

SHELL PROGRAMMING - Set 2 – Part 2

Aim :

To practice various shell scripting programs

Question 6 :

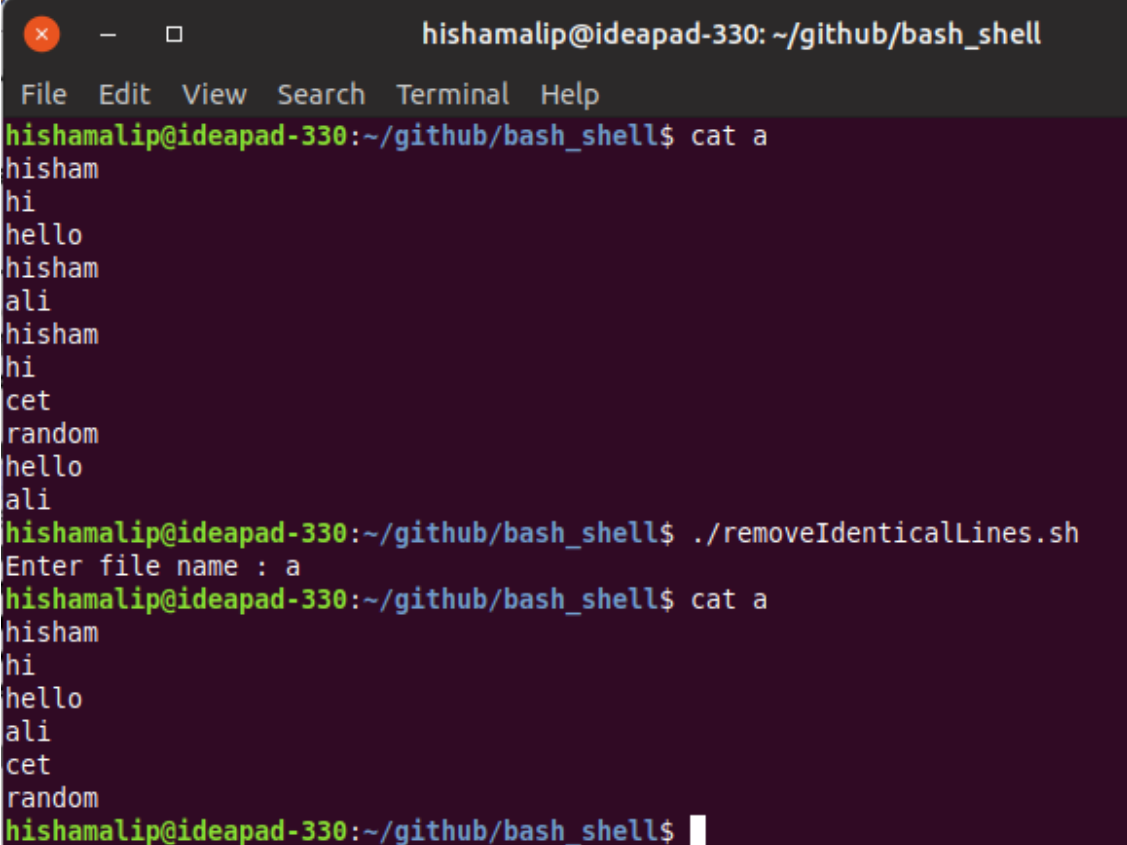
Write a shell script that will take an input file and remove identical lines.

Algorithm :

- 1 Read file
- 2 Remove identical lines and save result into a temporary file.
- 3 Copy temporary file to argument
- 4 Remove temporary file

Program :

```
fread -p "Enter file name : " file1
if [ ! -f $file1 ]; then
    echo "File not found!"
else
    awk '!seen[$0]++' $file1 > temp
    cp templog $file1
    rm temp
fi
```

Output :

```
hishamalip@ideapad-330: ~/github/bash_shell
File Edit View Search Terminal Help
hishamalip@ideapad-330:~/github/bash_shell$ cat a
hisham
hi
hello
hisham
ali
hisham
hi
cet
random
hello
ali
hishamalip@ideapad-330:~/github/bash_shell$ ./removeIdenticalLines.sh
Enter file name : a
hishamalip@ideapad-330:~/github/bash_shell$ cat a
hisham
hi
hello
ali
cet
random
hishamalip@ideapad-330:~/github/bash_shell$
```

Question 7 :

