MD YASEEN

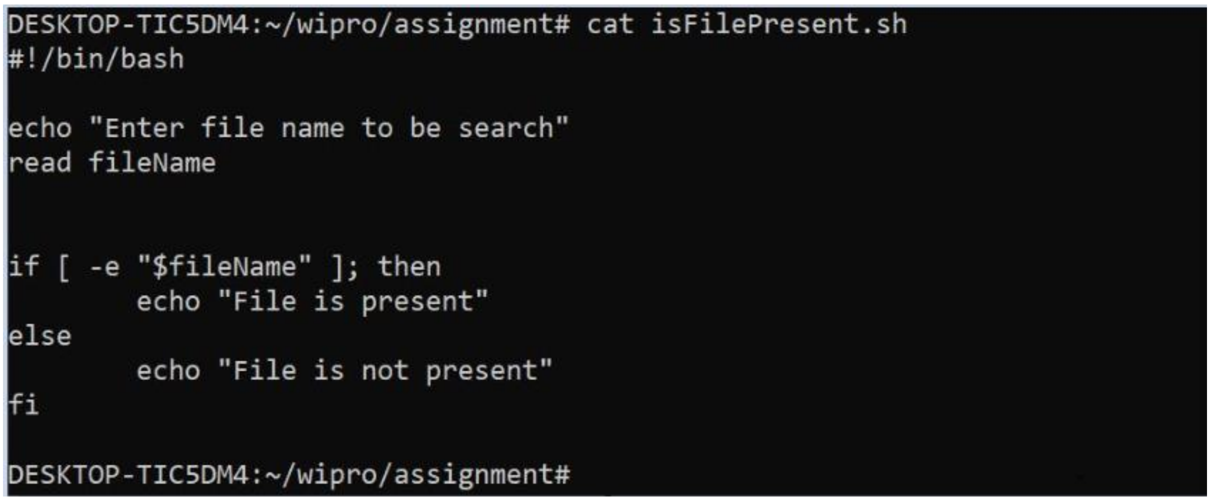
DAY 7 ASSIGNMENT (SHELL SCRIPT)

Assignment-1:

Ensure the script checks if a specific file (e.g., myfile.txt) exists in the current directory. If it exists, print "File exists", otherwise print "File not found".

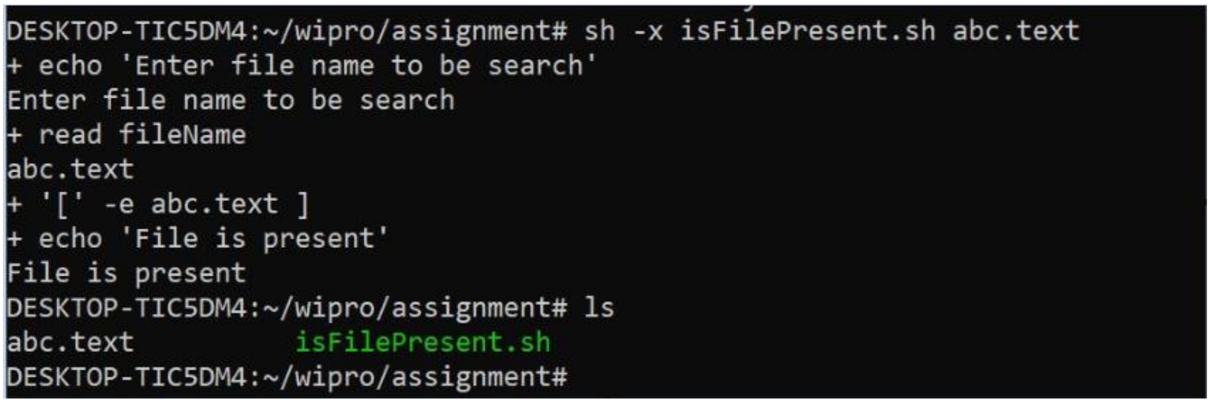
SOLUTION:

- Script to check if a specific file exists or not (CODE):



```
DESKTOP-TIC5DM4:~/wipro/assignment# cat isFilePresent.sh
#!/bin/bash

echo "Enter file name to be search"
read fileName


if [ -e "$fileName" ]; then
        echo "File is present"
else
        echo "File is not present"
fi

DESKTOP-TIC5DM4:~/wipro/assignment#
```

- Output :



