Free & Open Source Software
Lab Report

Shell Scripting
Set 2

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1 Question 1

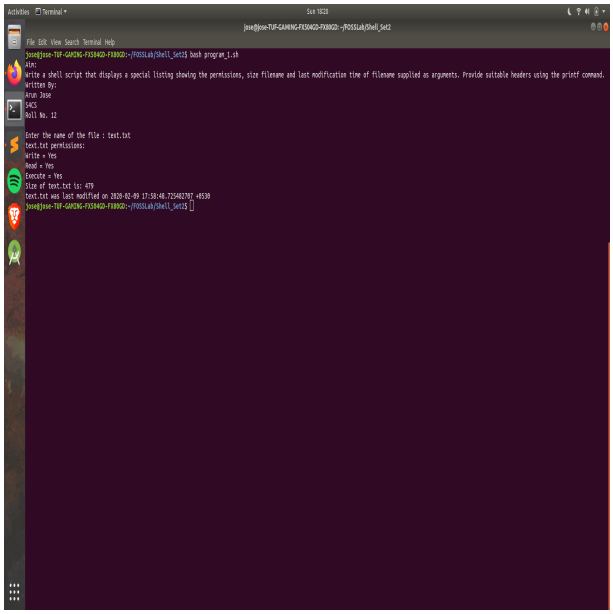
1.1 Aim

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.

1.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

echo -n "Enter the name of the file : "
read fileName

if [ ! -f $fileName ]
then
 echo "$fileName not a file"
 exit 1
fi
[ -w $fileName ] && W="Write = Yes" || W="Write = No"
[ -x $fileName ] && X="Execute = Yes" || X="Execute = No"
[ -r $fileName ] && R="Read = Yes" || R="Read = No"

echo "$fileName permissions:"
echo "$W"
echo "$R"
echo "$X"
echo "Size of $fileName is: $(stat -c%s $fileName)"
echo "$fileName was last modified on $(stat -c %x $fileName)"
```

1.3 Sample



1.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.

2 Question 2

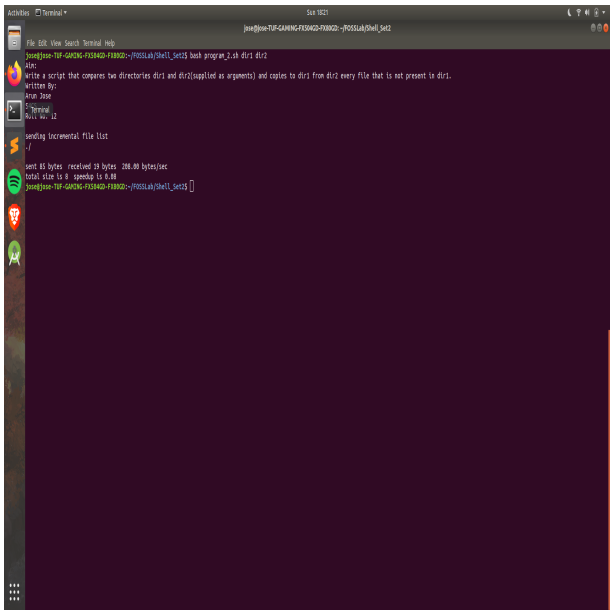
2.1 Aim

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.

2.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

dir1=$1
dir2=$2

diff -q dir1 dir2
rsync -av dir1/ dir2
```

2.3 Sample



2.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.