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

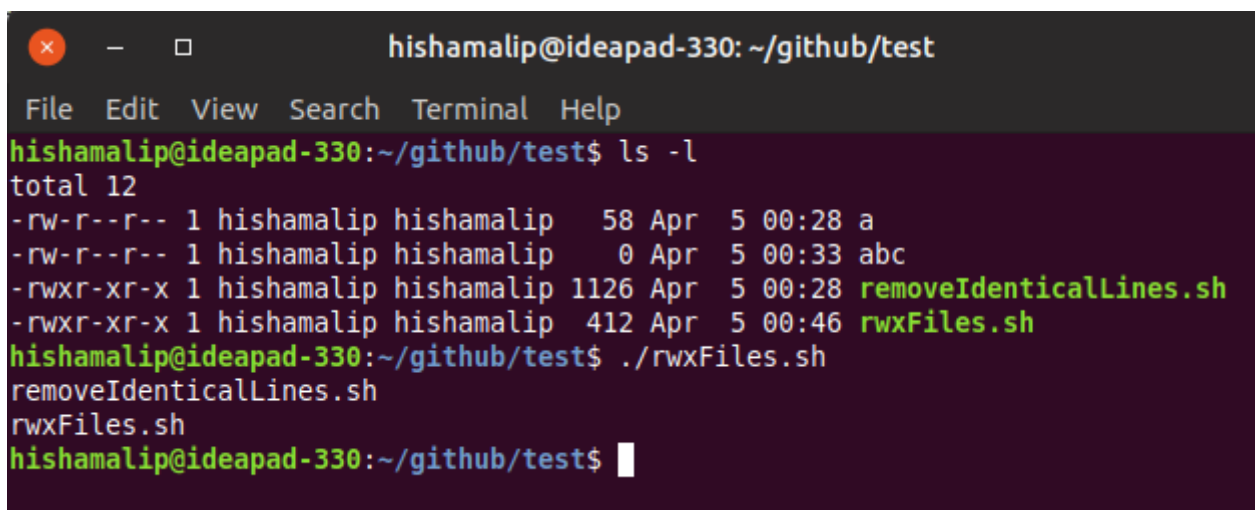
Algorithm :

```
1 Save permission of all files to a temporary file
2 while read i from temporary file
3     copy properties of files into variable x
4     if x is file with read, write and execute permission
5         set flag = 1
6         print file name
7     end if
8 end while
9 if flag != 1
10     print "No files with read, write and execution permission"
11 end if
```

Program :

```
ls -l > temp
while read i ; do
    x="$(echo $i | cut -b 1-4)"
    if [ $x = "-rwx" ] ; then
        flag=1;
        echo $i | awk {'print $9'}
    fi
done < temp
rm temp
if [ "$flag" != 1 ] ; then
    echo "No files with read,write and execute permission"
fi
```

Output :



```
hishamalip@ideapad-330: ~/github/test
File Edit View Search Terminal Help
hishamalip@ideapad-330:~/github/test$ ls -l
total 12
-rw-r--r-- 1 hishamalip hishamalip  58 Apr  5 00:28 a
-rw-r--r-- 1 hishamalip hishamalip   0 Apr  5 00:33 abc
-rwxr-xr-x 1 hishamalip hishamalip 1126 Apr  5 00:28 removeIdenticalLines.sh
-rwxr-xr-x 1 hishamalip hishamalip  412 Apr  5 00:46 rwxFiles.sh
hishamalip@ideapad-330:~/github/test$ ./rwxFiles.sh
removeIdenticalLines.sh
rwxFiles.sh
hishamalip@ideapad-330:~/github/test$
```

Question 8 :

Write a shell script that folds long lines into 40 columns. Thus any line that exceeds 40 characters must be broken after 40th ; a\ is to be appended as the indication of folding and the processing is to be continued with the residue. The input is to be through a text file created by the user.

Algorithm :

```
1 Read file
2 Save total no of lines of file into variable n
3 set i = 1
4 while i <= n
5     read 1st line of file to variable named line
6     length = length of the line
7     while length >= 40
8         x = first 40 charchters of line
9         print x/
10        y = charchters of line from 41th column
11        line = y
12        length = length of line
13    end while
14    print line
15    i++
15 end while
```

Program :

```
read -p "Enter file name : " file
n=$(wc -l $file | awk '{print $1}')
i=1
while [ $i -le $n ] ; do
    line=$(sed -n "$i p" $file)
    length=$(echo $line | awk '{print length}')
    while [ $length -ge 40 ] ; do
        x=$(echo $line | cut -b 1-40)
        echo "$x\\"
        y=$(echo $line | cut -b 40-)
        line=$y
        length=$(echo $line | awk '{print length}')
    done
    echo $line
    i=$((i + 1))
done
```

Output :

```
hishamalip@ideapad-330:~/github/test$ cat a
Ram and Sham were in a fight. Both of them said they owned the same tree.
They went up to Birbal and asked him to decide the matter, once and for all. Who was the true owner of the tree?
hishamalip@ideapad-330:~/github/test$ ./b.sh
Enter file name : a
Ram and Sham were in a fight. Both of th\
hem said they owned the same tree.
They went up to Birbal and asked him to \
decide the matter, once and for all. Who\
o was the true owner of the tree?
hishamalip@ideapad-330:~/github/test$
```

Question 9 :

Write a shell script to delete all lines containing a specific word in one or more file supplied as argument to it.

