# **Automated Testing and Linux and Shell Scripting**

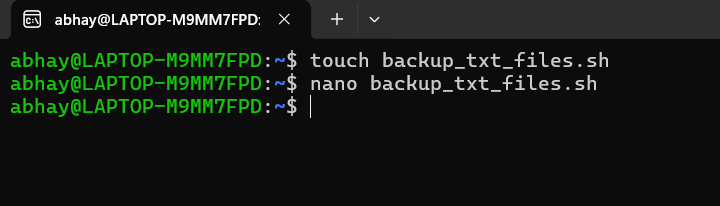
## 

## **Create a Directory Structure:**

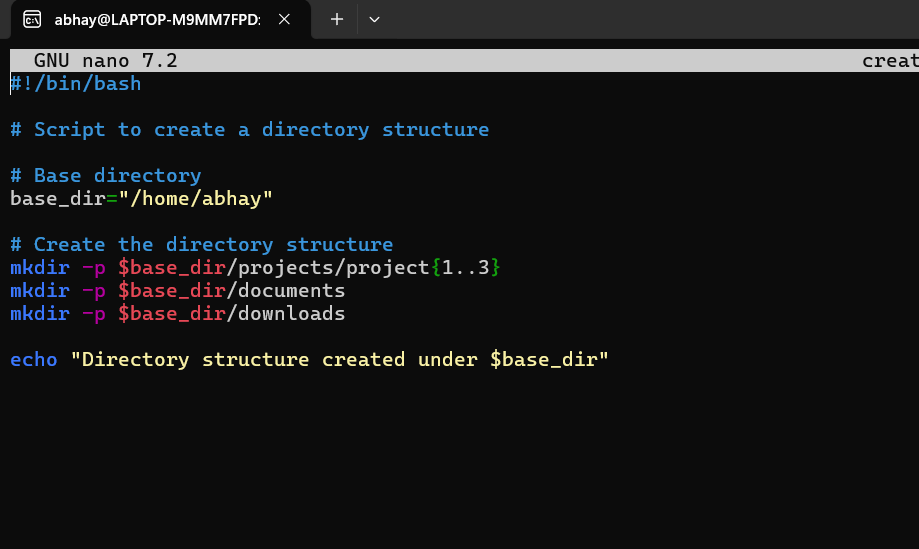
**Objective:** Create a script that generates a specific directory structure under the ‘/home/user/’ directory.

Steps to Create the Script :

1. Create a New File: “touch create\_structure.sh”



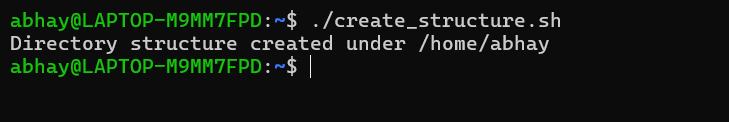
1. Write the Script in file: “nano create\_structure.sh” and add this script -

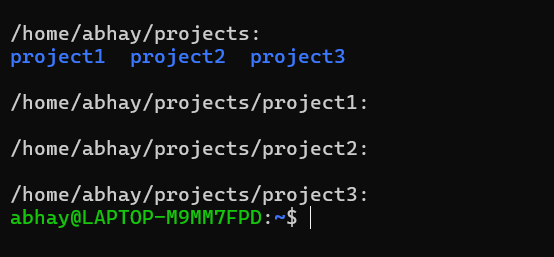


1. Save this script and make the script Executable: “chmod +x create\_structure.sh”



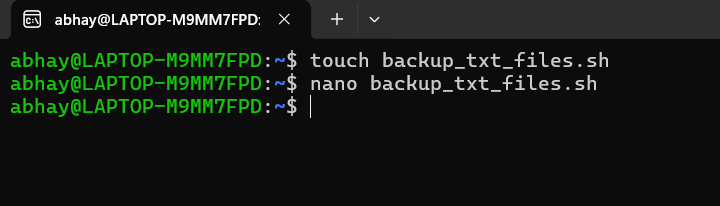
1. Run the Script: “./create\_structure.sh”





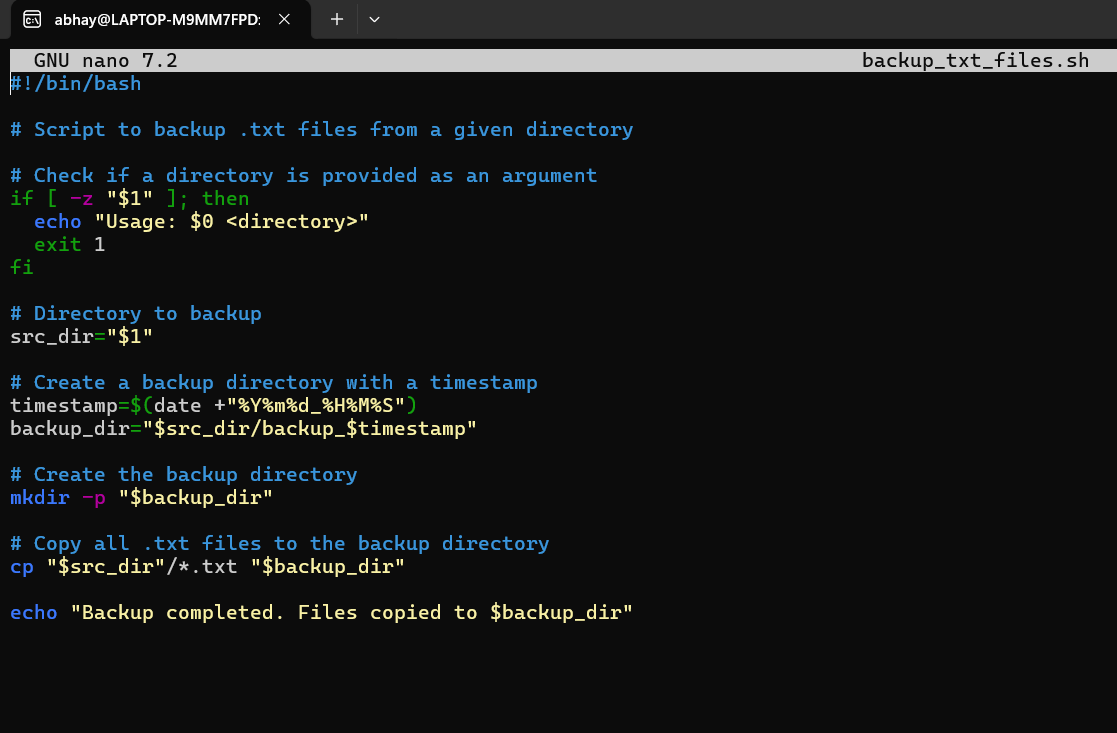
## **File Backup:**

1. Create a New File: “touch backup\_txt\_files.sh”



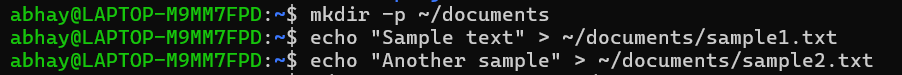
1. Write the Script: “nano backup\_txt\_files.sh”