3 Question 3

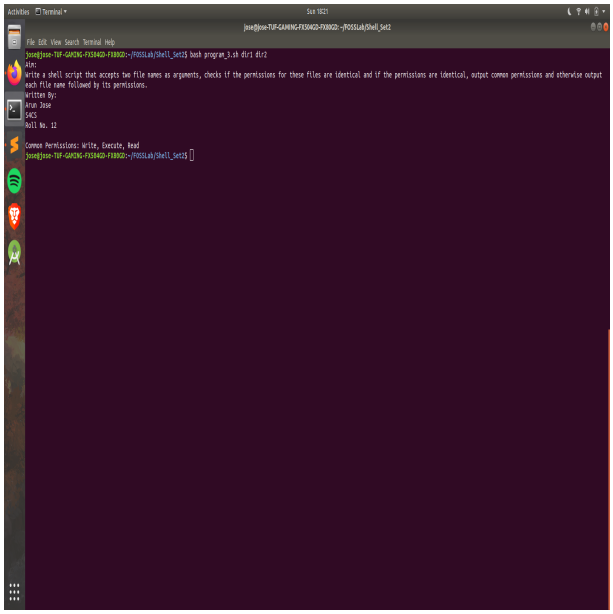
3.1 Aim

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.

3.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

dir1=$1
dir2=$2

[ -w $dir1 ] && W1="Write = Yes" || W1="Write = No"
[ -x $dir1 ] && X1="Execute = Yes" || X1="Execute = No"
[ -r $dir1 ] && R1="Read = Yes" || R1="Read = No"

[ -w $dir2 ] && W2="Write = Yes" || W2="Write = No"
[ -x $dir2 ] && X2="Execute = Yes" || X2="Execute = No"
[ -r $dir2 ] && R2="Read = Yes" || R2="Read = No"

if [ "$W1" == "$W2" ] && [ "$X1" == "$X2" ] && [ "$R1" == "$R2" ]
then
    echo "Common Permissions: Write, Execute, Read"
else
 echo "$dir1 Permissions: "
 echo "Write: $W1"
 echo "Execute: $X1"
 echo "Read: $R1"
 echo ""
 echo "$dir2 Permissions: "
 echo "Write: $W2"
 echo "Execute: $X2"
 echo "Read: $R2"
fi
```

3.3 Sample



3.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.

4 Question 4

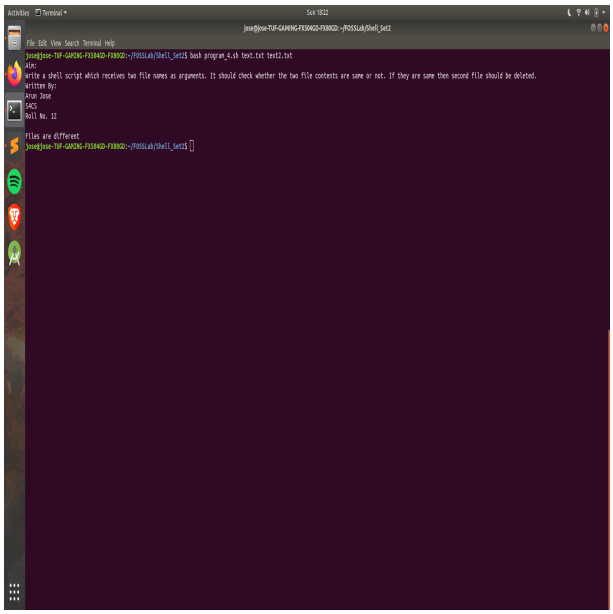
4.1 Aim

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.

4.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

dir1=$1
dir2=$2

cmp --silent $dir1 $dir2 && rm "$dir2" && echo "$dir2 removed" ||
echo "Files are different"
```

4.3 Sample



4.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.

