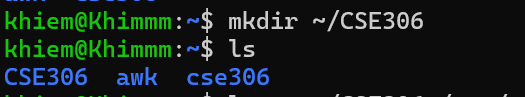
Ngô Quang Khiêm - 2031220025

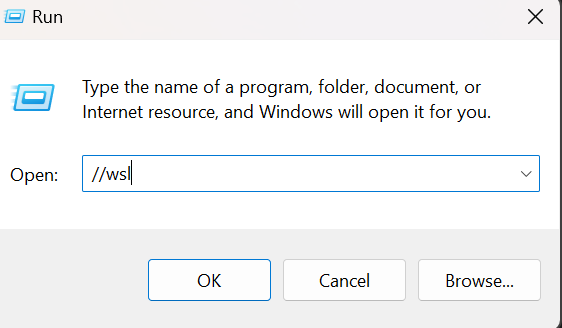
**1. Create a folder named CSE306 in your home folder.**

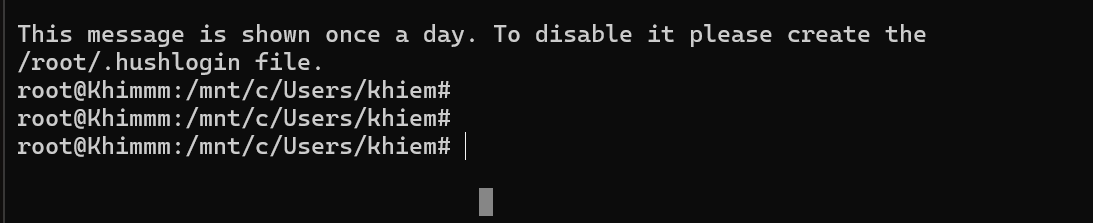
mkdir ~/CSE306

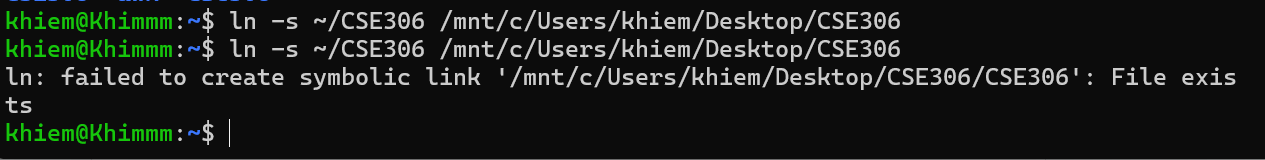


**2. Create a symbolic link of CSE306 to Desktop**

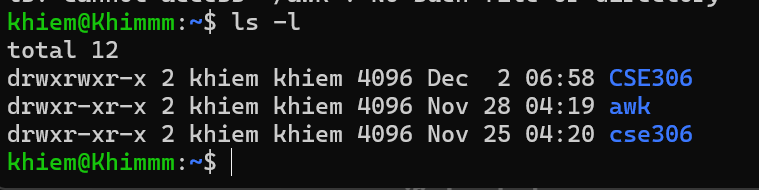
ln -s ~/CSE306 /mnt/c/Users/khiem/Desktop/CSE306







**3. Use ls command to list all files and folder in a specified path.**

****

**4. Create a file named Grade.txt (using nano command) in CSE306 folder with the**

**following content:**

**Hai 6 5**

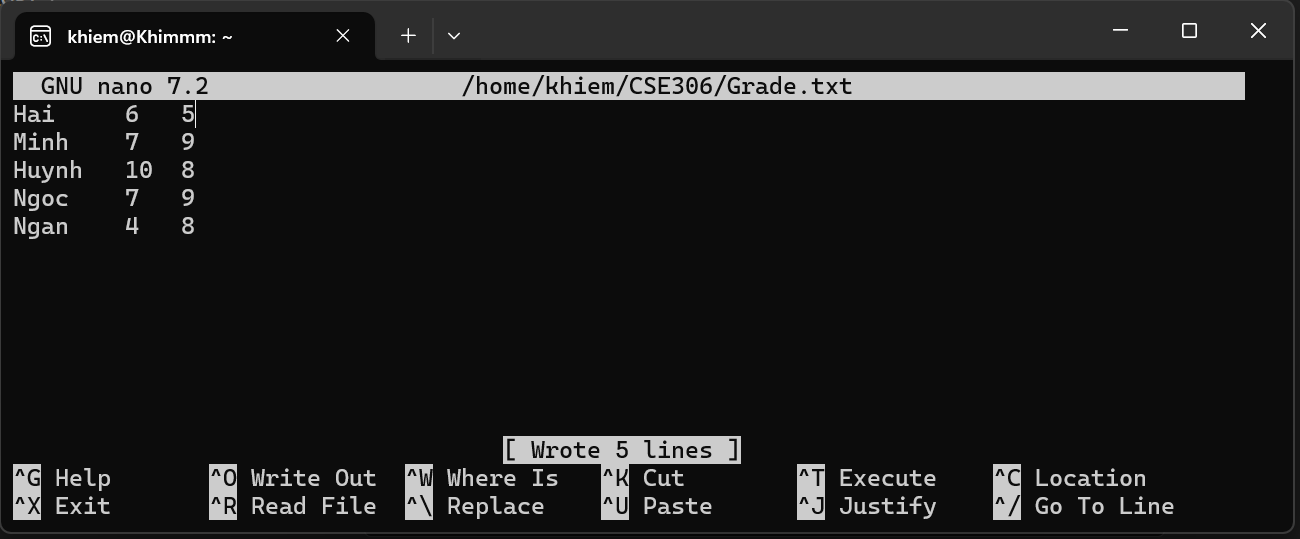
**Minh 7 9**

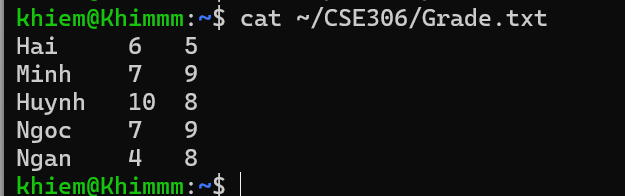
**Huynh 10 8**

**Ngoc 7 9**

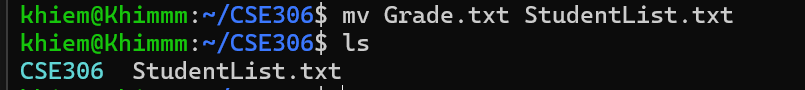
**Ngan 4 8**

Go into the file : nano ~/CSE306/Grade.txt\

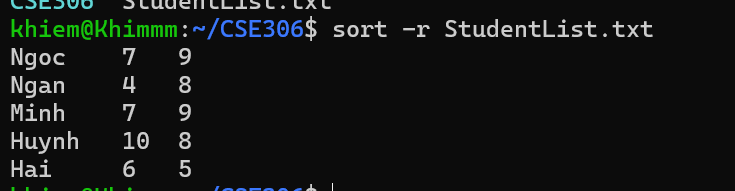
****

Show file: cat ~/CSE306/Grade.txt****

**5. Rename Grate.txt to StudentList.txt**

****

**6. Use sort command to sort the list by name column in descending order**

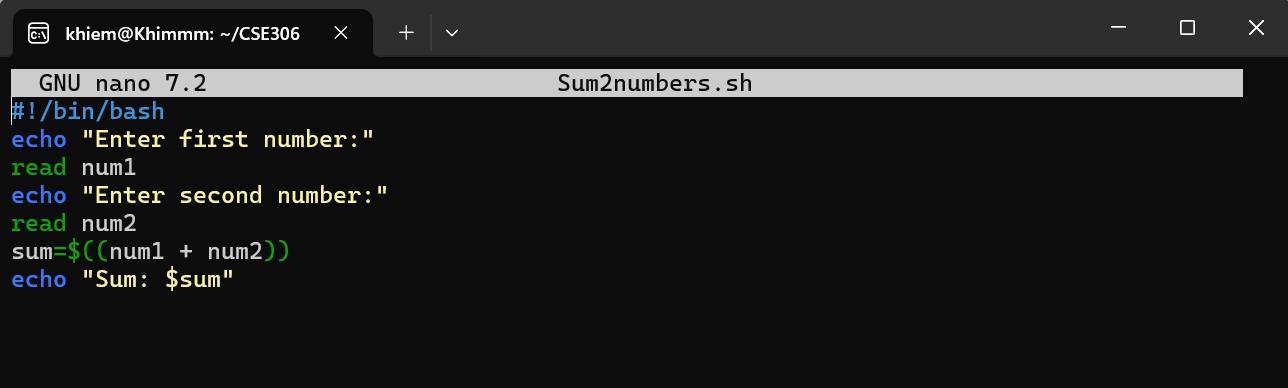
****

**7. Write a script to calculate the sum of two numbers entered by a user. (two ways)**

Using read:

