Shell Scripting
Set 2
Part b

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

   (a) Start.

   (b) Exit the script if the file does not exist.

   (c) Use awk '!seen[$0]++' to remove duplicate lines.

   (d) This makes a dictionary, named seen. When a new line is encountered, it sets the value of the key as one. It prints the lie only if the value of seen[$0] is zero. So the next time the same line is encountered, it is not printed.

   (e) Stop.

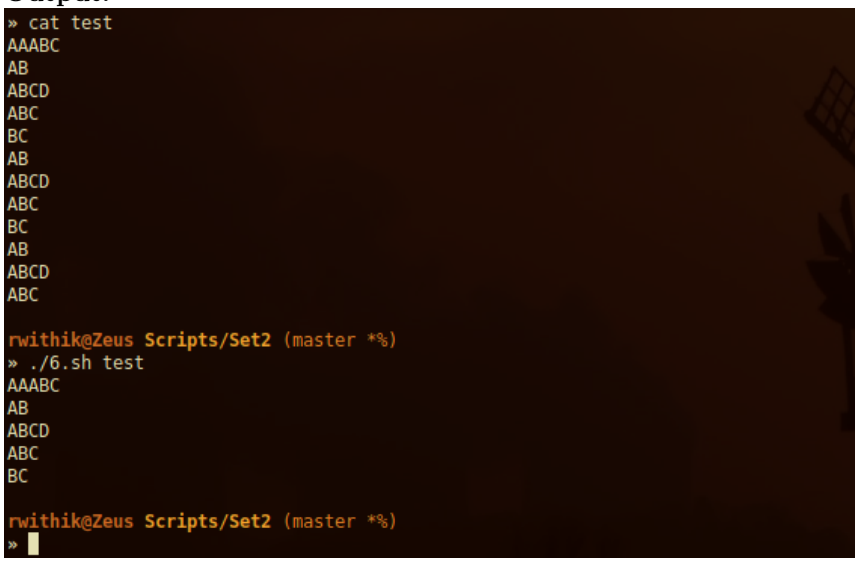
Script:

```
#!/bin/bash

if [[ ! -f $1 ]]
then
        printf "File does not exist"
fi

awk '!seen[$0]++' $1
```

Output:



2. 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:

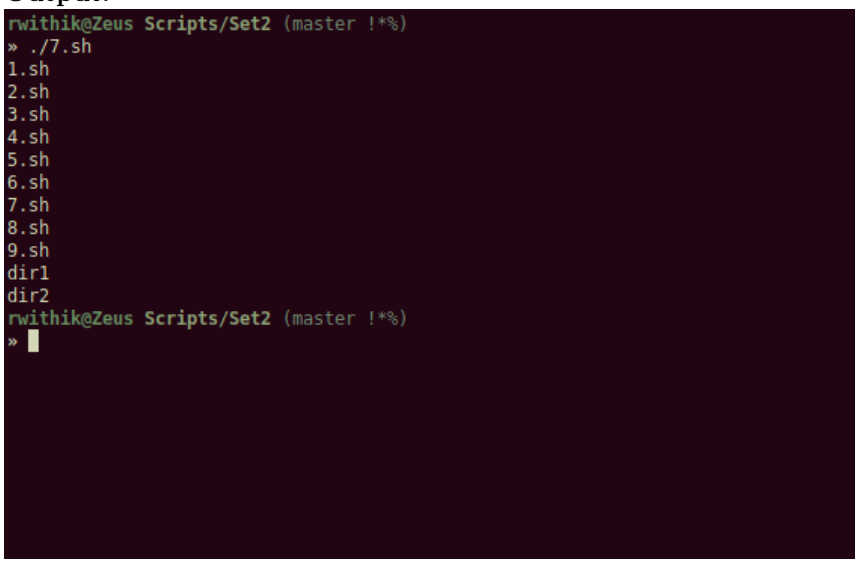
   (a) Start.
   (b) Write the contents of the current directory to a file, f.
   (c) Redirect the input stream to the file.
   (d) Check the permissions of the file with the -r, -w and -x flags of test.
   (e) Stop.

Script:

```
#!/bin/bash

ls -1 > f
exec < f
while read file
do
        if [[ -r $file && -w $file && -x $file ]]
        then
                printf "$file\n"
        fi
done
```

Output:



3. 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:

   (a) Start.
   (b) Exit the script if the file doesn't exist.
   (c) Store the number of lines in a variable, n.
   (d) Iterate through the file.
   (e) Loop through the line and cut 40 characters in each iteration.
   (f) Stop.