Add following script:



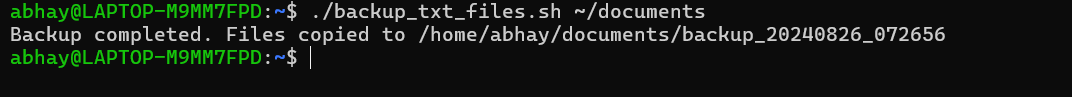
1. Create the Necessary Directory and Files:

Create ‘Document’ directory in my home directory and add ‘txt file in this directory’



1. Run the script:

“./backup\_txt\_files.sh ~/documents”

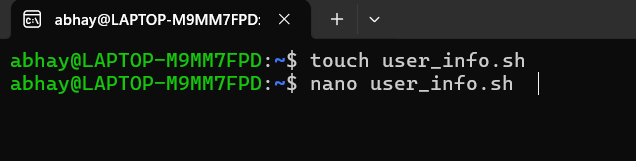


## **User Information Script:**

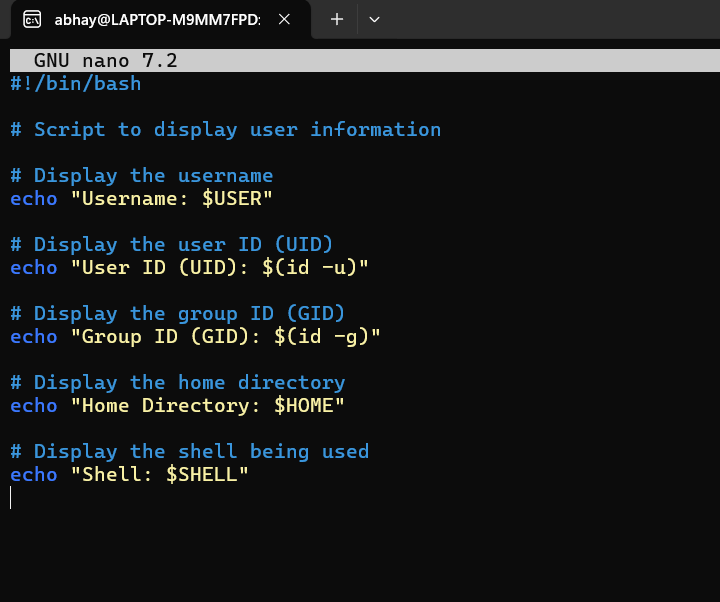
**Objective:** Create a script that displays the following information about the user:

Steps to Create the Script :

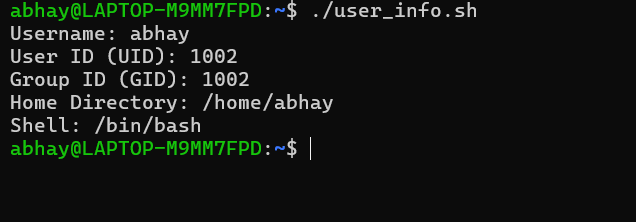
1. Create a new file : “touch user\_info.sh”



1. Write the Script in “user\_info.sh” file :



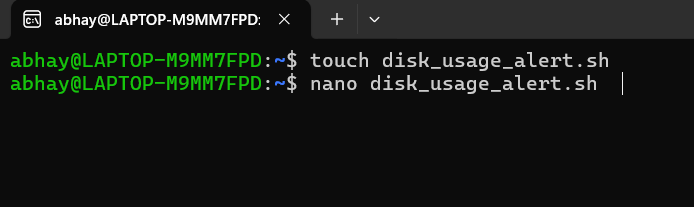
1. Make Executable Script : “chmod +x user\_info.sh”
2. Run the Script ; “./user\_info.sh”