Create file sh:

khiem@Khimmm:~/CSE306$ nano Sum2numbers.sh  
****

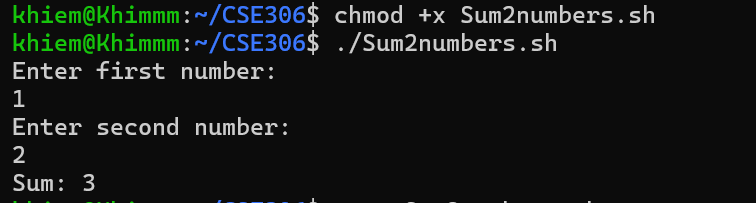
****

Run as:

khiem@Khimmm:~/CSE306$ chmod +x Sum2numbers.sh

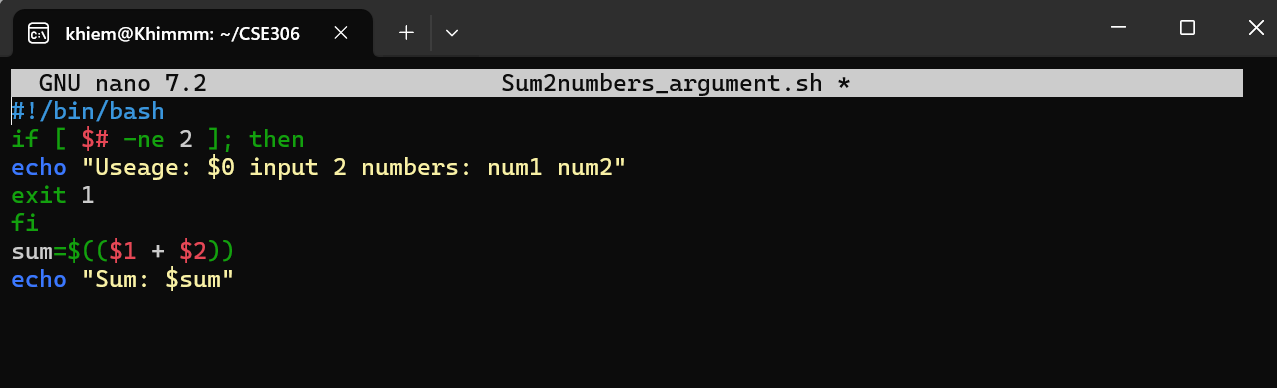
khiem@Khimmm:~/CSE306$ ./Sum2numbers.sh

or: bash file\_name.sh

****

Using arguments:

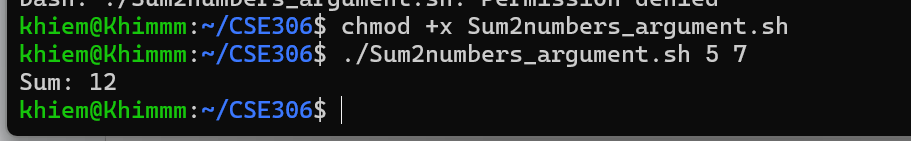
****

****

Run as:

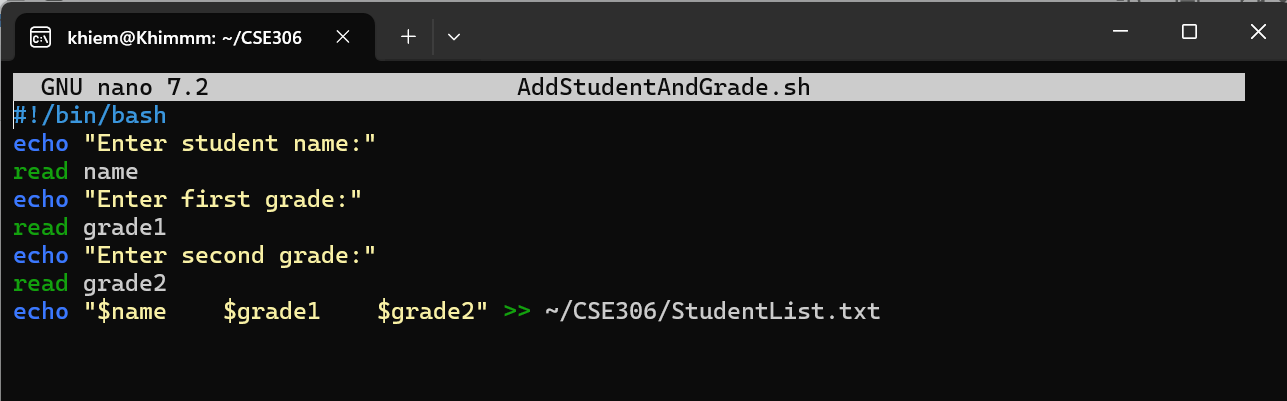
khiem@Khimmm:~/CSE306$ chmod +x Sum2numbers\_argument.sh

