Day-7

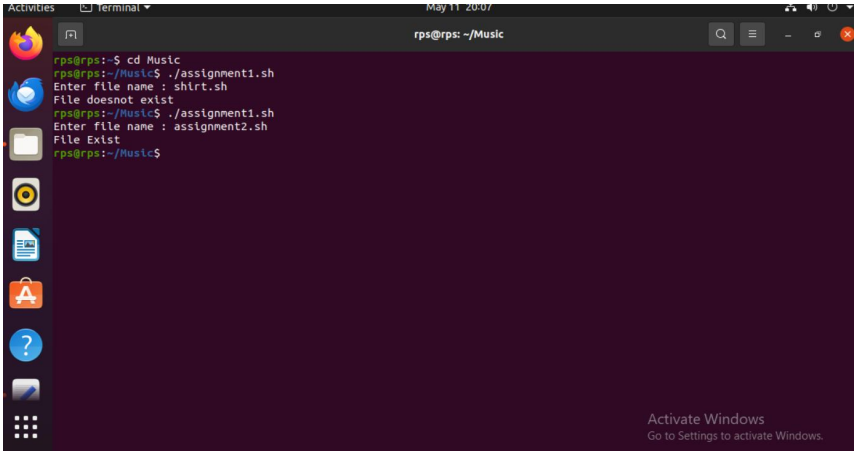
Assignment 1: Ensure the script checks if a specific file (e.g., myfile.txt) exists in the current directory. If it exists, print "File exists", otherwise print "File not found".

Below is a simple shell script that checks if a specific file (e.g., myfile.txt) exists in the current directory and prints the appropriate message:

```
#!/bin/bash

# Check if the file
exists if [ -f
"myfile.txt" ]; then
   echo "File exists"
else
   echo "File not found"
fi
```

- #!/bin/bash: This line specifies the shell to be used to execute the script, in this case, Bash.
- [-f "myfile.txt"]: This is the condition that checks if the file myfile.txt exists in the current directory. The -fflag checks if the file exists and is a regular file.
- echo "File exists": If the file exists, this command prints "File exists" to the standard output.
- echo "File not found": If the file does not exist, this command prints "File not found" to the standard output.



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.

Here's a simple shell script that reads numbers from the user until they enter '0' and prints whether each number is odd or even:

```
#!/bin/bash
echo "Enter numbers (enter '0' to exit)
while true; do
    read -p "Enter a number: " number

    # Check if the input is
    '0' if [ "$number" -eq 0 ];
    then
        echo "Exiting..."
        break
    fi

    # Check if the number is odd or
    even if [ "$((number % 2))" -eq 0 ];
    then
        echo "$number is
    even" else
        echo "$number is odd"
    fi
```

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- #!/bin/bash: Specifies the shell to be used to execute the script.
- echo "Enter numbers (enter '0' to exit):": Prints a message prompting the user to enter numbers.
- while true; do: Starts an infinite loop.
- read -p "Enter a number: " number: Prompts the user to enter a number and stores the input in the variable number.
- if ["$number" -eq 0]; then: Checks if the input is '0'. If it is, the script prints "Exiting..." and breaks out of the loop.
- if ["$((number % 2))" -eq 0]; then: Checks if the number is even by calculating the remainder when divided by 2. If the remainder is 0, the number is even; otherwise, it's odd.
- Inside the loop, the script continuously prompts the user for numbers until '0' is entered, printing whether each number is odd or even.

You can save this script to a file (e.g., check_odd_even.sh), make it executable with the command chmod +x check_odd_even.sh, and then run it with ./check_odd_even.sh.

- Inside the loop, the script continuously prompts the user for numbers until '0' is entered, printing whether each number is odd or even.

You can save this script to a file (e.g., check_odd_even.sh), make it executable with the command chmod +x check_odd_even.sh, and then run it with ./check_odd_even.sh.

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.