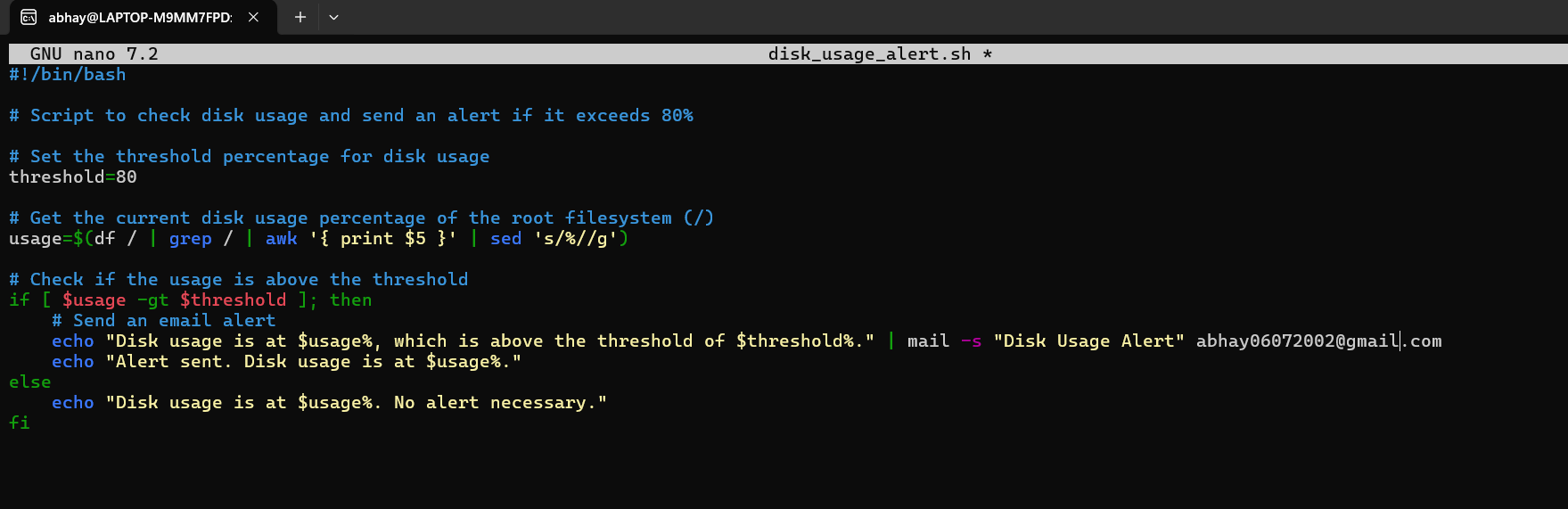
## **Disk Usage Alert Script:**

Steps to Create the Script

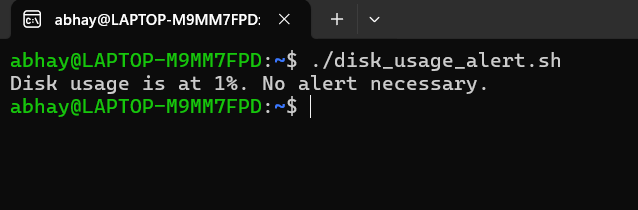
1. Create a New File: “touch disk\_usage\_alert.sh”



1. Write the script in file :



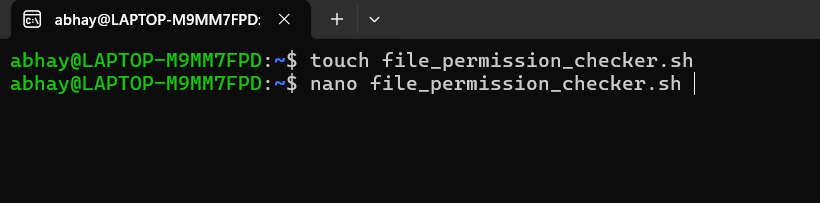
1. Make Script Executable : “chmod +x disk\_usage\_alert.sh”
2. Run the Script:



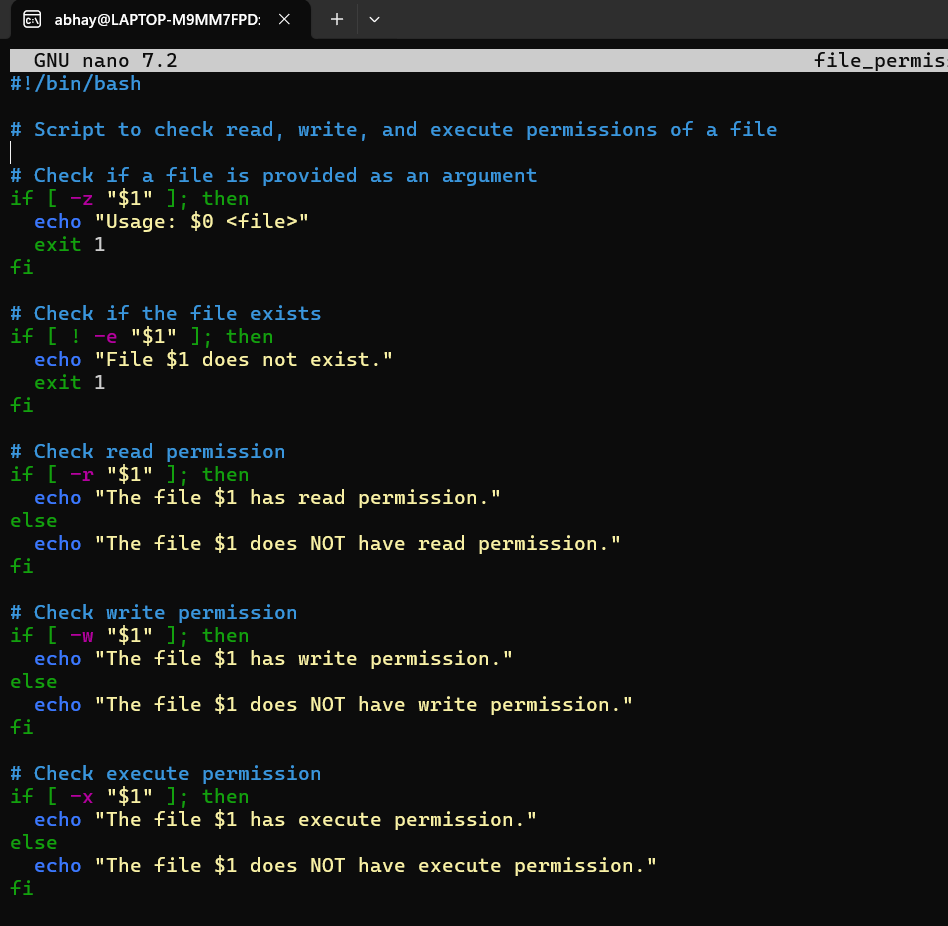
## **File Permission Checker Script:**

Steps to Create the Script

1. Create a New File: “touch file\_permission\_checker.sh”



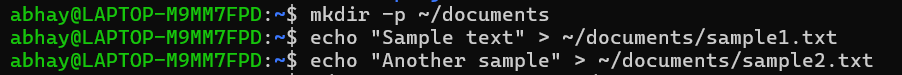
1. Write the Script in file



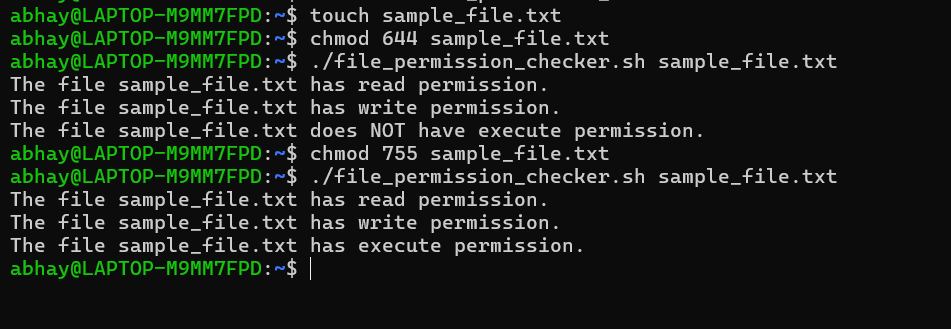
1. Make Script Executable: “chmod +x file\_permission\_checker.sh”
2. Test the Script: Create a sample file for testing

