Experiment 6
Shell Scripting – Set 2 29/03/2019

1. Write a shell script that displays a special listing showing the permissions, size filename and last modification time of filename supplied as arguments. Provide suitable headers using the printf command.

Algorithm

1 If $# is zero then go to step 6
2 Read the file name in file
3 if the file with the name doesnt exist go to 6
4 Store the file name ,permission,size,date
5 Print stored details
6 Exit

schell script

```
#To display filename permissions and Modification date
if [ $# -eq 0 ]
        then
        echo "Enter the file names"
        exit
fi
for file in $*
        do
                if [ -f $file ]
                then
                        NAME=`basename $file`
                        PERM=`ls -lah $file|awk -F " " '{print $1}'`
                        SIZE=`ls -lah $file|awk -F " " '{print $5}'`
                        DATE=`ls -lah $file|awk -F " " '{print $6 " " $7 " " $8}'`
                        printf "=======================\nThe name of file is : $NAME\n++++++++++ \nPermissions are $PERM\n++++++++++\nThe $

                else
                        echo "File $file is not present"

                fi
        done
```

output

```
abhishek@abhishek:~/Abhishek/fosslab/shell$ sh q6.sh
Enter the file names
abhishek@abhishek:~/Abhishek/fosslab/shell$ sh q6.sh hello
File hello is not present
abhishek@abhishek:~/Abhishek/fosslab/shell$ sh q6.sh ulist
=======================
The name of file is : ulist
++++++++++
Permissions are -rw-r--r--
++++++++++
The size is 28
last modified date is Mar 19 22:20
abhishek@abhishek:~/Abhishek/fosslab/shell$
```

2. Write a script that compares two directories dir1 and dir2(supplied as arguments) and copies to dir1 from dir2 every file that is not present in dir1.

Algorithm

1 if $# not euql to 2 go to step 6
2 if both directories deosnt exist go to step 6
3 store the name of second directory
4 checking the files in second directory which is absent in first directory
5 copying unique files in directory 2 to 1
6 exit

schell script

```
#copy the content od directories
if [ $# -ne 2 ]
        then
        echo "Enter two directory names"
        exit
fi
if [ -d $1 ]
        then
        if [ -d $2 ]
        then
        echo "both directories Exist"
        NAME2=`basename $2`
        diff $1 $2 | grep -w "$NAME2" |awk -F ":" '{print $2}' >> temp
        while read line
        do
                cp "$2/$line" $1
        done < temp
        rm temp
        else
                echo "Directory not present"
        fi
else
        echo "Directory not present"
fi
```

output

```
abhishek@abhishek:~/Abhishek/fosslab/shell$ mkdir test1
abhishek@abhishek:~/Abhishek/fosslab/shell$ mkdir test2
abhishek@abhishek:~/Abhishek/fosslab/shell$ cd test1
abhishek@abhishek:~/Abhishek/fosslab/shell/test1$ touch a b
abhishek@abhishek:~/Abhishek/fosslab/shell/test1$ ls
a  b
abhishek@abhishek:~/Abhishek/fosslab/shell/test1$ cd ..
abhishek@abhishek:~/Abhishek/fosslab/shell$ cd test2
abhishek@abhishek:~/Abhishek/fosslab/shell/test2$ touch c d a
abhishek@abhishek:~/Abhishek/fosslab/shell/test2$ cd ..
abhishek@abhishek:~/Abhishek/fosslab/shell$ sh q7.sh test1 test2
both directories Exist
abhishek@abhishek:~/Abhishek/fosslab/shell$ cd test1
abhishek@abhishek:~/Abhishek/fosslab/shell/test1$ ls
a  b  c  d
abhishek@abhishek:~/Abhishek/fosslab/shell/test1$
```

3. Write a shell script that accepts two file names as arguments, checks if the permissions for these files are identical and if the permissions are identical,output common permissions and otherwise output each file name followed by its permissions.