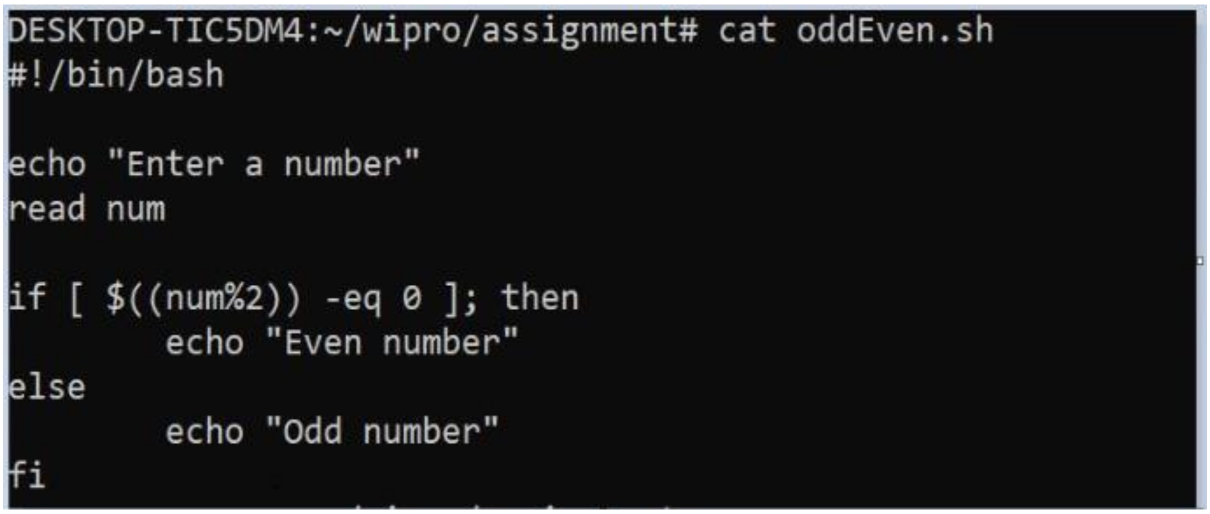
```
DESKTOP-TIC5DM4:~/wipro/assignment# sh -x isFilePresent.sh abc.text
+ echo 'Enter file name to be search'
Enter file name to be search
+ read fileName
abc.text
+ '[' -e abc.text ]
+ echo 'File is present'
File is present
DESKTOP-TIC5DM4:~/wipro/assignment# ls
abc.text            isFilePresent.sh
DESKTOP-TIC5DM4:~/wipro/assignment#
```

Assignment-2:

Write a script that reads numbers from the user until they enter '0'. The script should also print whether each number is odd or even.

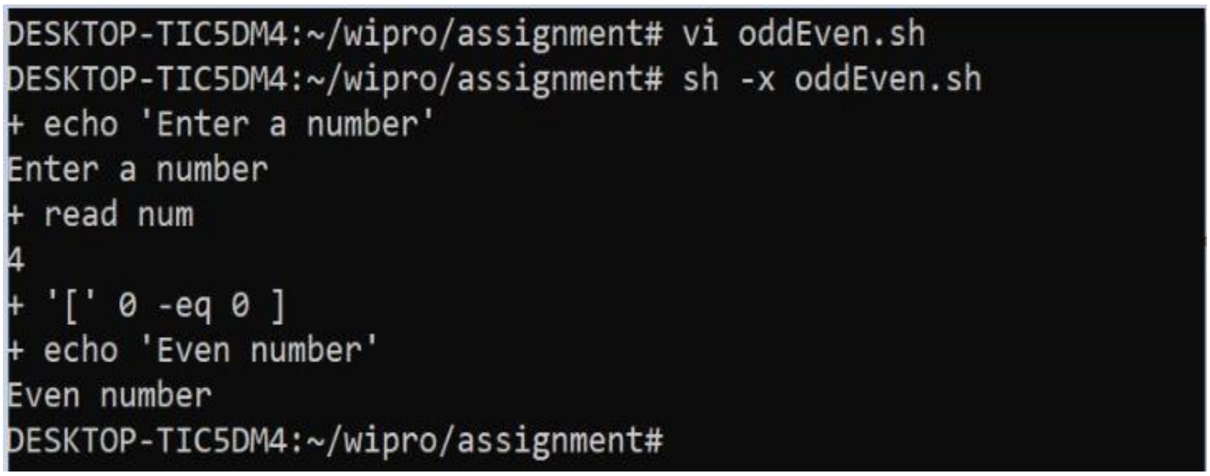
SOLUTION:

- Script :



```
DESKTOP-TIC5DM4:~/wipro/assignment# cat oddEven.sh
#!/bin/bash

echo "Enter a number"
read num

if [ $((num%2)) -eq 0 ]; then
        echo "Even number"
else
        echo "Odd number"
fi
```

- OUTPUT:



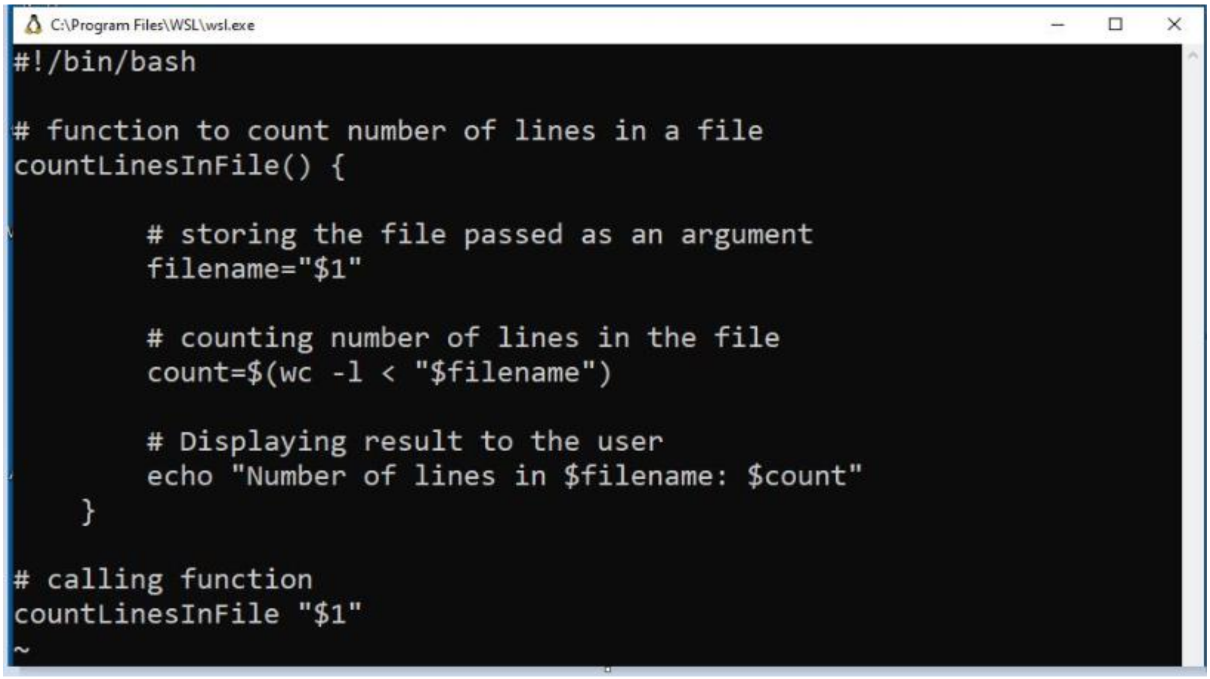
```
DESKTOP-TIC5DM4:~/wipro/assignment# vi oddEven.sh
DESKTOP-TIC5DM4:~/wipro/assignment# sh -x oddEven.sh
+ echo 'Enter a number'
Enter a number
+ read num
4
+ '[' 0 -eq 0 ]
+ echo 'Even number'
Even number
DESKTOP-TIC5DM4:~/wipro/assignment#
```

Assignment-3:

Create a function that takes a filename as an argument and prints the number of lines in the file. Call this function from your script with different filenames.

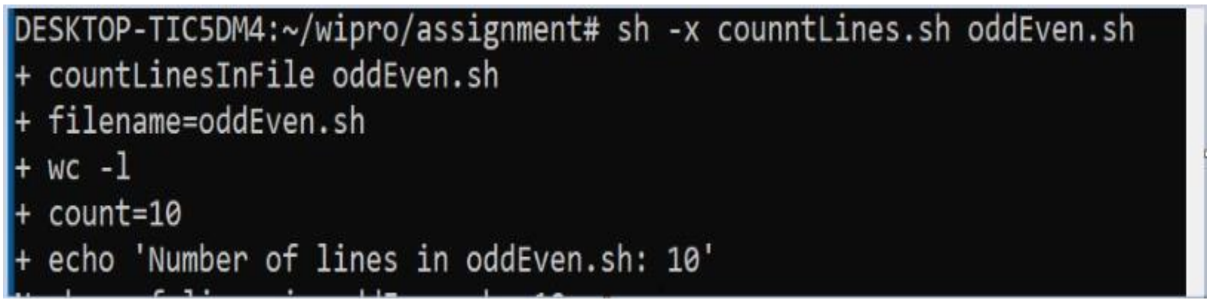
SOLUTION:

- Script to print number of lines in a file



```
#!/bin/bash

# function to count number of lines in a file
countLinesInFile() {

        # storing the file passed as an argument
        filename="$1"

        # counting number of lines in the file
        count=$(wc -l < "$filename")

        # Displaying result to the user
        echo "Number of lines in $filename: $count"
    }

# calling function
countLinesInFile "$1"
~
```

- OUTPUT:



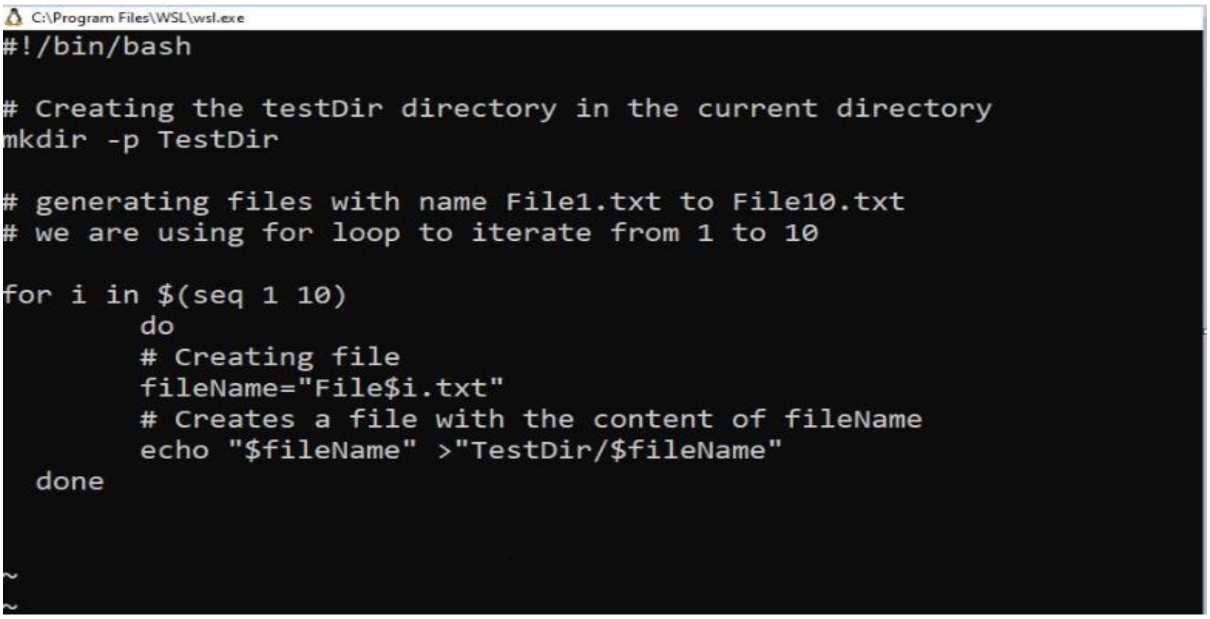
```
DESKTOP-TIC5DM4:~/wipro/assignment# sh -x counntLines.sh oddEven.sh
+ countLinesInFile oddEven.sh
+ filename=oddEven.sh
+ wc -l
+ count=10
+ echo 'Number of lines in oddEven.sh: 10'
```

Assignment-4:

Write a script that creates a directory named TestDir and inside it, creates ten files named File1.txt, File2.txt, ... File10.txt. Each file should contain its filename as its content (e.g., File1.txt contains "File1.txt").

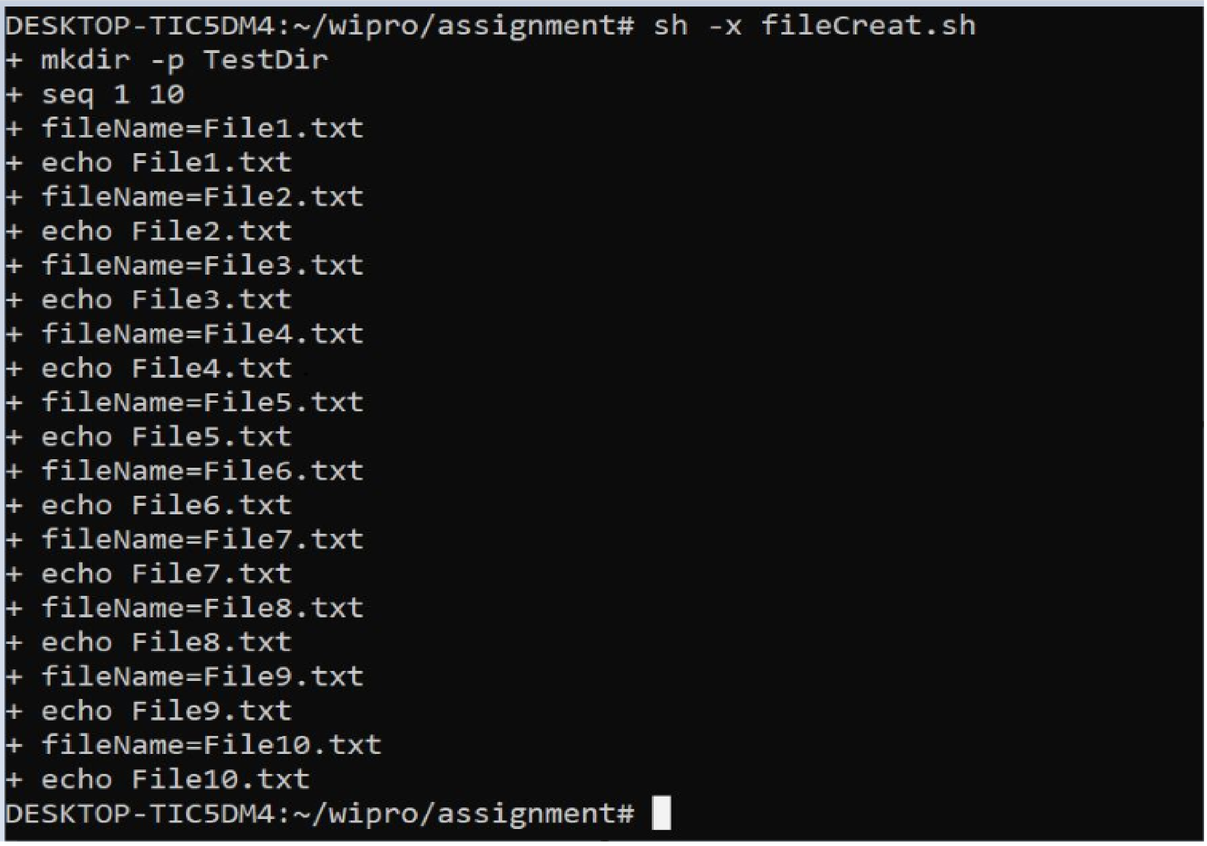
SOLUTION:

- Script to perform above task



```
#!/bin/bash

# Creating the testDir directory in the current directory
mkdir -p TestDir

# generating files with name File1.txt to File10.txt
# we are using for loop to iterate from 1 to 10

for i in $(seq 1 10)
        do
        # Creating file
        fileName="File$i.txt"
        # Creates a file with the content of fileName
        echo "$fileName" >"TestDir/$fileName"
  done


~
~
```

- OUTPUT:



```
DESKTOP-TIC5DM4:~/wipro/assignment# sh -x fileCreat.sh
+ mkdir -p TestDir
+ seq 1 10
+ fileName=File1.txt
+ echo File1.txt
+ fileName=File2.txt
+ echo File2.txt
+ fileName=File3.txt
+ echo File3.txt
+ fileName=File4.txt
+ echo File4.txt
+ fileName=File5.txt
+ echo File5.txt
+ fileName=File6.txt
+ echo File6.txt
+ fileName=File7.txt
+ echo File7.txt
+ fileName=File8.txt
+ echo File8.txt
+ fileName=File9.txt
+ echo File9.txt
+ fileName=File10.txt
+ echo File10.txt
DESKTOP-TIC5DM4:~/wipro/assignment# █
```

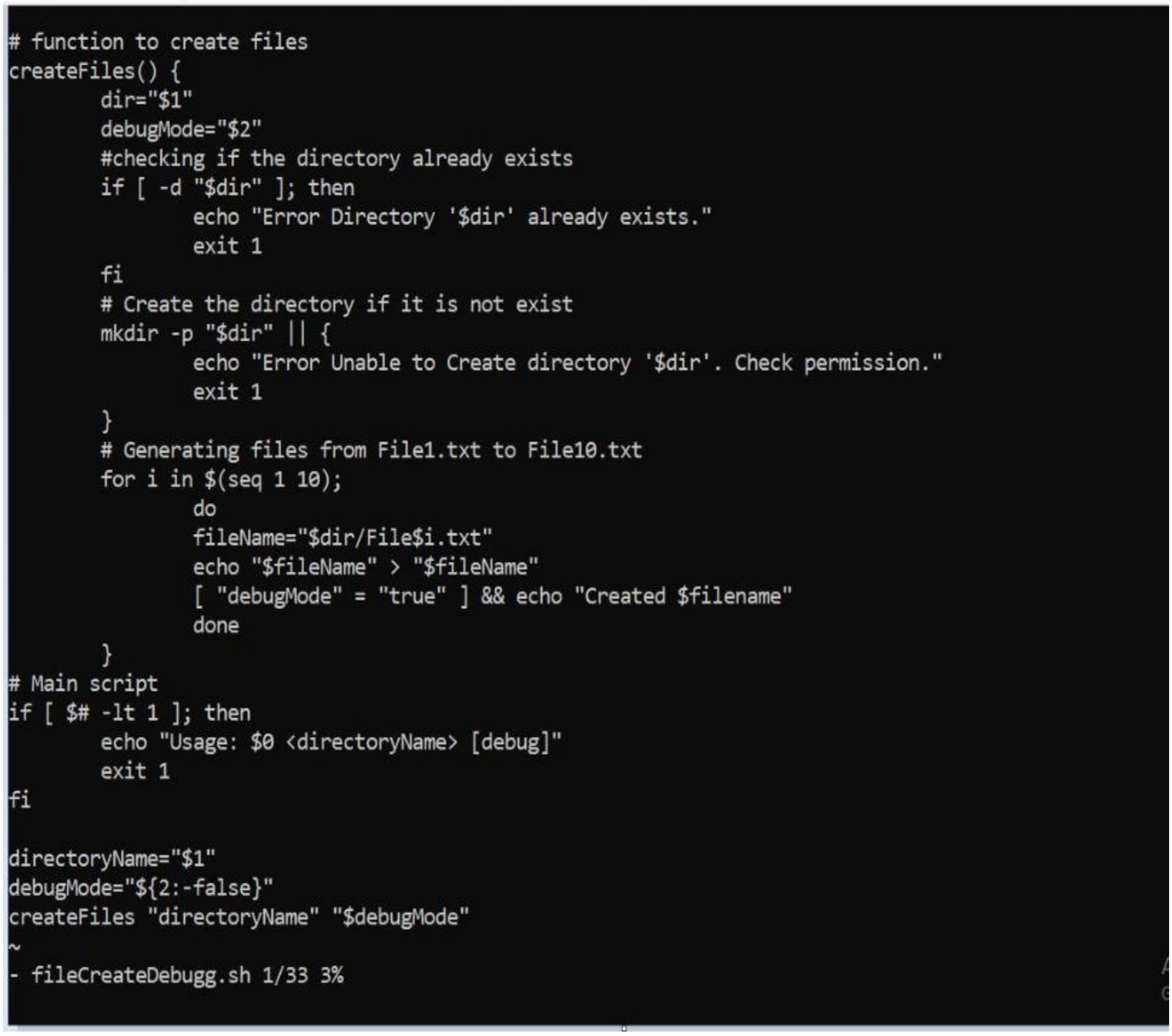
Assignment-5:

Modify the script to handle errors, such as the directory already existing or lacking permissions to create files.