khiem@Khimmm:~/CSE306$ ./Sum2numbers\_argument.sh 5 7

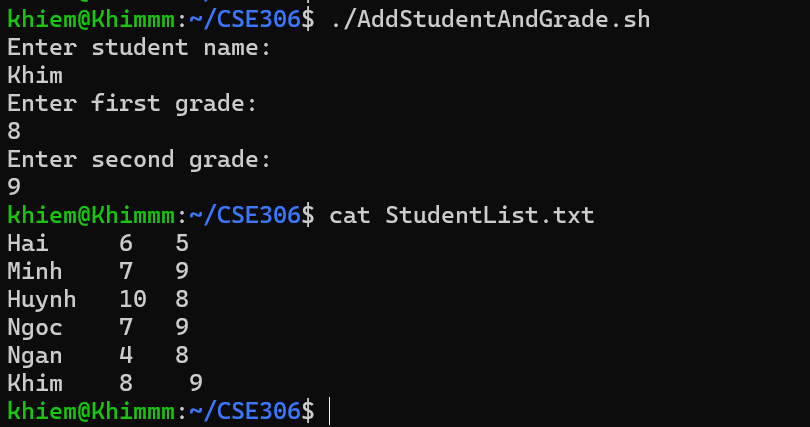
****

**8. Write a script that allows a user add a new student with grade to the list.**

****

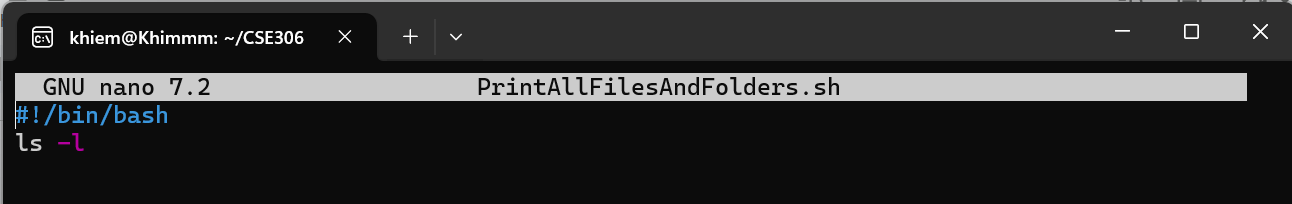
****

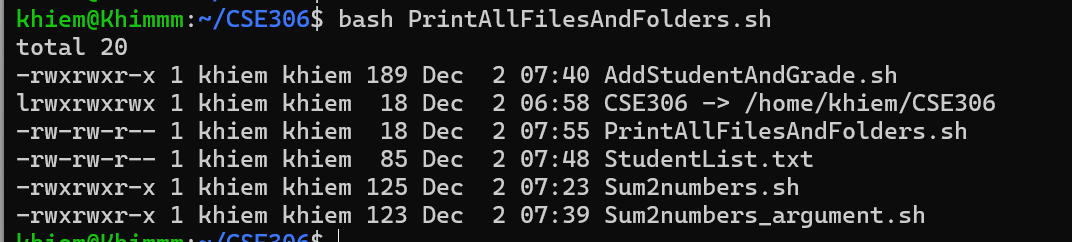
**Run & Check:**

****

**9. Write a script for printing all files and folders in the present working directory.**

****

****

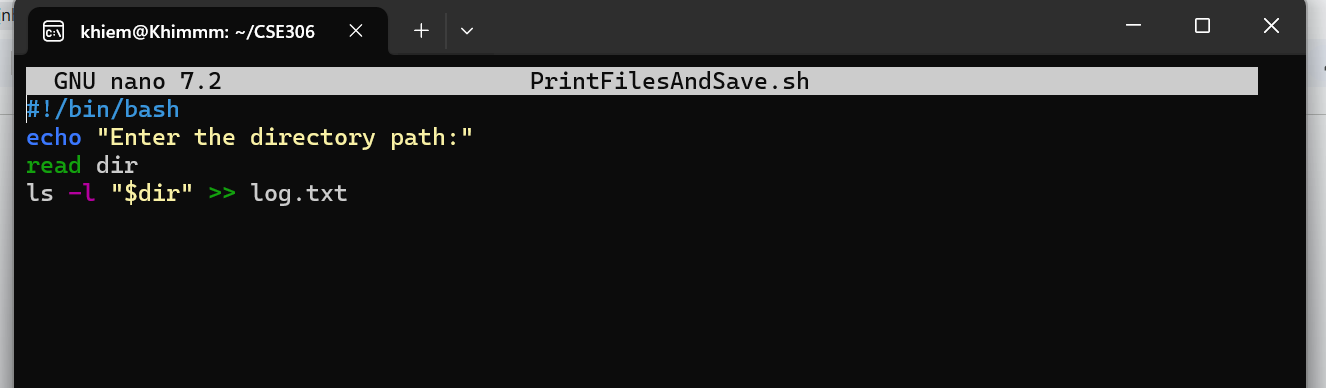
****

**10. Write a script for printing all files and folders in a specified directory and write to a log file.**

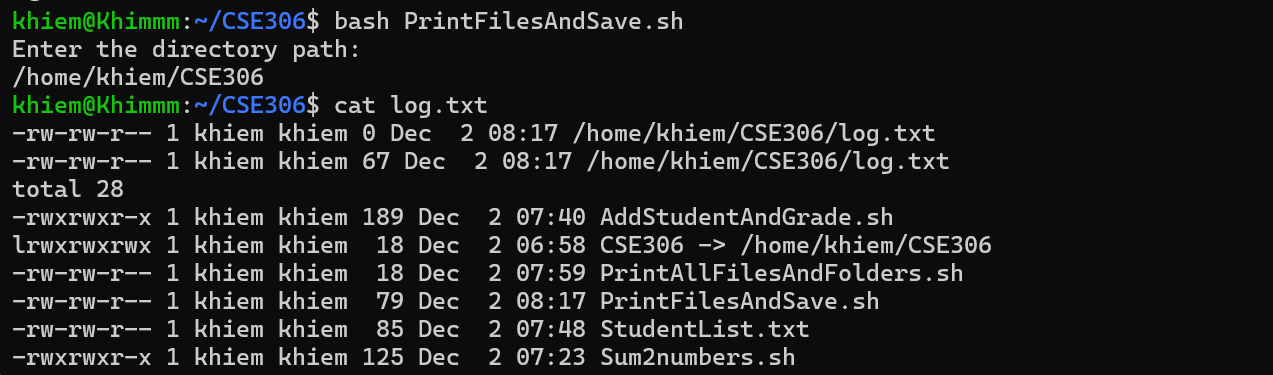
create a txt file

****

****

****

Run & Check:

****

**11. Write a script for printing all executable files in specified directory.**

#!/bin/bash

# Prompt user to enter a directory path

echo "Enter the directory path:"

read dir

# Check if the directory exists

if [ -d "$dir" ]; then

echo "Executable files in the directory:"

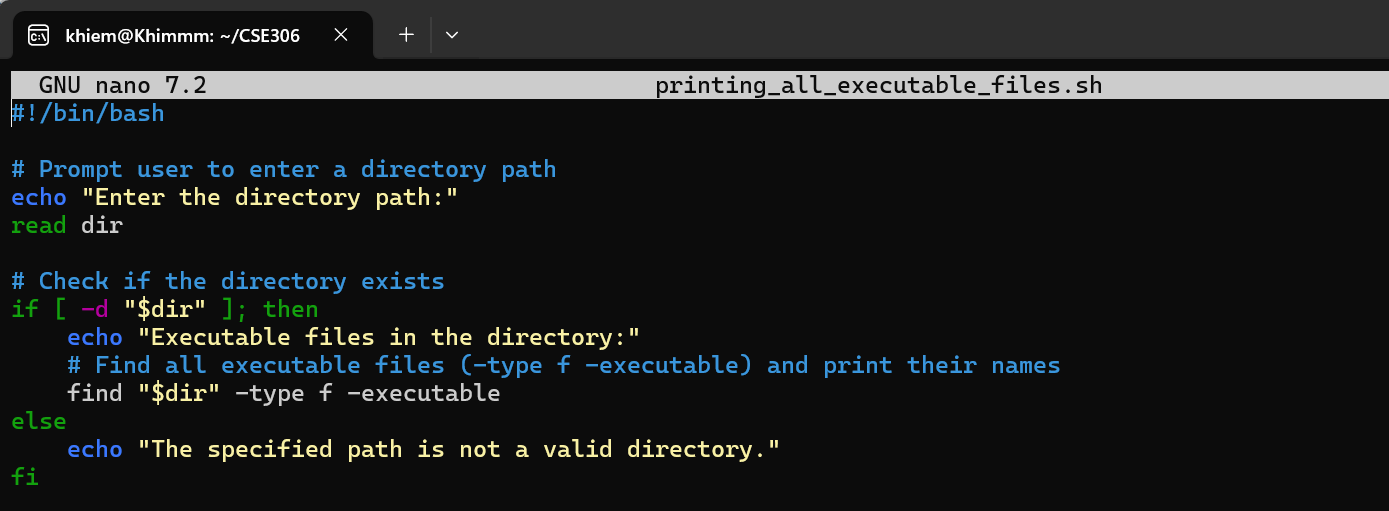
# Find all executable files (-type f -executable) and print their names