5 Question 5

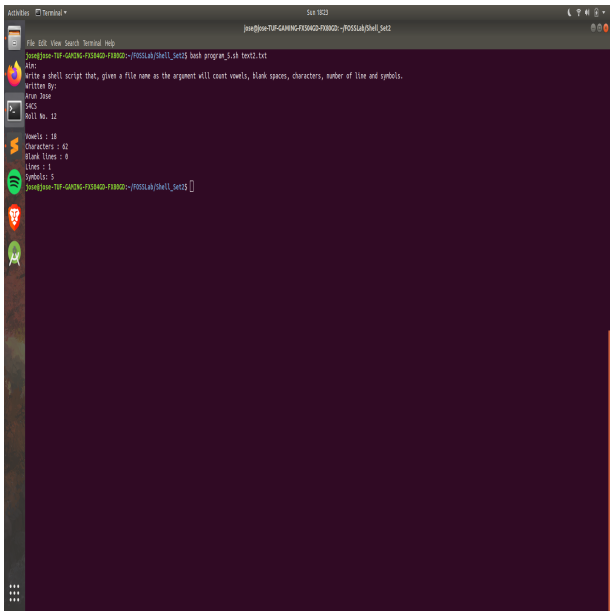
5.1 Aim

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

5.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

file=$1

echo "Vowels : $(cat $file | grep -o "[aAeEiIoOuU]" |wc -l)"
echo "Characters : $(cat $file | wc -c)"
echo "Blank lines : $(grep  -c '^$' $file)"
echo "Lines : $(cat $file|wc -l )"
echo "Symbols: $(cat $file | grep -o "[@#$%^&*()_-+={}|\:;,<.>/?]" |wc -l)"
```

5.3 Sample



5.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.

6 Question 6

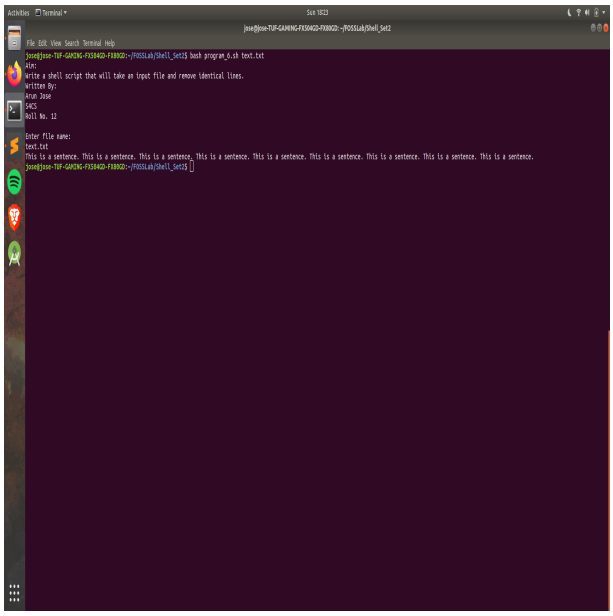
6.1 Aim

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

6.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

echo "Enter file name: "
read file

sort "$file" |uniq -u|tee "$file"
```

6.3 Sample



6.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.

7 Question 7

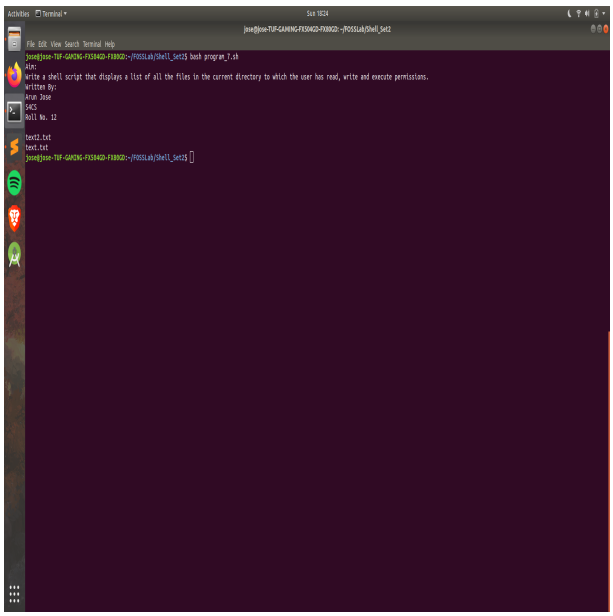
7.1 Aim

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.

