Karthik Koparde

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".

```
#!/bin/bash
file="$@"
if [ -f $file ]
then
echo "File exists"
else
echo "File not found"
fi
```

Output

```
karthikkoparde@cloudshell:~$ bash Task1.sh Demo1.txt
File not found
karthikkoparde@cloudshell:~$ bash Task1.sh Demo.txt
File exists
karthikkoparde@cloudshell:~$
```

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.

```
echo "enter number"
n=1
while [ $n -ne 0 ]
do
 read n
 if [ $((n%2)) -eq 0 ]
 then
 echo "Even"
 else
 echo "odd"
 fi
 done
```

Output

```
karthikkoparde@cloudshell:~$ bash Task2.sh
enter number
2
Even
3
odd
5
odd
0
Even
karthikkoparde@cloudshell:~$
```

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.

```
numberofLine(){
        wc -l < $1
}
numberofLine $1
```

Output

```
karthikkoparde@cloudshell:~$ cat Demo.txt
Hi
Hello
Bye
karthikkoparde@cloudshell:~$ bash Task3.sh Demo.txt
3
karthikkoparde@cloudshell:~$
```

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").

```
`mkdir Techdir`
for i in {1..10}; do
filename="File$i.txt"
echo "$filename" > "Techdir/$filename"
done
echo "Files Created"
```

Output

Assignment 5: Modify the script to handle errors, such as the directory already existing or lacking permissions to create files.

```
Techdir="/home/karthikkoparde"

if [ ! -d "$Techdir" ]; then
    mkdir -p "$Techdir" || { echo "Failed to create directory"; exit
1; }
    echo "Directory Created: $Techdir"
else
    echo "Directory Already Exists: $Techdir"
fi

if [ -d "$Techdir" ]; then
    for i in {1..10}; do
        filename="$Techdir/File$i.txt"
        echo "File $filename created"
        touch "$filename" || { echo "Failed to create file:
$filename"; exit 1; }
    done
    echo "Files Created Successfully"
```

```
fi
```

Output 1

```
File /home/karthikkoparde/File1.txt created
File /home/karthikkoparde/File2.txt created
File /home/karthikkoparde/File3.txt created
File /home/karthikkoparde/File4.txt created
File /home/karthikkoparde/File5.txt created
File /home/karthikkoparde/File6.txt created
File /home/karthikkoparde/File7.txt created
File /home/karthikkoparde/File8.txt created
File /home/karthikkoparde/File9.txt created
File /home/karthikkoparde/File10.txt created
Files Created Successfully
```

Output 2

```
karthikkoparde@cloudshell:~$ bash Task5.sh
Directory Already Exists
karthikkoparde@cloudshell:~$
```

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.

```
log_file="sample.log"
grep "ERROR" "$log_file" | awk '{print $1, $2, substr($0,
index($0,$3))}'
```

Output

```
karthikkoparde@cloudshell:~$ bash task7.sh
2024-05-19 10:23:15 ERROR: Something went wrong
2024-05-19 10:27:45 ERROR: Another error occurred
karthikkoparde@cloudshell:~$
```

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.

```
if [ "$#" -ne 3 ]; then
    echo "Usage: $0 input_file old_text new_text"
    exit 1
fi

input_file="$1"
old_text="$2"
new_text="$3"
output_file="${input_file}.new"

sed "s/$old_text/$new_text/g" "$input_file" > "$output_file"

echo "Replacement complete. Result saved to: $output_file"
```

Output

```
karthikkoparde@cloudshell:~$ bash task8.sh Demo.txt Hi Bye
Replacement complete. Result saved to: Demo.txt.new
karthikkoparde@cloudshell:~$ cat Demo.txt.new
Bye
karthikkoparde@cloudshell:~$
```