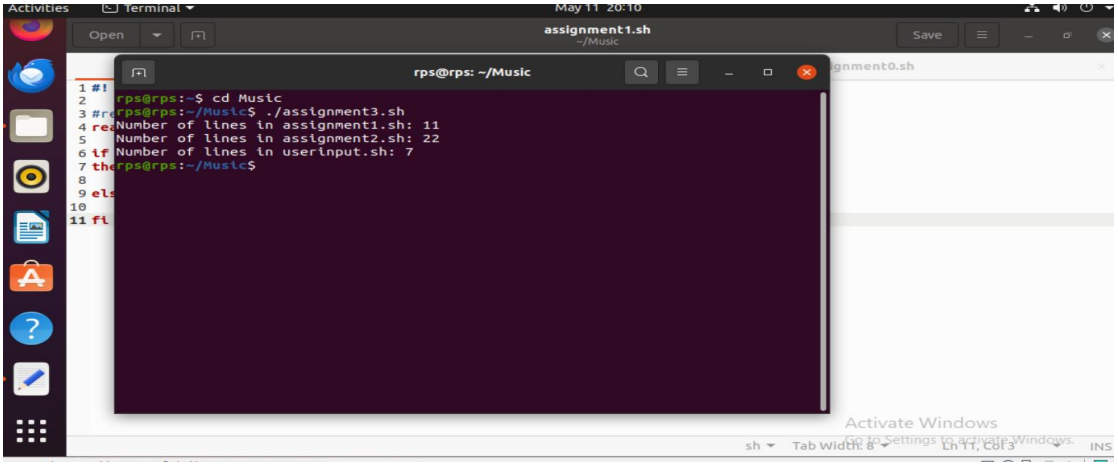
Below is a shell script that defines a function count_lines_in_file which takes a filename as an argument and prints the number of lines in the file. It then calls this function with different filenames:

```
#!/bin/bash



# Function to count lines in a file

count_lines_in_file() {

   local filename="$1"

   local num_lines=$(wc -l < "$filename")

   echo "Number of lines in $filename: $num_lines"

}



# Call the function with different filenames

count_lines_in_file "file1.txt"

count_lines_in_file "file2.txt"

count_lines_in_file "file3.txt"
```

- #!/bin/bash: Specifies the shell to be used to execute the script.
- count_lines_in_file() { ... }: Defines a function named count_lines_in_filewhich takes a filename as an argument.
- local filename="$1": Assigns the value of the first argument (the

filename) to the variable filename.

- local num_lines=$(wc -l < "$filename"): Uses the wc command to count the number of lines in the file specified by the filename. The < symbol is used for input redirection. The output of wc -l is stored in the variable num_lines.
- echo "Number of lines in $filename: $num_lines": Prints the filename and the number of lines in the file.
- The script then calls the count_lines_in_filefunction with different filenames: "file1.txt", "file2.txt", and "file3.txt".



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").

Below is a shell script that creates a directory named TestDirand inside it, creates ten files named File1.txt, File2.txt, ..., File10.txt. Each file contains its filename as its content:

```
#!/bin/bash

# Create the directory TestDir if it doesn't
exist mkdir -p TestDir

# Navigate to the TestDir
directory cd TestDir || exit

# Create ten files named File1.txt, File2.txt, ...,
```

```
File10.txt for ((i = 1; i <= 10; i++)); do
   filename="File$i.txt"
   echo "$filename" >
"$filename" done

echo "Files created successfully."
```

- #!/bin/bash: Specifies the shell to be used to execute the script.
- mkdir -p TestDir: Creates the directory TestDirif it doesn't already exist. The -poption ensures that the command doesn't produce an error if the directory already exists.

- cd TestDir || exit: Navigates into the TestDirdirectory. If for some reason navigation fails, the script exits.
- for ((i = 1; i <= 10; i++)); do: Starts a loop to create ten files.
- filename="File$i.txt": Constructs the filename for each iteration of the loop (e.g., File1.txt, File2.txt, ..., File10.txt).
- echo "$filename" > "$filename": Writes the filename (e.g., "File1.txt") into the corresponding file.
- echo "Files created successfully.": Prints a message indicating that the files have been created successfully.