7.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

for  file  in *
do
 if [ -f  $file ]
 then
 if [ -r  $file -a -w  $file -a -x  $file ]
 then
 ls $file
 fi
 fi
done
```

7.3 Sample



7.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.

8 Question 8

8.1 Aim

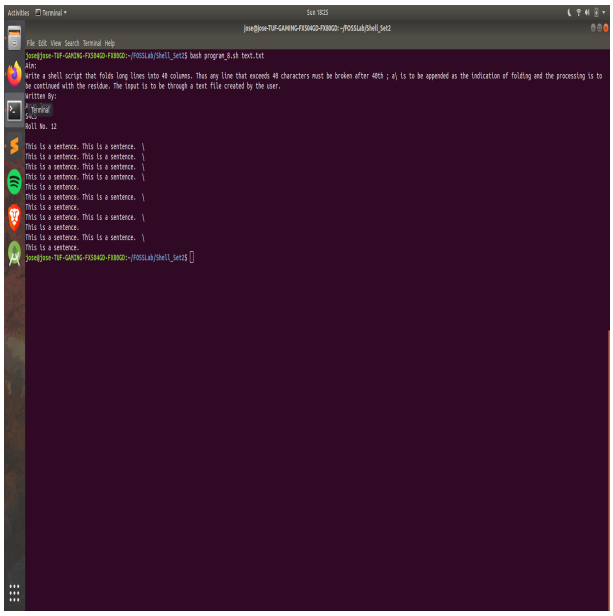
Write a shell script that folds long lines into 40 columns. Thus any line that exceeds 40 characters must be broken after 40th ; a is to be appended as the indication of folding and the processing is to be continued with the residue. The input is to be through a text file created by the user.

8.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

if [[ $# -ne 1 ]]
then
   echo "Enter file as argument"
    exit
fi

if [[ !(-a $1) ]]
then
    echo "Enter valid file"
    exit
fi

n=‘wc -l $1 | cut -d " " -f 1‘
i=1

while [ $i -le $n ]
do
    line=‘sed -n "$i p" $1‘
    cc=‘echo $line | wc -c | cut -d " " -f 1‘
    while [ $cc -ge 40 ]
    do
        ext=‘echo $line | cut -c 41-‘
        line=‘echo $line | cut -c 1-40‘
        echo "$line \\"
        line=$ext
        cc=‘echo $ext | wc -c | cut -d " " -f 1‘
    done
```

```
    echo "$line"
    i=‘expr $i + 1‘
    done
```

8.3 Sample



8.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.

9 Question 9

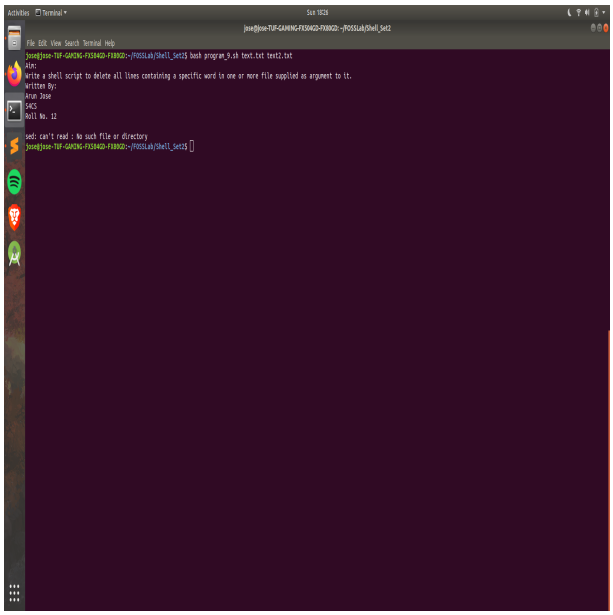
9.1 Aim

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

9.2 Source Code

```
printf "%s\n" "Written By: "
printf "%s\n" "Arun Jose"
printf "%s\n" "S4CS"
printf "%s\n" "Roll No. 12"
echo ""

sed -i '' -e '/The/d' "$@"
```

9.3 Sample



9.4 Result

The shell script was made and the output was verified. The script was run on Ubuntu 18.04.3 LTS.