“touch sample\_file.txt”

“chmod 644 sample\_file.txt”



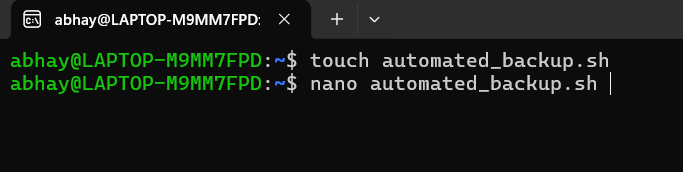
1. Run the script to check the permissions of ‘sample\_file.txt’



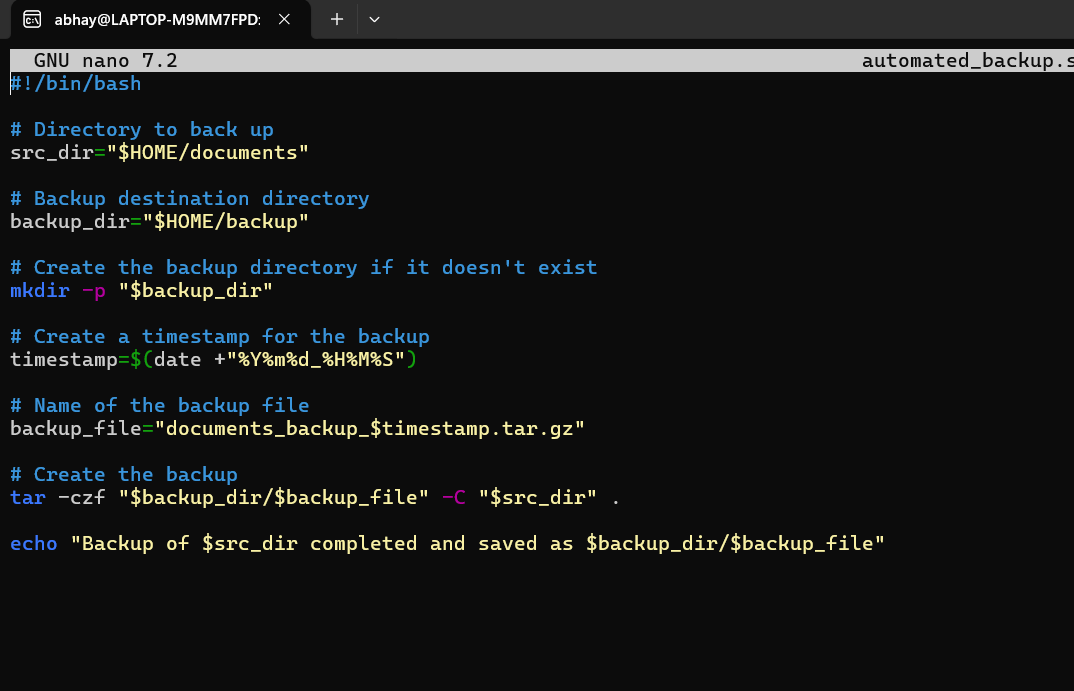
## **Automated Backup Script:**

Steps to Create the Script:

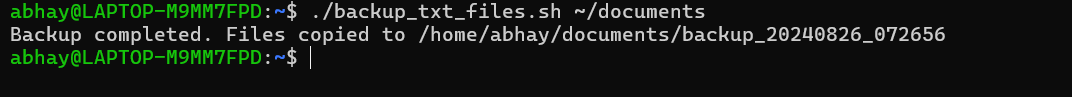
1. Create a new file “touch automated\_backup.sh”



1. Write the Script in file :



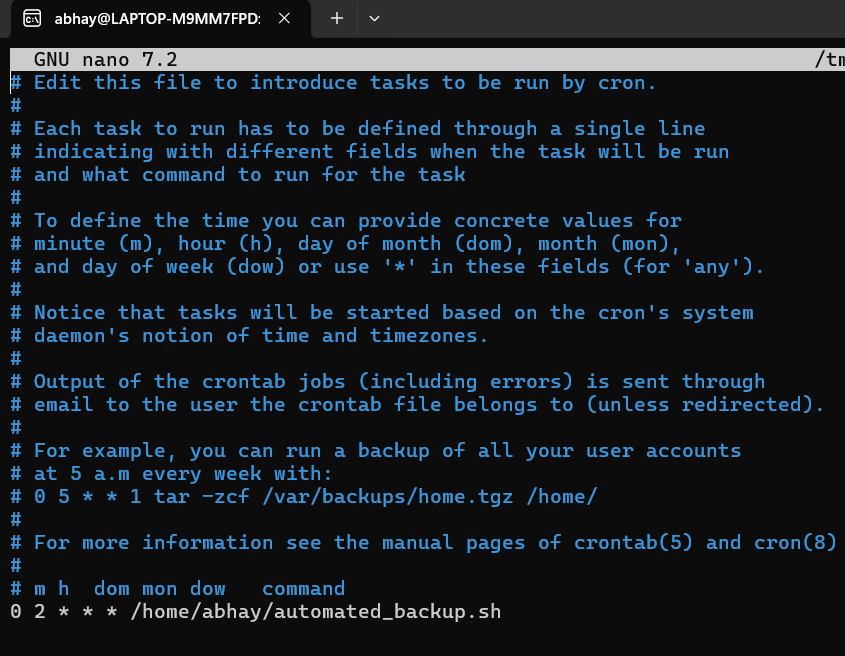
1. Make the Script Executable: “chmod +x automated\_backup.sh”
2. Run the Script:



### scheduled to run daily using cron:

1. Edit Crontab: Open the crontab editor “crontab -e”
2. Add the Cron Job: “0 2 \* \* \* /home/abhay/automated\_backup.sh”

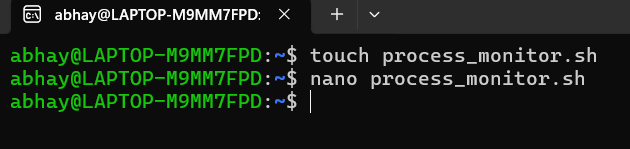
0 2 \* \* \* means the script will run at 2:00 AM every day.