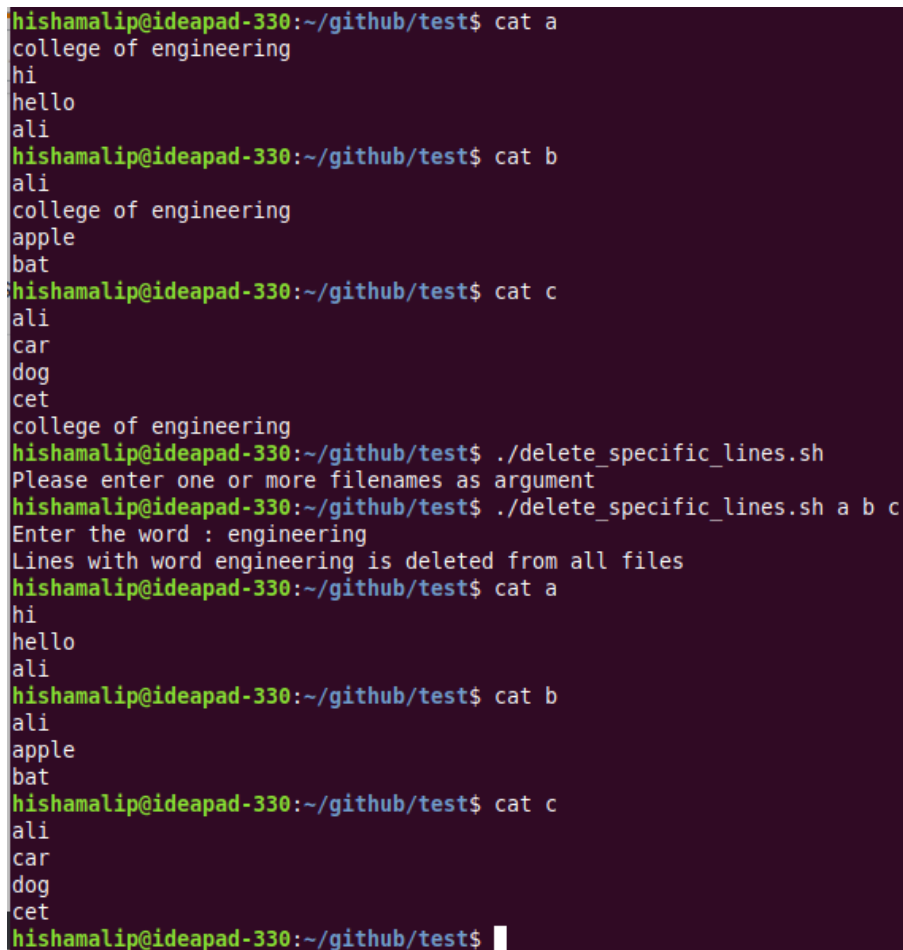
Algorithm :

- 1 Read arguments from \$*
- 2 Print "Enter the word to delete"
- 3 for arguments in \$*
- 4 Delete line with specific word and redirect output to temporary file
- 5 move temporary file to original file
- 6 end for

Program :

```
if [ $# -eq 0 ] ; then
    echo "Please enter one or more filenames as argument"
else
    read -p "Enter the word : " word
    for file in $* ; do
        sed "/$word/d" $file > temp
        mv temp $file
    done
    echo "Lines with word $word is deleted from all files"
fi
```

Output :



```
hishamali@ideapad-330:~/github/test$ cat a
college of engineering
hi
hello
ali
hishamali@ideapad-330:~/github/test$ cat b
ali
college of engineering
apple
bat
hishamali@ideapad-330:~/github/test$ cat c
ali
car
dog
cet
college of engineering
hishamali@ideapad-330:~/github/test$ ./delete_specific_lines.sh
Please enter one or more filenames as argument
hishamali@ideapad-330:~/github/test$ ./delete_specific_lines.sh a b c
Enter the word : engineering
Lines with word engineering is deleted from all files
hishamali@ideapad-330:~/github/test$ cat a
hi
hello
ali
hishamali@ideapad-330:~/github/test$ cat b
ali
apple
bat
hishamali@ideapad-330:~/github/test$ cat c
ali
car
dog
cet
hishamali@ideapad-330:~/github/test$
```

Result :

Practiced various shell scripting programs and output is verified.