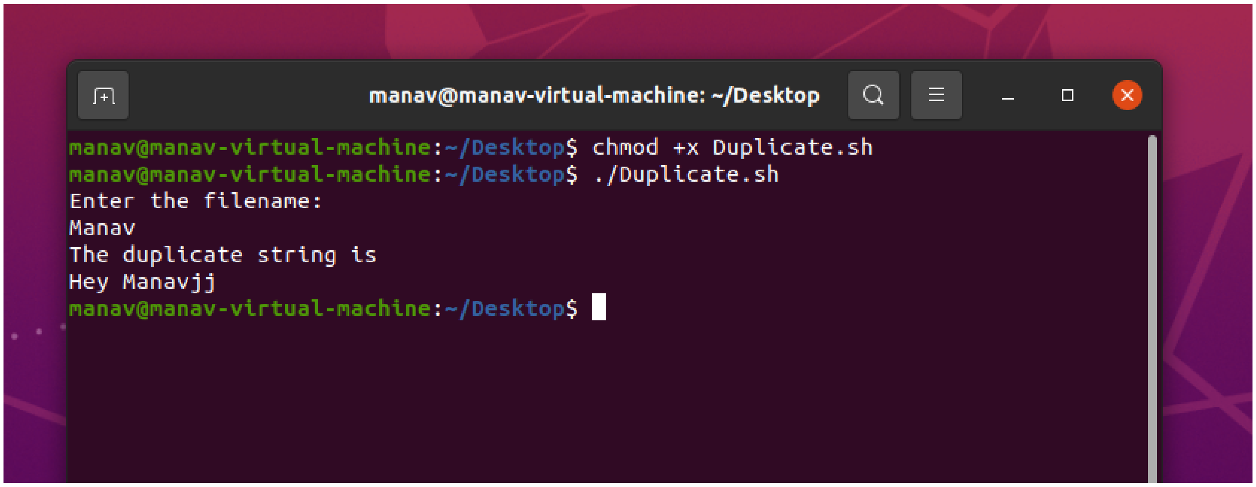
```
manav@manav-virtual-machine:~/Desktop$ chmod +x Replace.sh
manav@manav-virtual-machine:~/Desktop$ ./Replace.sh
Enter file name to edit:
Manav
Enter the word to replace:
Manav
Enter replacing word:
Manavj
Before:
Hello Manavj
Hi Manavj
Hey Manavj
The choice was red, green, or blue. It didn't seem like an important choice when
 he was making it, but it was a choice nonetheless. Had he known the consequence
s at that time, he would likely have considered the choice a bit longer. In the
end, he didn't and ended up choosing blue.

After:
Hello Manavjj
Hi Manavjj
Hey Manavjj
The choice was red, green, or blue. It didn't seem like an important choice when
 he was making it, but it was a choice nonetheless. Had he known the consequence
s at that time, he would likely have considered the choice a bit longer. In the
```

(iv) Write a script using sed command to print duplicate lines in input.

Script:

```
#!/bin/bash
echo "Enter the filename: "
read filename
echo "The duplicate string is"
sort $filename | sed '$!N; s/^\(.*\)\n\1$/\1/; t; D'
```

Output:



```
manav@manav-virtual-machine:~/Desktop$ chmod +x Duplicate.sh
manav@manav-virtual-machine:~/Desktop$ ./Duplicate.sh
Enter the filename:
Manav
The duplicate string is
Hey Manavjj
manav@manav-virtual-machine:~/Desktop$
```

Conclusion:

Thus, we successfully executed the scripts for the given problem statement using grep / sed commands.