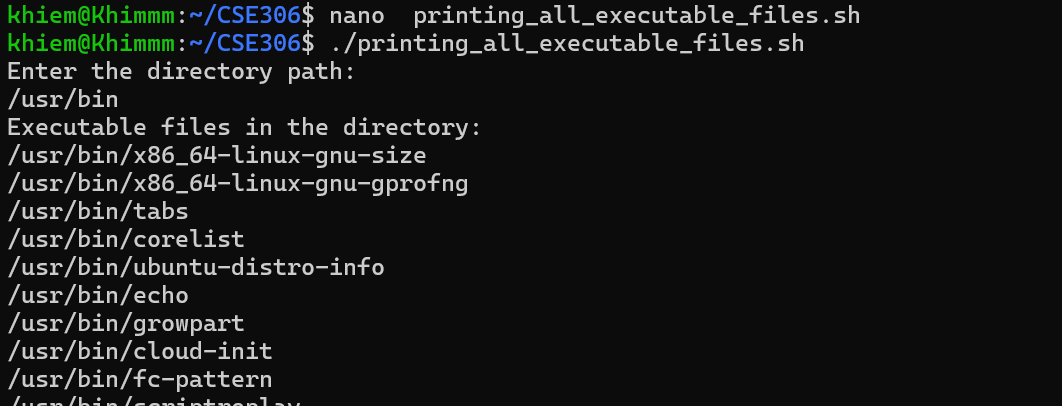
find "$dir" -type f -executable

else

echo "The specified path is not a valid directory."

fi

****

****

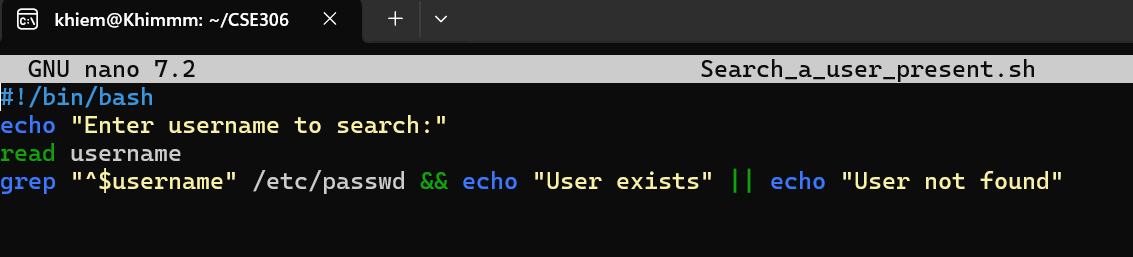
**12. Write a script to search a user present in your system. (use grep command) (\*)**

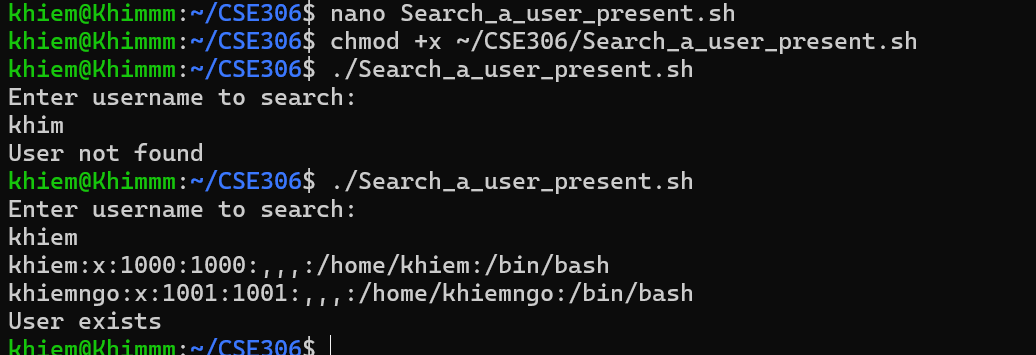
#!/bin/bash

echo "Enter username to search:"

read username

grep "^$username" /etc/passwd && echo "User exists" || echo "User not found"

****

****

**13. Write a script to check if the file “file\_path” exists and is writable.**

#!/bin/bash

echo "Enter file path:"

read file

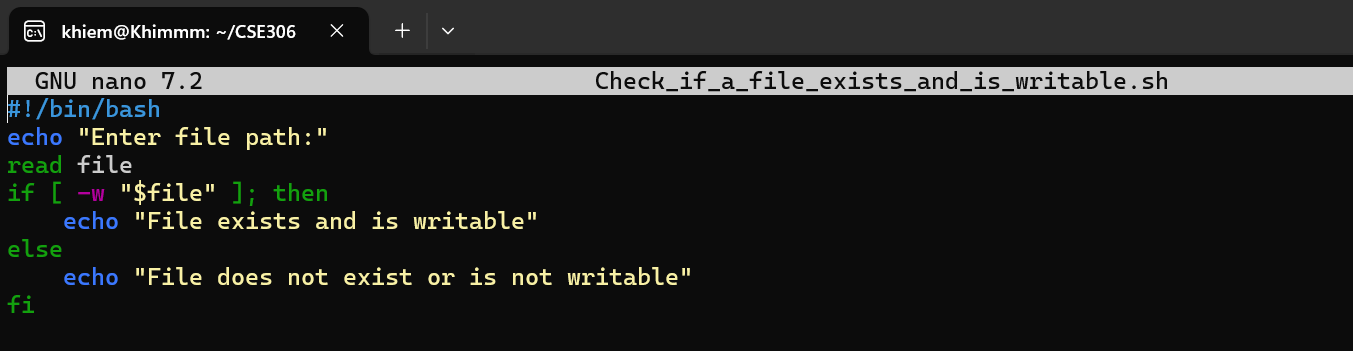
if [ -w "$file" ]; then

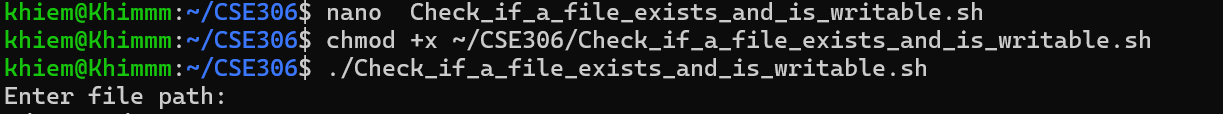
echo "File exists and is writable"

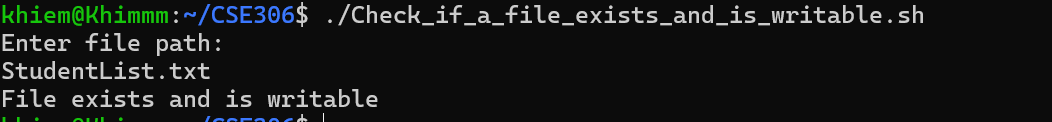
else

echo "File does not exist or is not writable"

fi

****

****

****

**14. Write a script that prompts the user for a path of a file or directory and return if it is a regular file, a directory, or another type of file. Also perform an ls command against the file or directory with the long listing option**

#!/bin/bash

echo "Enter file/directory path:"

read path

if [ -f "$path" ]; then

echo "It is a file."