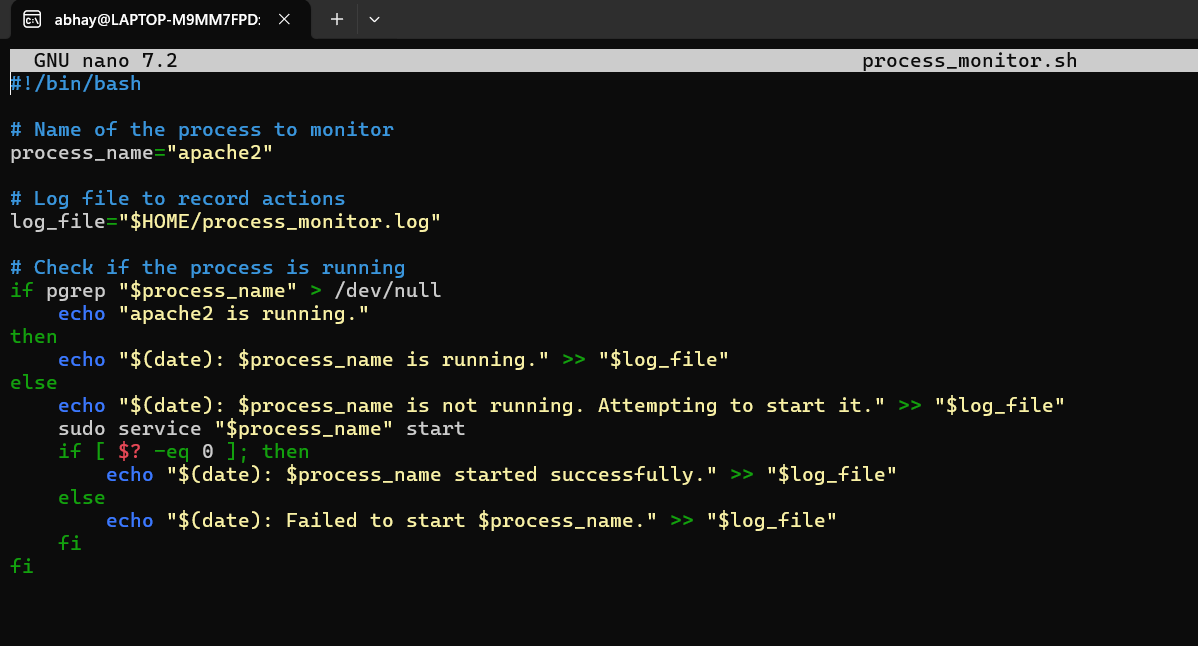
## **Process Monitor Script**:

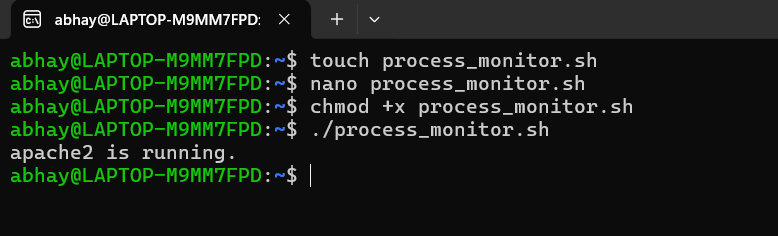
Steps to create the script

1. Create a New Script File:



1. Write the Script in file:

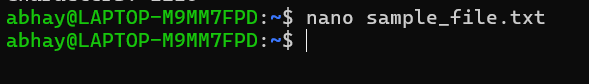


1. Make the Script Executable: “chmod +x process\_monitor.sh”
2. Run the Script:
3. 

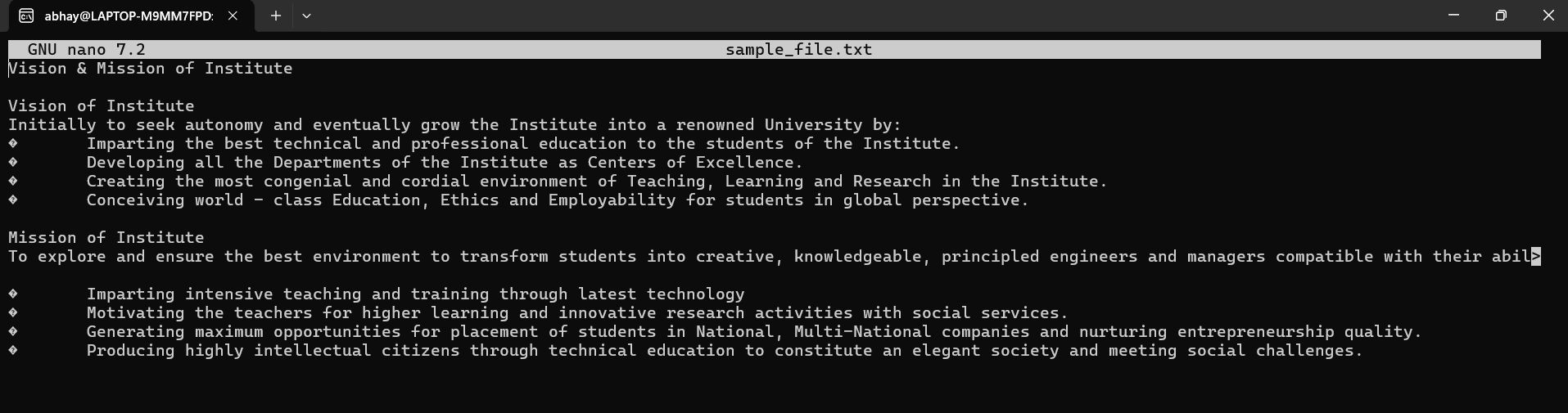
## **Text File Analysis:**

Steps to Create the Script

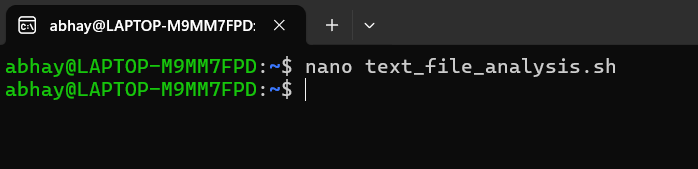
1. Create a .txt file for analysis: “nano sample\_file.txt”