Add a debugging mode that prints additional information when enabled.

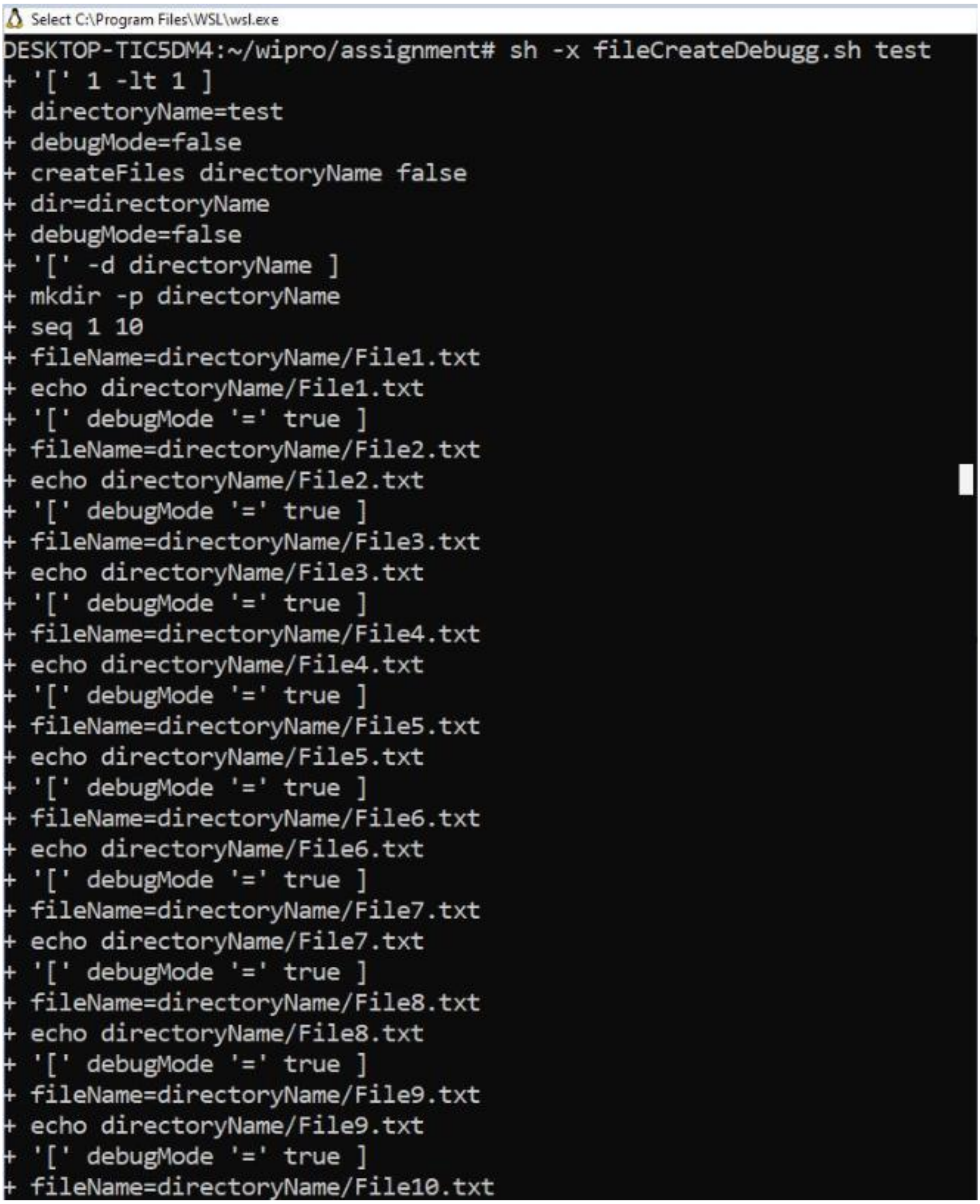
SOLUTION:

- Script to perform above task:



```
# function to create files
createFiles() {
        dir="$1"
        debugMode="$2"
        #checking if the directory already exists
        if [ -d "$dir" ]; then
                echo "Error Directory '$dir' already exists."
                exit 1
        fi
        # Create the directory if it is not exist
        mkdir -p "$dir" || {
                echo "Error Unable to Create directory '$dir'. Check permission."
                exit 1
        }
        # Generating files from File1.txt to File10.txt
        for i in $(seq 1 10);
                do
                fileName="$dir/File$i.txt"
                echo "$fileName" > "$fileName"
                [ "debugMode" = "true" ] && echo "Created $filename"
                done
        }
# Main script
if [ $# -lt 1 ]; then
        echo "Usage: $0 <directoryName> [debug]"
        exit 1
fi

directoryName="$1"
debugMode="${2:-false}"
createFiles "directoryName" "$debugMode"
~
- fileCreateDebugg.sh 1/33 3%
```