elif [ -d "$path" ]; then

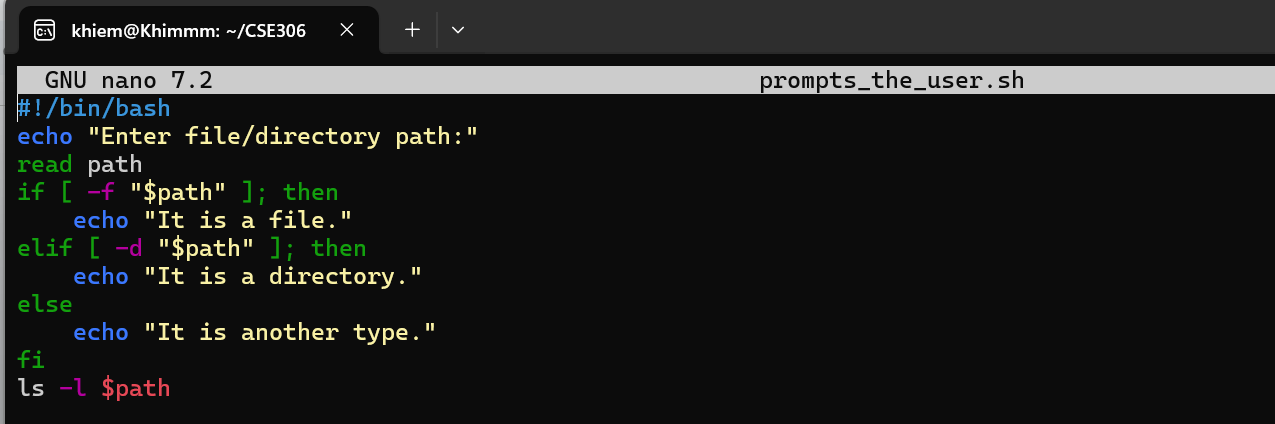
echo "It is a directory."

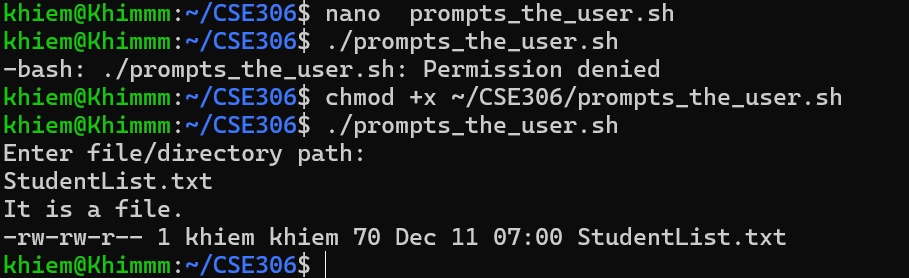
else

echo "It is another type."

fi

ls -l $path

****

****

**15. Modify the previous script to that it accepts the file or directory name as an argument instead of prompting the user to enter it.**

#!/bin/bash

if [ $# -eq 0 ]; then

echo "Usage: $0 path"

exit 1

fi

path=$1

if [ -f "$path" ]; then

echo "It is a file."

elif [ -d "$path" ]; then

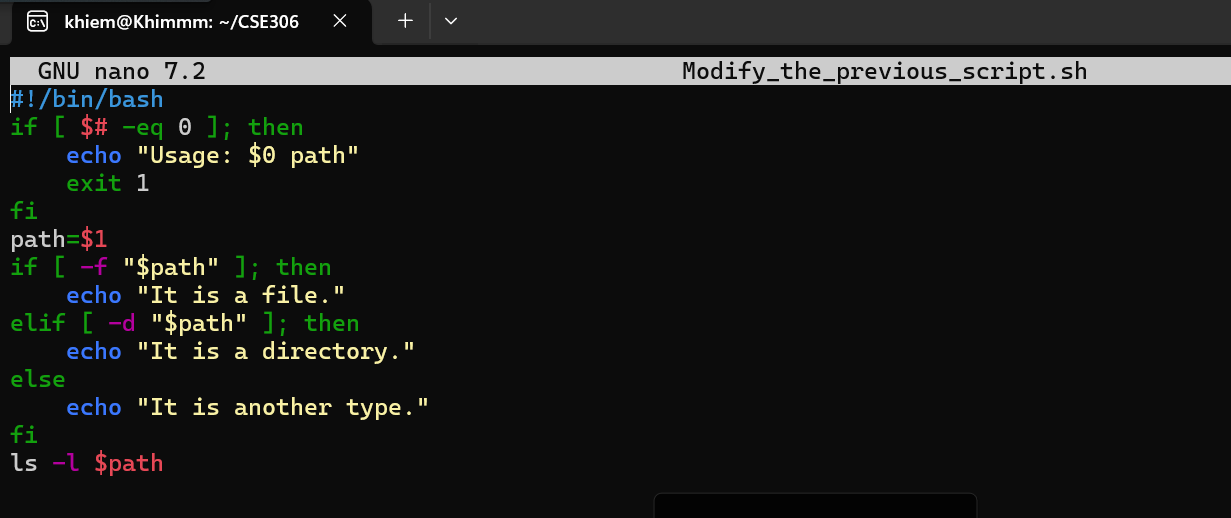
echo "It is a directory."

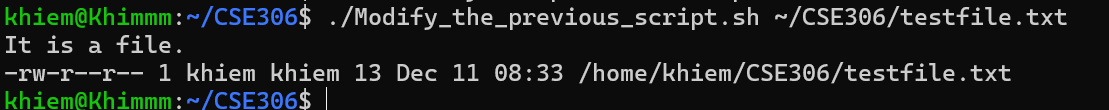
else

echo "It is another type."

fi

ls -l $path

****

****

**16. Modify the previous script to accept an unlimited number of files and directories as arguments. (\*)**

#!/bin/bash

for path in "$@"; do

echo "Processing: $path"

if [ -f "$path" ]; then

echo "It is a file."

elif [ -d "$path" ]; then

echo "It is a directory."