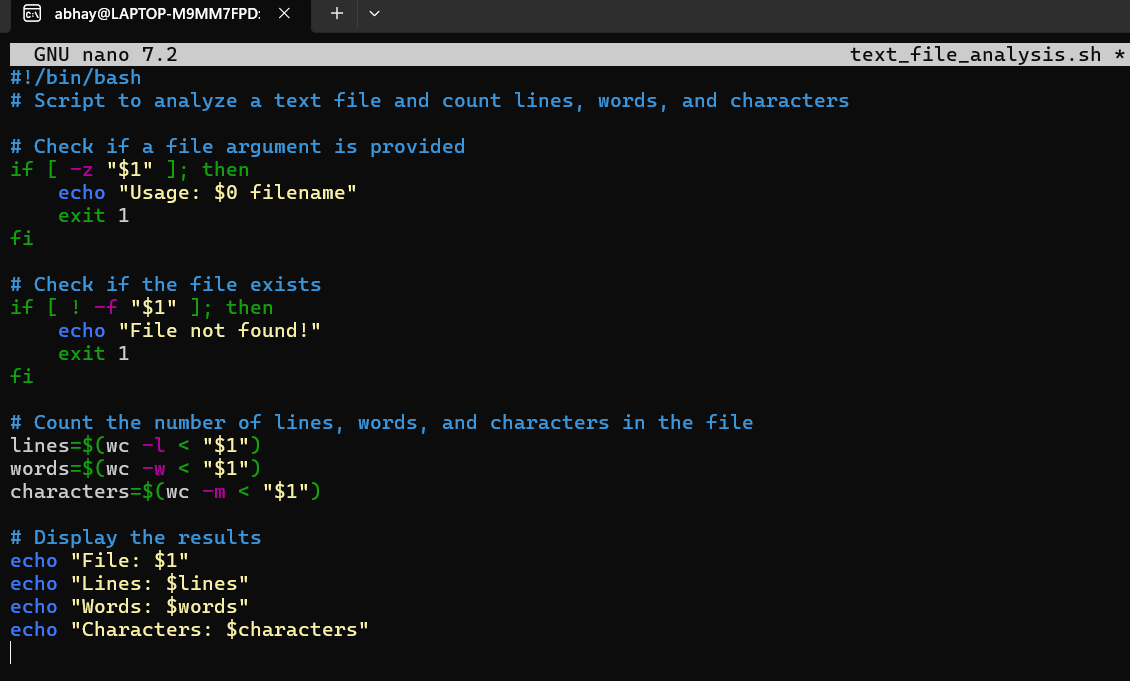
1. Write some line in the file:



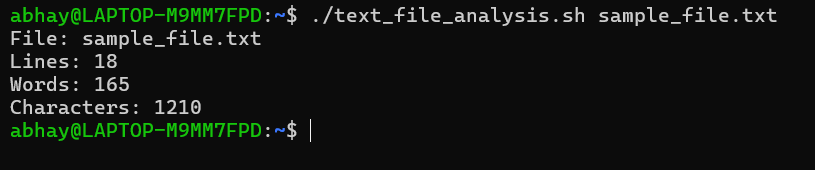
1. Create the Script File: “nano text\_file\_analysis.sh”



1. Write the Script in file:



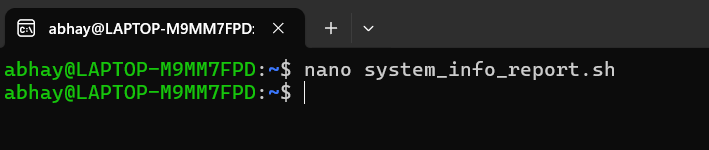
1. Make the Script Executable: “chmod +x text\_file\_analysis.sh”
2. Run the script:



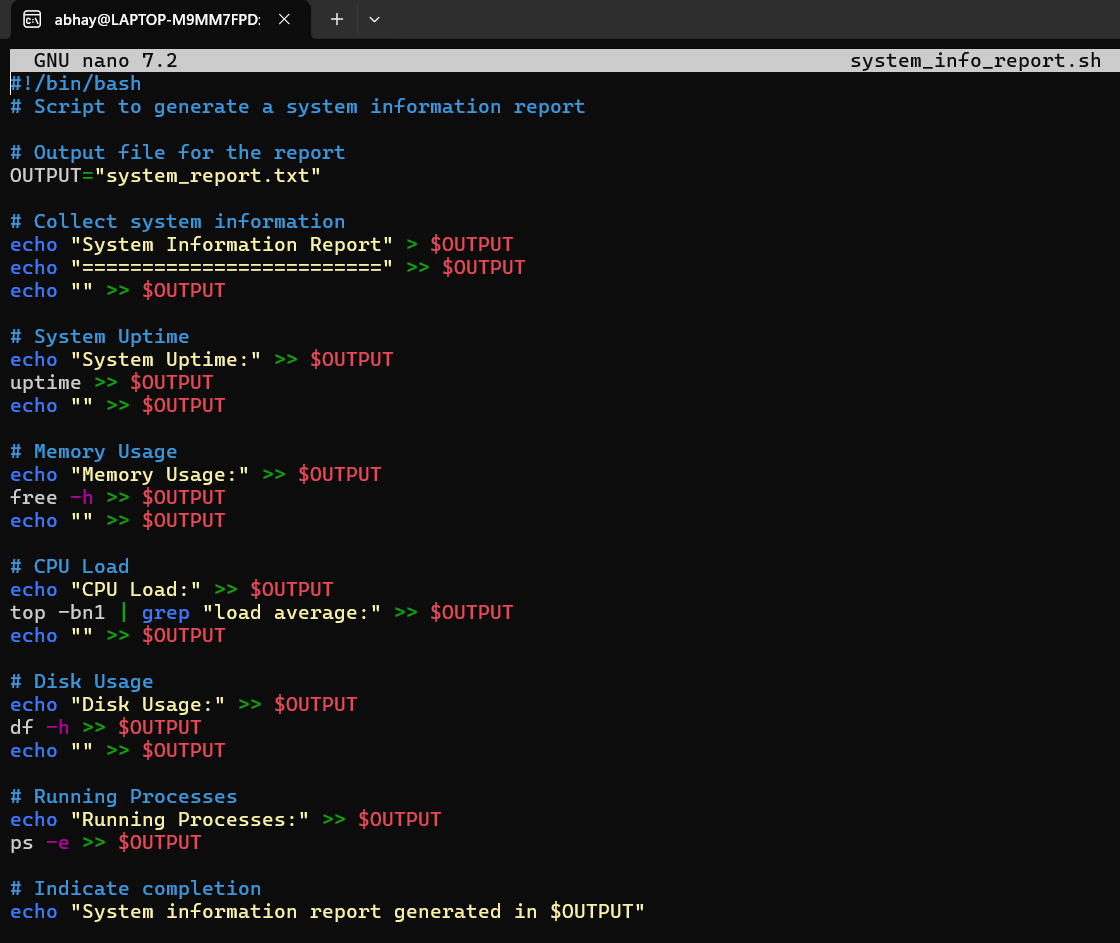
## **System Information Report:**

Steps to Create the Script:

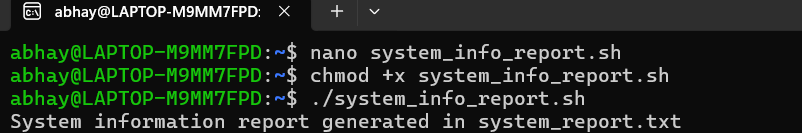
1. Create the Script File:



1. Write the Script in file:



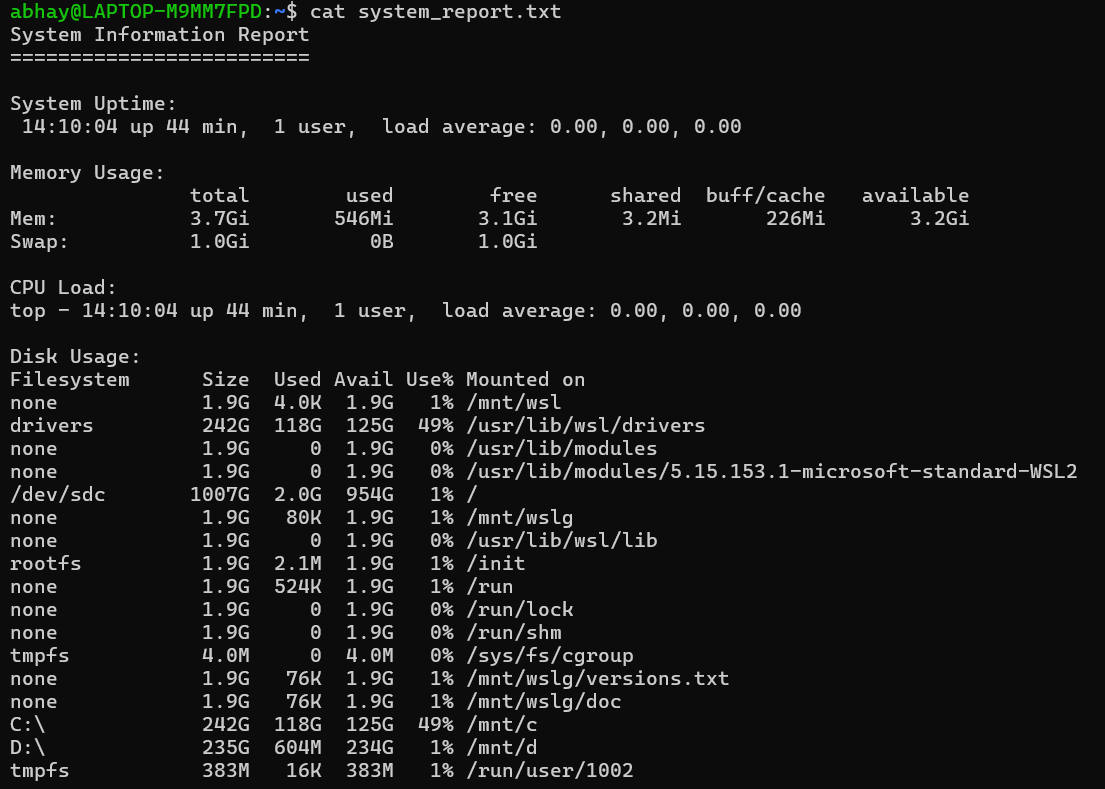
1. Make the Script Executable: “chmod +x system\_info\_report.sh”
2. Run the Script:

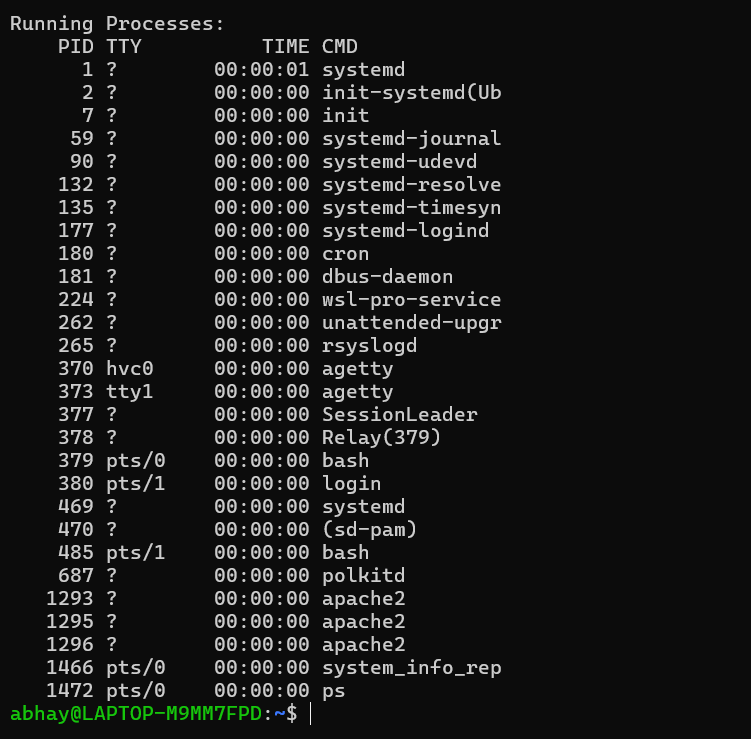


1. Check the Output:

After running the script, check the generated ‘system\_report.txt’ file:

“cat system\_report.txt”

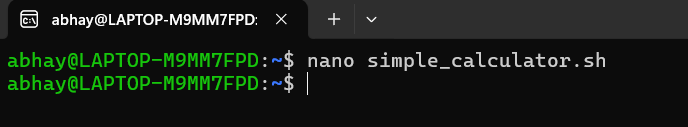




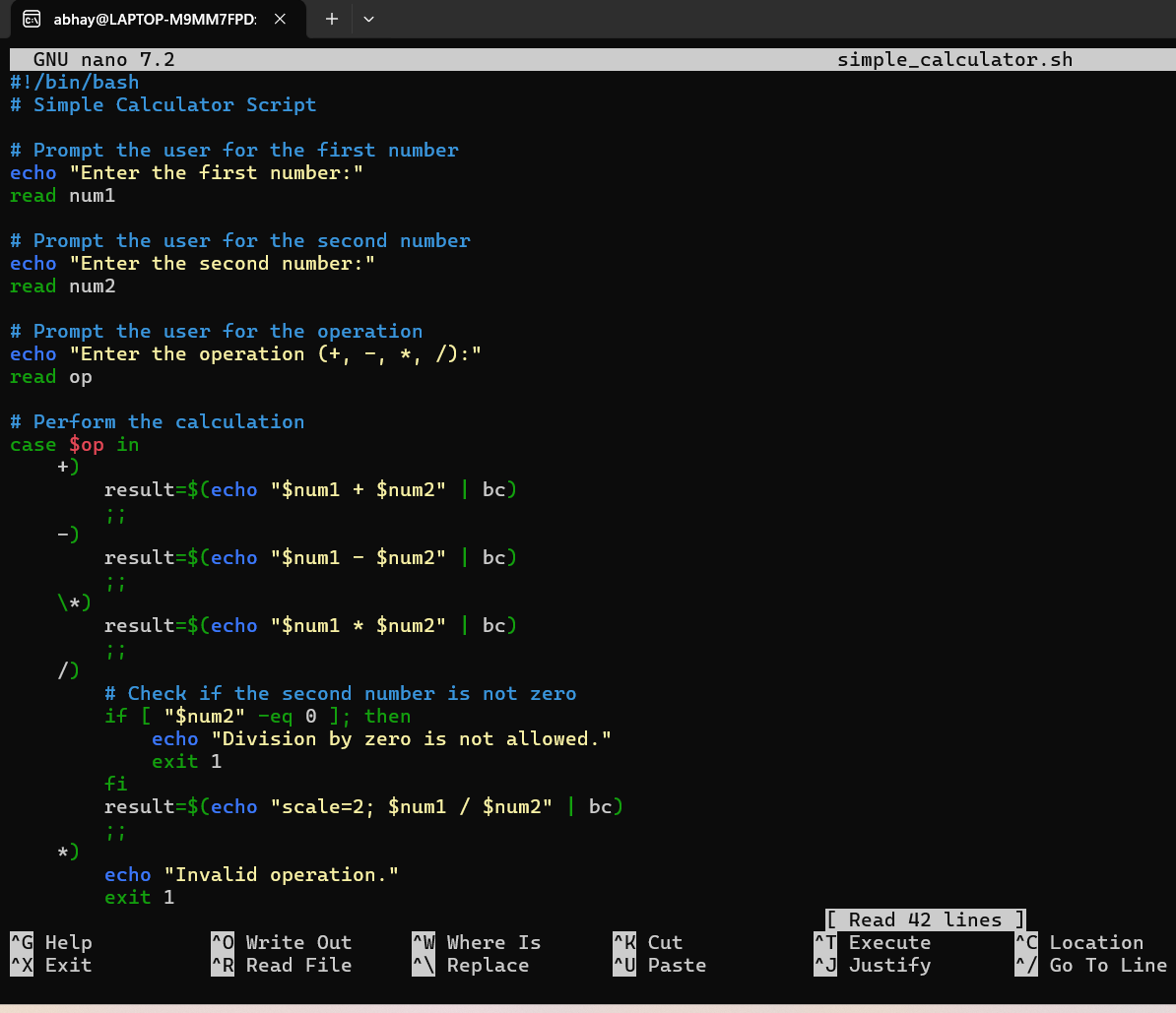
## **Simple Calculator:**

Steps to Create the Script:

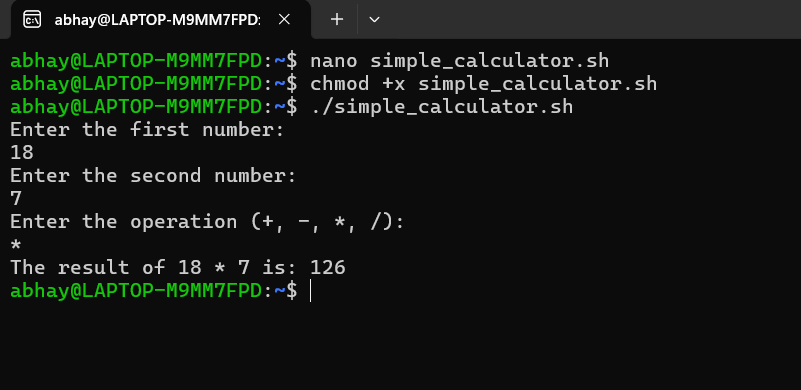
1. Create the Script File:



1. Write the Script in file:



1. Make the script Executable: “chmod +x simple\_calculator.sh”
2. Run the script:



1. Enter first number and second number after that select the operator, press enter.