Algorithm

1 if $# not equal to 2 go to step 7
2 if both files doesnt exist go to step 7
3 store the permissions of two files in PERM1, PERM2
4 if PERM1=PERM2 do 4 else do 6
5 print common permission go to 7
6 print both permissions
7 exit

Schellscript

```
#compare two files permission
if [ $# -ne 2 ]
        then
        echo "Enter two file names"
        exit
fi
if [ -f $1 ]
        then
        if [ -f $2 ]
                then
                echo "both files Exist"
                PERM1=`ls -lah $1|awk -F " " '{print $1}'`
                PERM2=`ls -lah $2|awk -F " " '{print $1}'`
                if [ $PERM1 = $PERM2 ]
                        then
                        echo "The common Permission is $PERM1"
                # else
                        echo "The Permission of $1 is $PERM1"
                        echo "The Permission of $2 is $PERM2"
                fi
        else
                echo "file 2 not present"
        fi
else
        echo "file 1 not present"
fi
```

output

```
abhishek@abhishek:~/Abhishek/fosslab/shell$ sh q8.sh q1.sh hello
both files Exist
The Permission of q1.sh is -rw-rw-r--
The Permission of hello is -rwxr-xr-x
abhishek@abhishek:~/Abhishek/fosslab/shell$ sh q8.sh q1.sh q2.sh
both files Exist
The common Permission is -rw-rw-r--
abhishek@abhishek:~/Abhishek/fosslab/shell$
```

4. Write a shell script which receives two file names as arguments. It should check whether the two file contents are same or not. If they are same then second file should be deleted.

Algorithm

1 if #$ is not 2 go to step 5
2 if both files doesnt exist go to step 5
3 compare the content of two files
4 if contents are same remove second file else go to 5
5 exit

Schell script

```
#compare two files
if [ $# -ne 2 ]
        then
        echo "Enter two file names"
        exit
fi
if [ -f $1 ]
        then
        if [ -f $2 ]
                then
                echo "both files Exist"
                (cmp -s $1 $2)&&(rm $2 ; echo "deleted repeating file $2")||(echo "not deleted they are different files")

        else
                echo "file 2 not present"
        fi
else
        echo "file 1 not present"
fi
```

output

```
abhishek@abhishek:~/Abhishek/fosslab/shell$ cat a
hello world
abhishek@abhishek:~/Abhishek/fosslab/shell$ cat aa
hello world
abhishek@abhishek:~/Abhishek/fosslab/shell$ ls
a   addnames.sh       q10.sh  q2.sh  q3.sh.save  q6.sh  q8.sh  test1  ulist
aa  addnames.sh.save  q1.sh   q3.sh  q5.sh       q7.sh  q9.sh  test2
abhishek@abhishek:~/Abhishek/fosslab/shell$ sh q9.sh a aa
both files Exist
deleted repeating file aa
abhishek@abhishek:~/Abhishek/fosslab/shell$ ls
a            addnames.sh.save  q1.sh  q3.sh       q5.sh  q7.sh  q9.sh  test2
addnames.sh  q10.sh            q2.sh  q3.sh.save  q6.sh  q8.sh  test1  ulist
abhishek@abhishek:~/Abhishek/fosslab/shell$
```

5. Write a shell script that, given a file name as the argument will count vowels, blank spaces, characters, number of line and symbols.

Algorithm

1 if #$ not equal to 1 go to step 8
2 if file doesnt exit go to step 8
3 store number of spaces *Space=`grep -o ' ' $1 | wc -l`*
4 store number of charecters *Chr=`wc -c $1 | awk '{print $1}'*
5 store number of lines Line=`wc -l $1 | awk '{print $1}'`
6 read the file charecter by charecter and store in c
7 if vowel found increment vowel count
6 if special charecter found ,increment special charecter count
7 print Space,Chr,Line,v,Sym
8 exit

Schell script

```
if [[ $# -ne 1 ]]
then
  echo "Enter file as argument"
  exit
fi
if [[ !(-a $1) ]]
then
  echo "Enter valid file"
  exit
fi
Sym=0
Space=`grep -o ' ' $1 | wc -l`
Chr=`wc -c $1 | awk '{print $1}'`
V=0
Line=`wc -l $1 | awk '{print $1}'`
while read -n1 c
do
if [[ $c == *['!'@#\$%^\&*()_+]* ]]
then
((Sym++))
elif [[ $c == *[aAeEiIoOuU]* ]]
then
((V++))
fi
done < "$1"
echo "The number of lines are: $Line"
echo "The number of vowels are: $V"
echo "The number of characters are: $Chr"
echo "The number of spaces are: $Space"
echo "The number of symbols are: $Sym"
```

output

```
abhishek@abhishek:~/Abhishek/fosslab/shell$ cat abhi
Hello world!
&
Hai world!
abhishek@abhishek:~/Abhishek/fosslab/shell$ bash q10.sh abhi
The number of lines are: 3
The number of vowels are: 6
The number of characters are: 26
The number of spaces are: 2
The number of symbols are: 3
abhishek@abhishek:~/Abhishek/fosslab/shell$
```

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