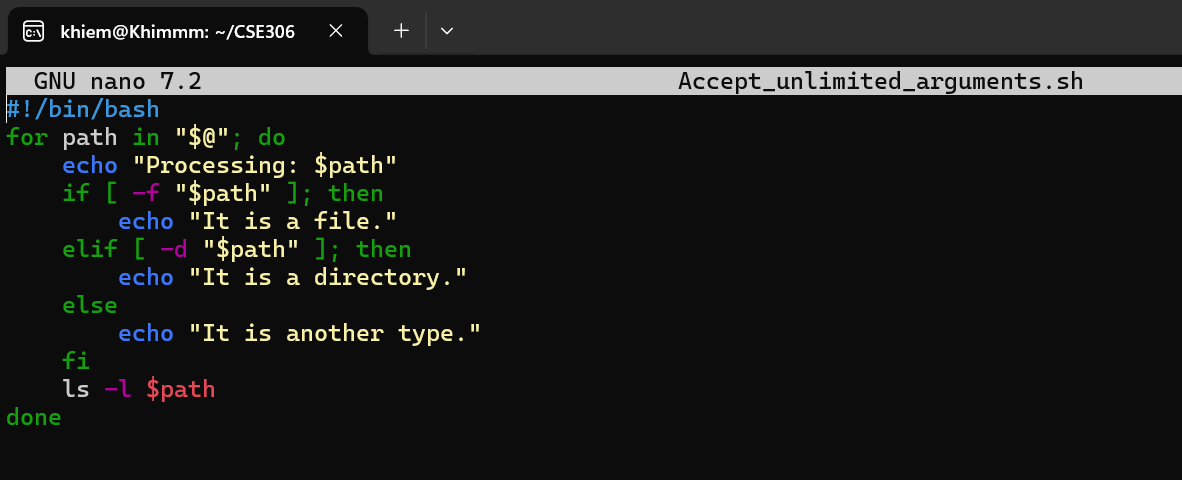
else

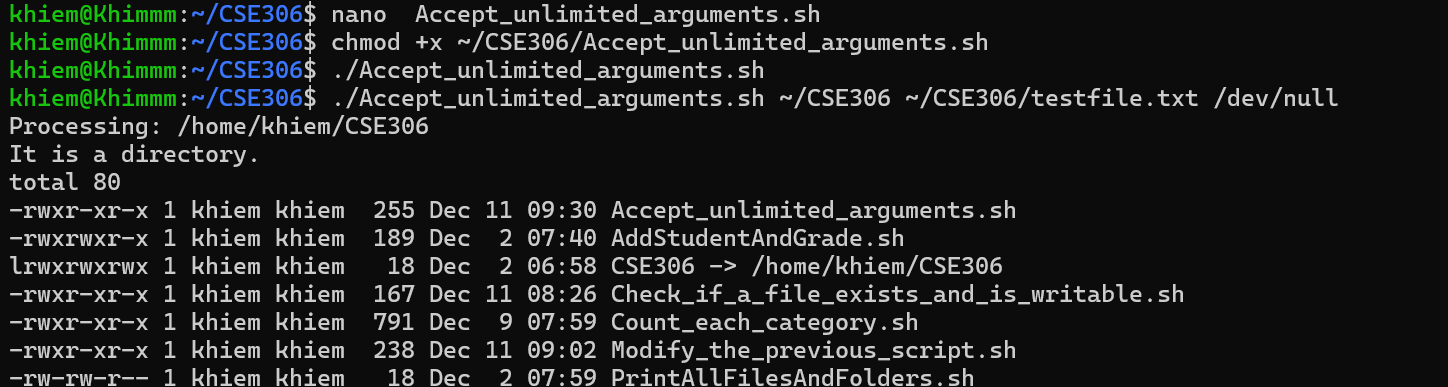
echo "It is another type."

fi

ls -l $path

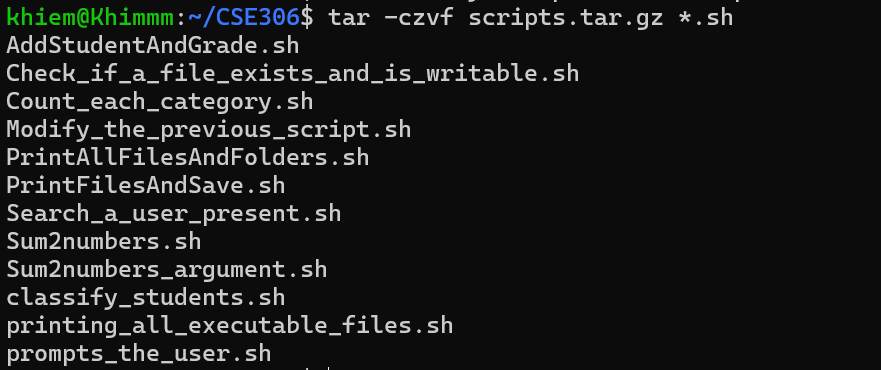
done

****

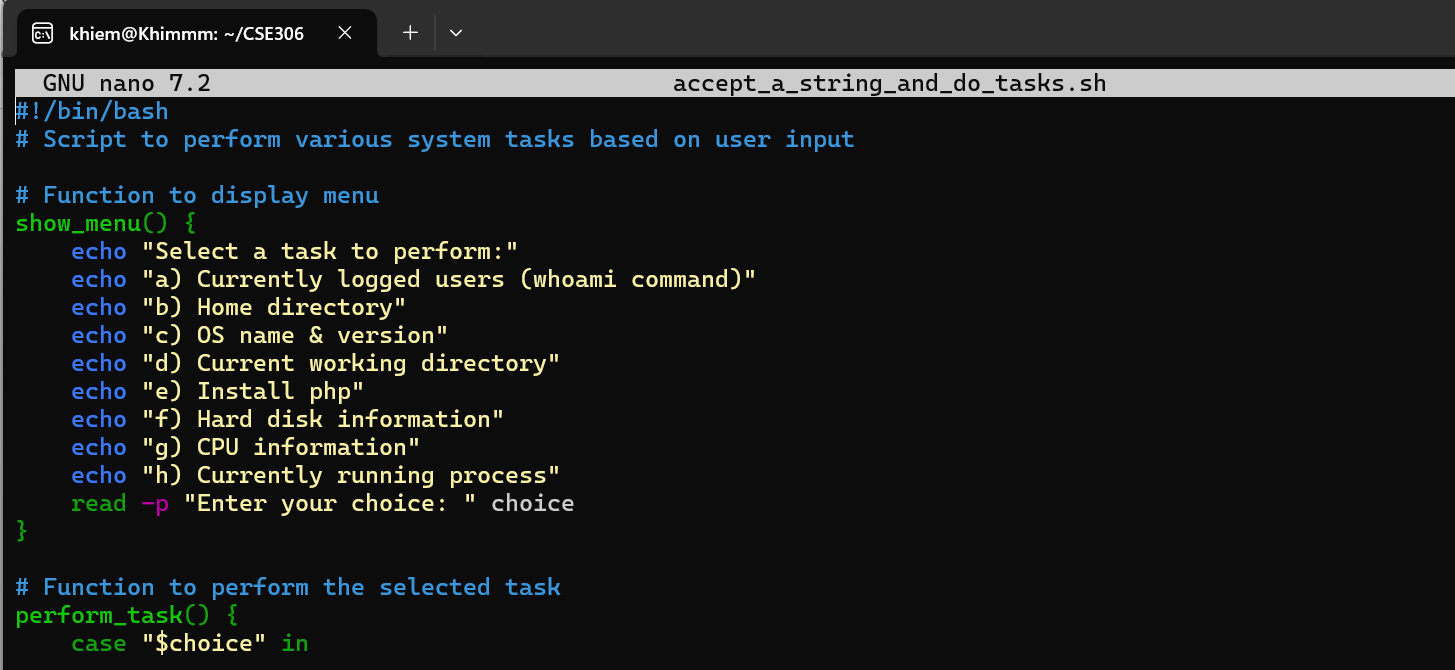
****

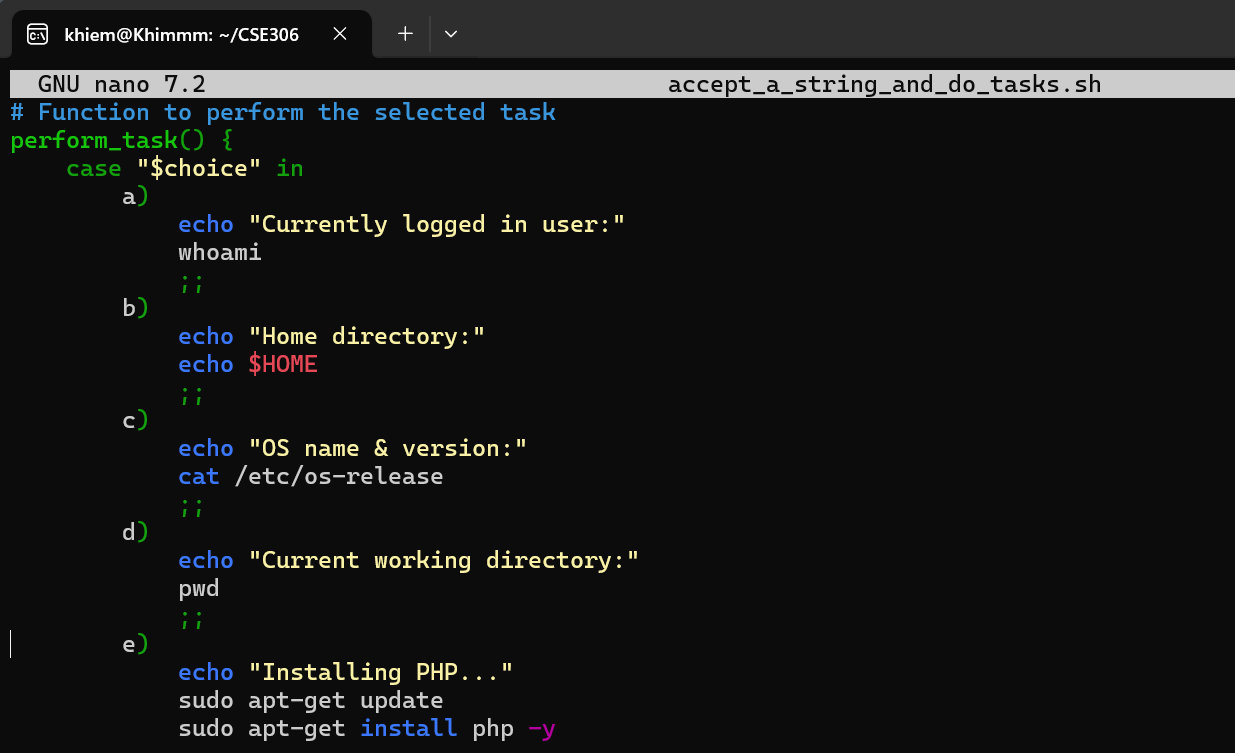
**17. Compress all scripts using tar command.**