Script:

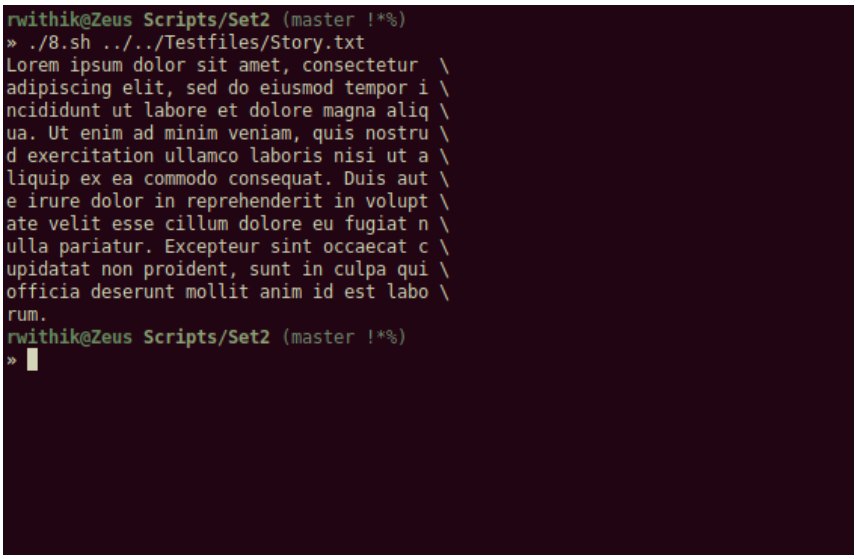
```
#!/bin/bash

if [[ ! -f $1 ]]
then
        printf "File does not exist"
        exit
fi

n=`wc -l $1 | cut -d " " -f 1`
i=1

while [ $i -le $n ]
do
    LINE=`sed -n "$i p" $1`
    CHARCOUNT=`echo $LINE | wc -c | cut -d " " -f 1`
    while [ $CHARCOUNT -ge 40 ]
    do
        EXT=`echo $LINE | cut -c 41-`
        LINE=`echo $LINE | cut -c 1-40`
        echo "$LINE \\"
        LINE=$EXT
        CHARCOUNT=`echo $EXT | wc -c | cut -d " " -f 1`
    done
        echo "$LINE"
        i=`expr $i + 1`
done
```

Output:


rwithik@Zeus Scripts/Set2 (master !*%)
» ./8.sh ../../Testfiles/Story.txt
Lorem ipsum dolor sit amet, consectetur \
adipiscing elit, sed do eiusmod tempor i \
ncididunt ut labore et dolore magna aliq \
ua. Ut enim ad minim veniam, quis nostru \
d exercitation ullamco laboris nisi ut a \
liquip ex ea commodo consequat. Duis aut \
e irure dolor in reprehenderit in volupt \
ate velit esse cillum dolore eu fugiat n \
ulla pariatur. Excepteur sint occaecat c \
upidatat non proident, sunt in culpa qui \
officia deserunt mollit anim id est labo \
rum.
rwithik@Zeus Scripts/Set2 (master !*%)
»

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

   (a) Start.
   (b) Read the word.
   (c) Loop through the files.
   (d) Check of the file exists.
   (e) Delete the lines contaning the word, with sed.
   (f) Stop.

Script:

```
#!/bin/bash

printf "Enter the word: "
read WORD

for file in $@
do
    if [[ -f $file ]]
    then
        printf "File: $file\n"
        cat $file | sed "/$WORD/d"
        printf "\n\n\n"
    else
        printf "File does not exist"
    fi
done
```

Output:

```
rwithik@Zeus Scripts/Set2 (master !*%)
» ./9.sh temp
Enter the word: Lorem
File: temp
adipiscing elit, sed do eiusmod tempor i \
ncididunt ut labore et dolore magna aliq \
ua. Ut enim ad minim veniam, quis nostru \
d exercitation ullamco laboris nisi ut a \
liquip ex ea commodo consequat. Duis aut \
e irure dolor in reprehenderit in volupt \
ate velit esse cillum dolore eu fugiat n \
ulla pariatur. Excepteur sint occaecat c \
upidatat non proident, sunt in culpa qui \
officia deserunt mollit anim id est labo \
rum.



rwithik@Zeus Scripts/Set2 (master !*%)
»
```