- OUTPUT:



```
DESKTOP-TIC5DM4:~/wipro/assignment# sh -x fileCreateDebugg.sh test
+ '[' 1 -lt 1 ]
+ directoryName=test
+ debugMode=false
+ createFiles directoryName false
+ dir=directoryName
+ debugMode=false
+ '[' -d directoryName ]
+ mkdir -p directoryName
+ seq 1 10
+ fileName=directoryName/File1.txt
+ echo directoryName/File1.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File2.txt
+ echo directoryName/File2.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File3.txt
+ echo directoryName/File3.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File4.txt
+ echo directoryName/File4.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File5.txt
+ echo directoryName/File5.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File6.txt
+ echo directoryName/File6.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File7.txt
+ echo directoryName/File7.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File8.txt
+ echo directoryName/File8.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File9.txt
+ echo directoryName/File9.txt
+ '[' debugMode '=' true ]
+ fileName=directoryName/File10.txt
```

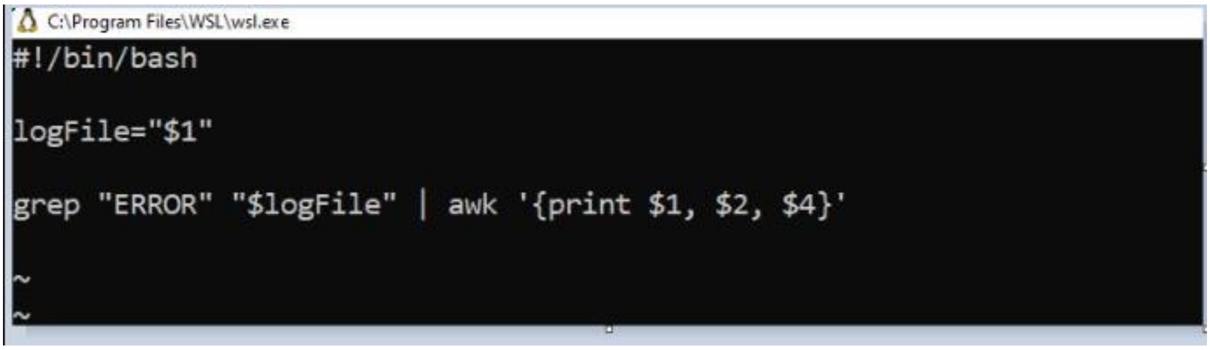
Assignment-6:

Given a sample log file, write a script using grep to extract all lines containing "ERROR". Use awk to print the date, time, and error message of each extracted line.

Data Processing with sed

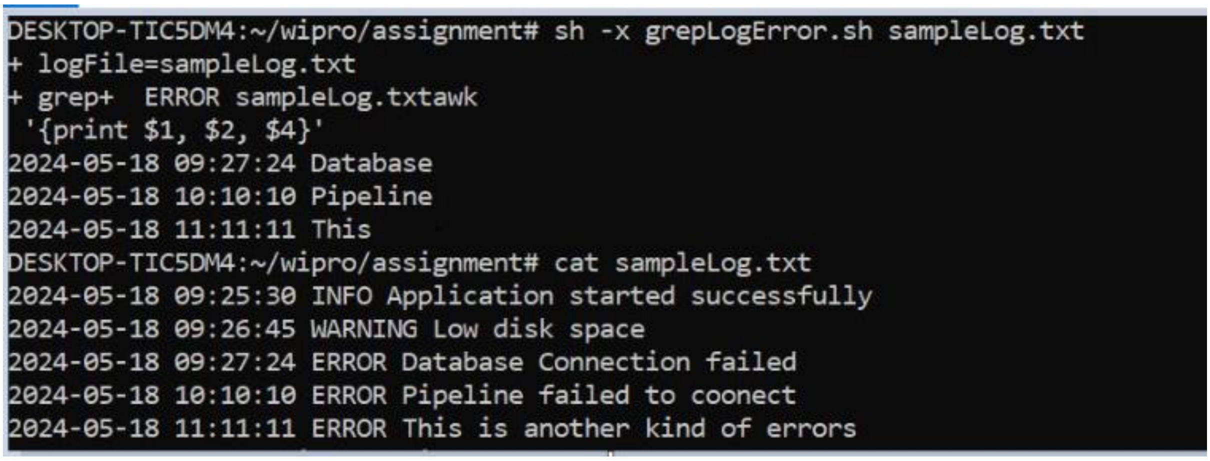
SOLUTION:

- Script to perform above specified task



```
#!/bin/bash

logFile="$1"

grep "ERROR" "$logFile" | awk '{print $1, $2, $4}'

~
~
```

- OUTPUT:



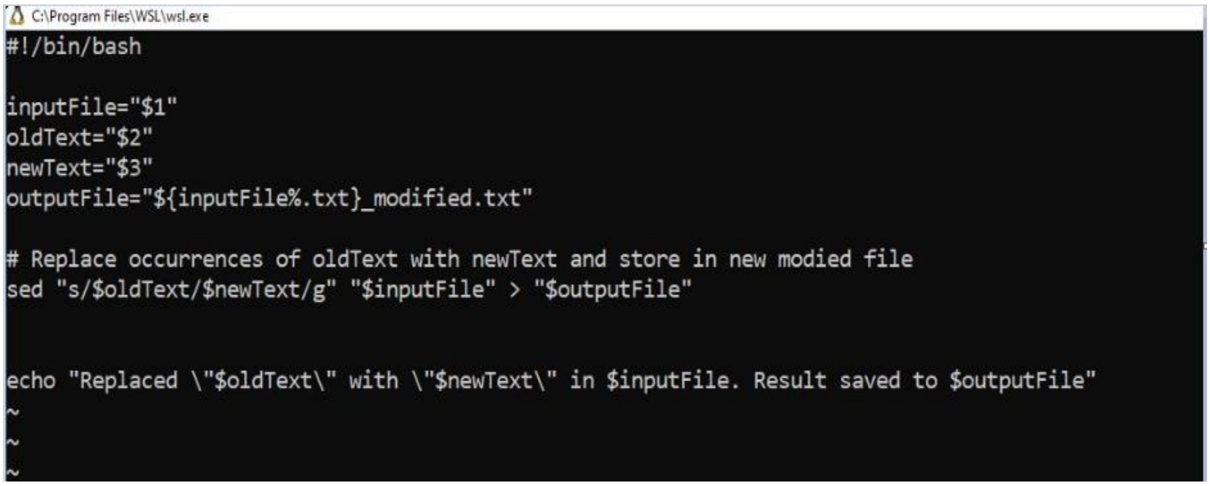
```
DESKTOP-TIC5DM4:~/wipro/assignment# sh -x grepLogError.sh sampleLog.txt
+ logFile=sampleLog.txt
+ grep+  ERROR sampleLog.txtawk
 '{print $1, $2, $4}'
2024-05-18 09:27:24 Database
2024-05-18 10:10:10 Pipeline
2024-05-18 11:11:11 This
DESKTOP-TIC5DM4:~/wipro/assignment# cat sampleLog.txt
2024-05-18 09:25:30 INFO Application started successfully
2024-05-18 09:26:45 WARNING Low disk space
2024-05-18 09:27:24 ERROR Database Connection failed
2024-05-18 10:10:10 ERROR Pipeline failed to coonect
2024-05-18 11:11:11 ERROR This is another kind of errors
```

Assignment-7:

Create a script that takes a text file and replaces all occurrences of "old_text" with "new_text". Use sed to perform this operation and output the result to a new file.

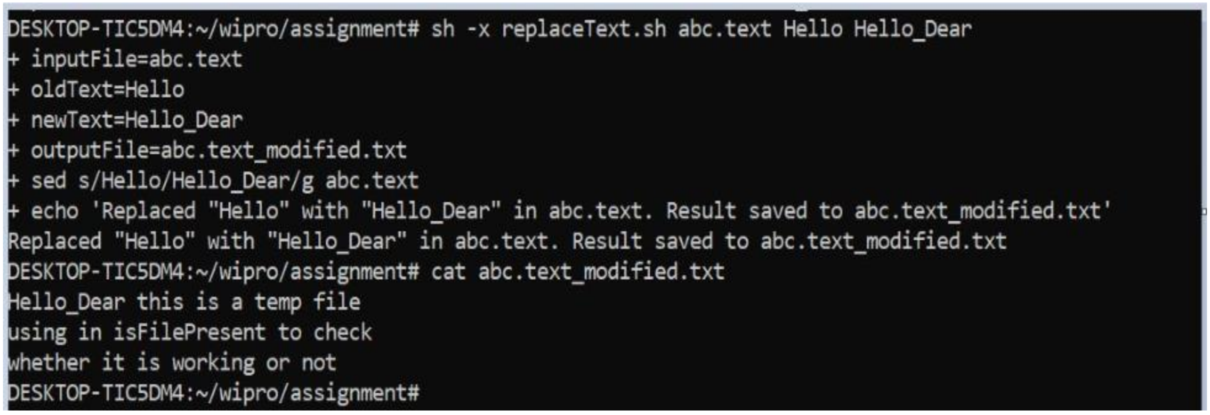
SOLUTION:

- Script to replace “oldText” with “newText”



```
#!/bin/bash

inputFile="$1"
oldText="$2"
newText="$3"
outputFile="${inputFile%.txt}_modified.txt"

# Replace occurrences of oldText with newText and store in new modied file
sed "s/$oldText/$newText/g" "$inputFile" > "$outputFile"


echo "Replaced \"$oldText\" with \"$newText\" in $inputFile. Result saved to $outputFile"
~
~
~
```

- Output:



```
DESKTOP-TIC5DM4:~/wipro/assignment# sh -x replaceText.sh abc.text Hello Hello_Dear
+ inputFile=abc.text
+ oldText=Hello
+ newText=Hello_Dear
+ outputFile=abc.text_modified.txt
+ sed s/Hello/Hello_Dear/g abc.text
+ echo 'Replaced "Hello" with "Hello_Dear" in abc.text. Result saved to abc.text_modified.txt'
Replaced "Hello" with "Hello_Dear" in abc.text. Result saved to abc.text_modified.txt
DESKTOP-TIC5DM4:~/wipro/assignment# cat abc.text_modified.txt
Hello_Dear this is a temp file
using in isFilePresent to check
whether it is working or not
DESKTOP-TIC5DM4:~/wipro/assignment#
```