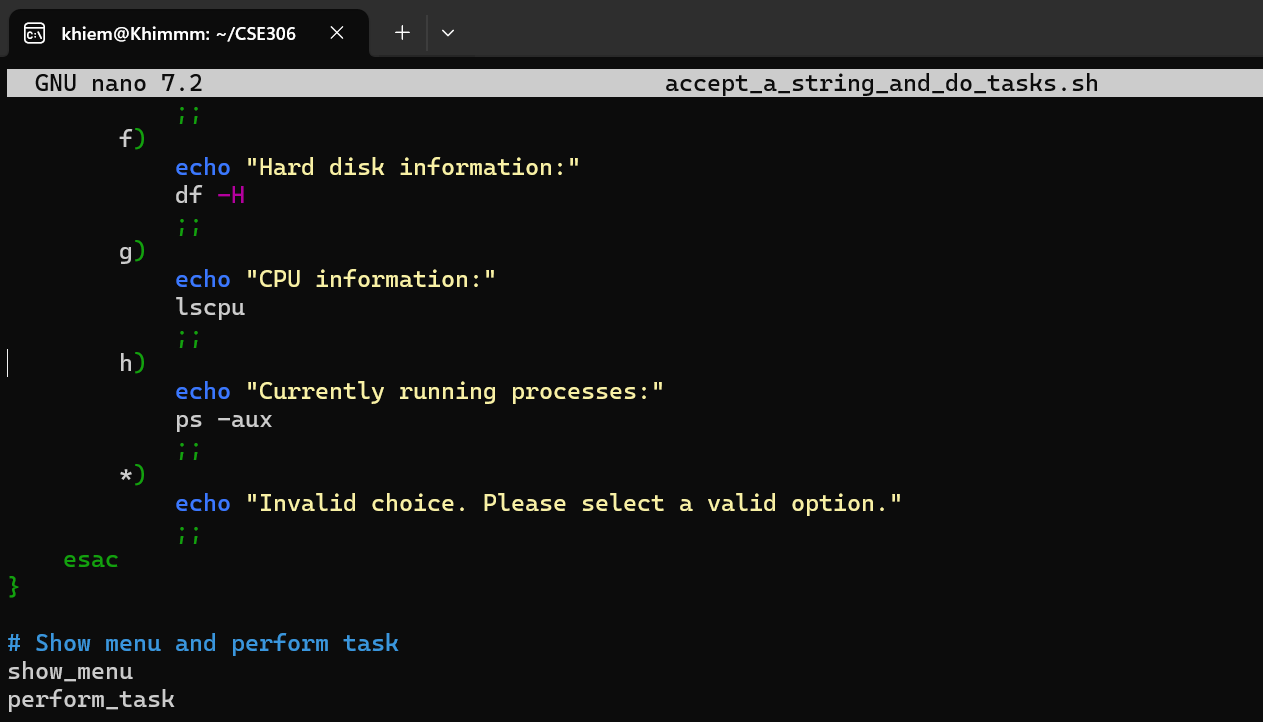
tar -czvf scripts.tar.gz \*.sh

****

**18. Write a script that accept a string from a user and do the corresponding tasks:**

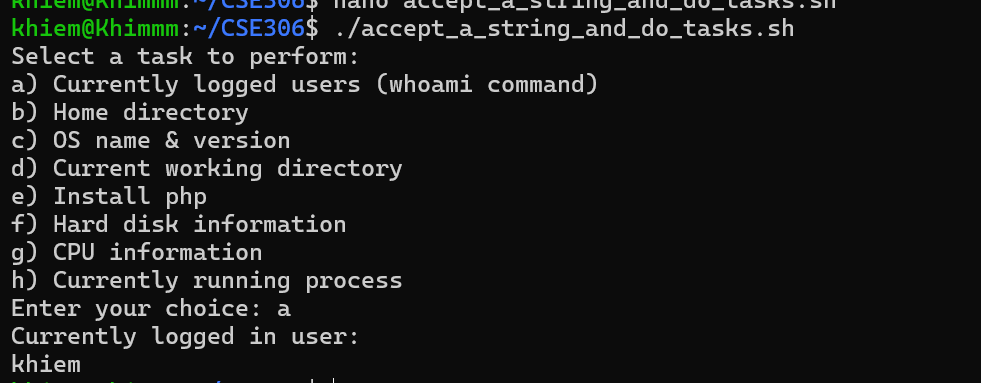
****

****

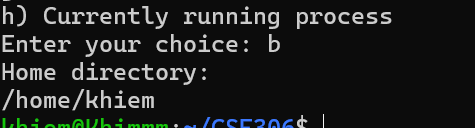
****

**Results**

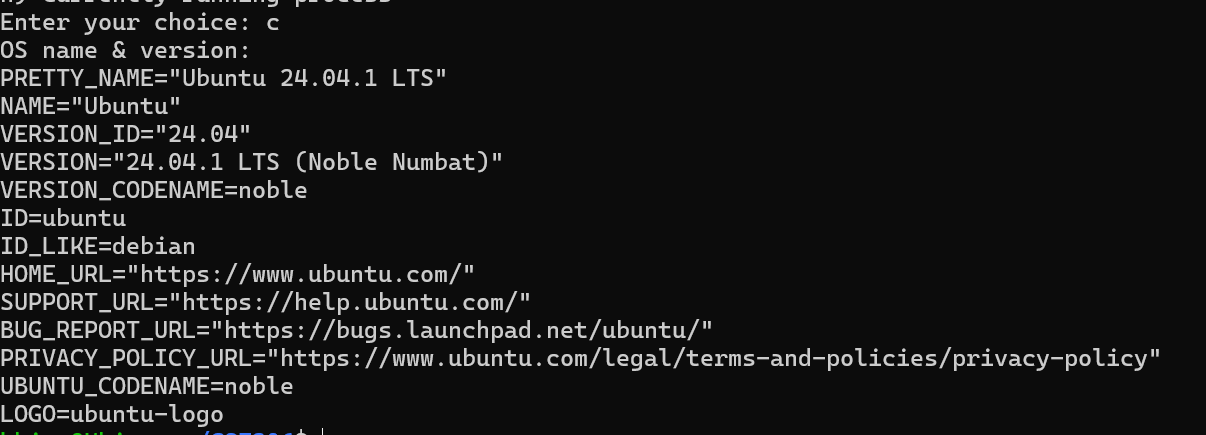
**a) Currently logged users (whoami command)**

****

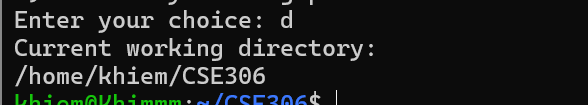
**b) Home directory (Find the variable to show the folder in TOP 25 Environment variables)**

****

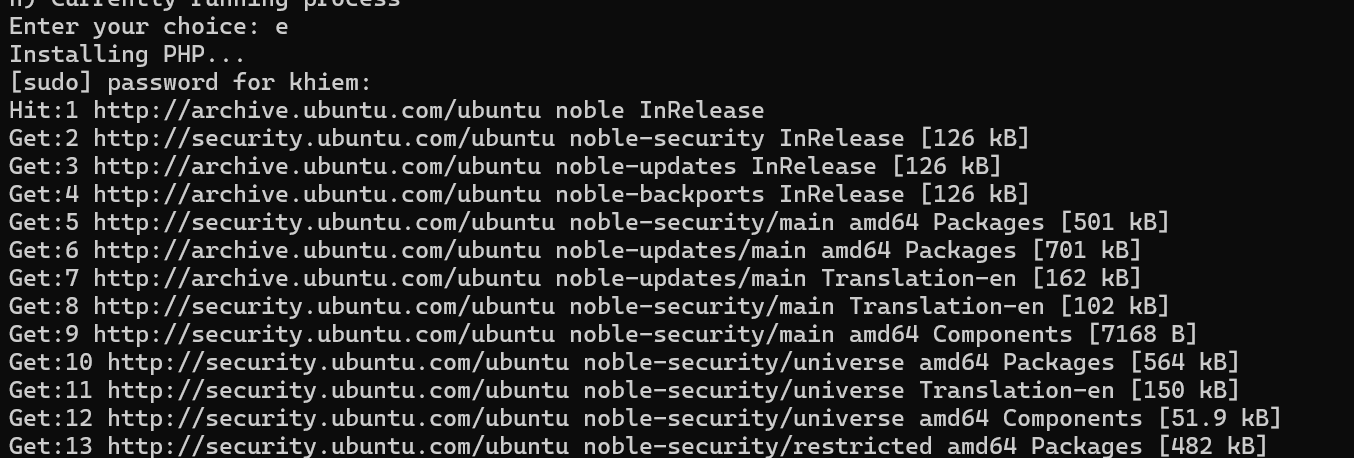
**c) OS name & version (cat /etc/os-release or hostnamectl)**

****

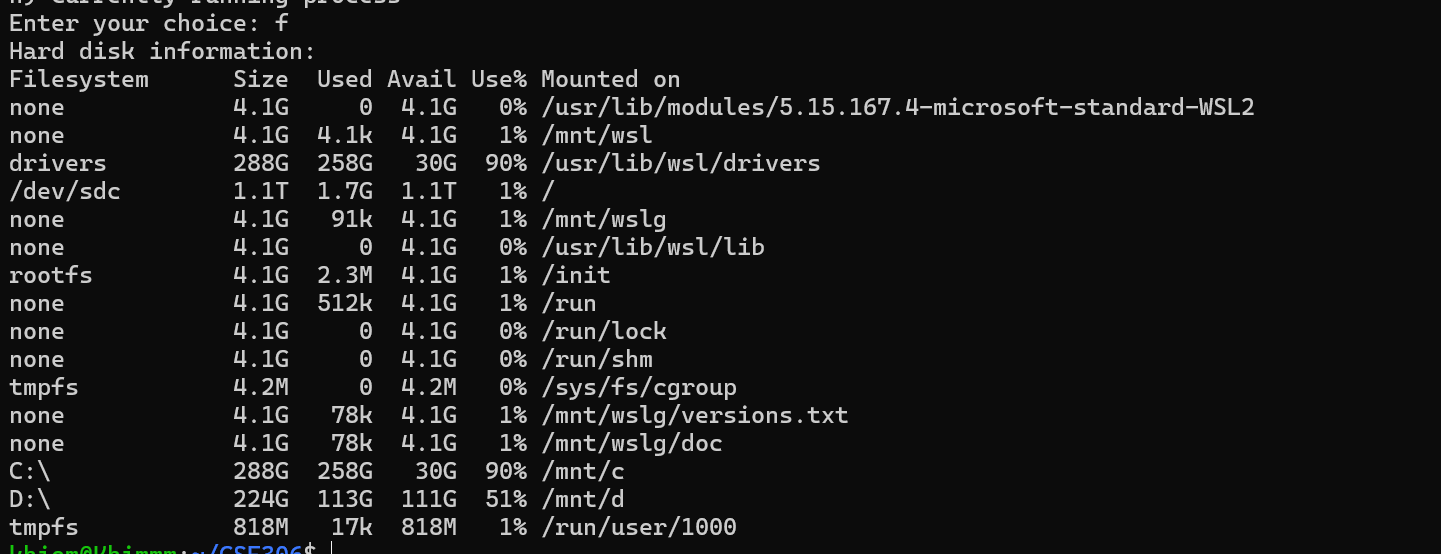
**d) Current working directory**

****

**e) Install php**

****

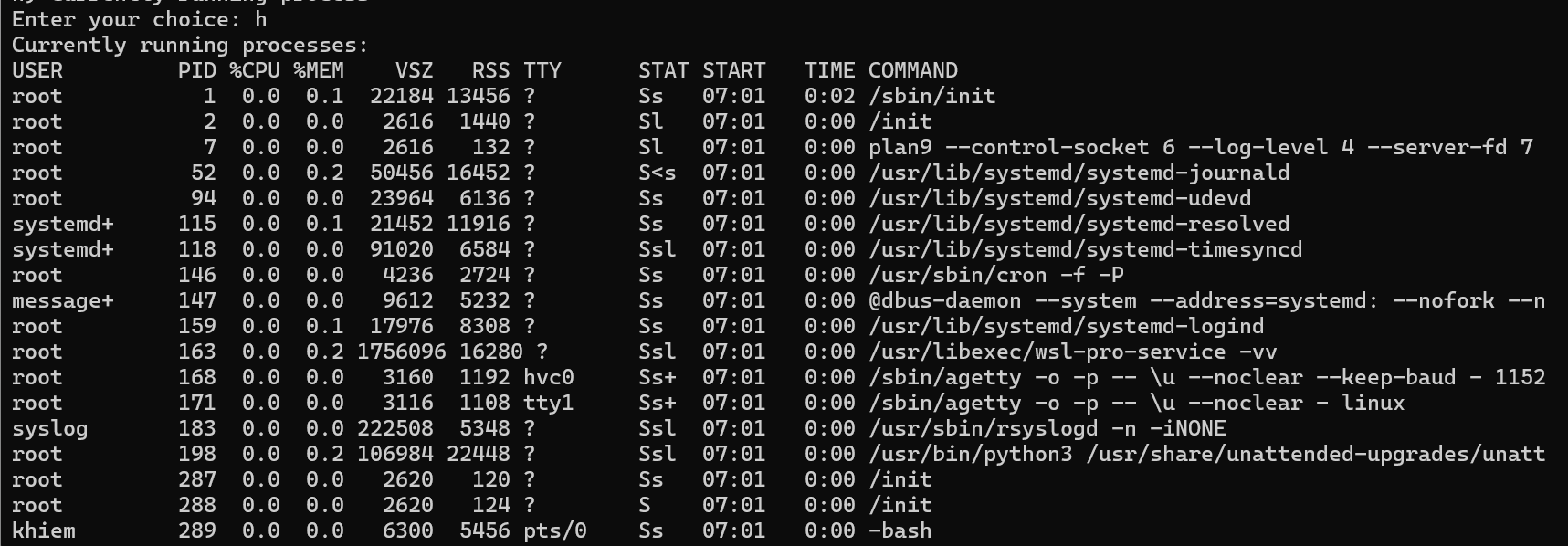
**f) Hard disk information (df -H)**

****

**g) CPU information (lscpu or cat /proc/cpuinfo)**

****

**h) Currently running process (ps -aux)**

****