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## Lab04

### Operating System

#### Submission :

Upload the word or pdf file to cms describes some questions as

- Submit the **source of the shell script (\*.sh)** and that **present the result of shell script program of Fibonacci in Shell.**

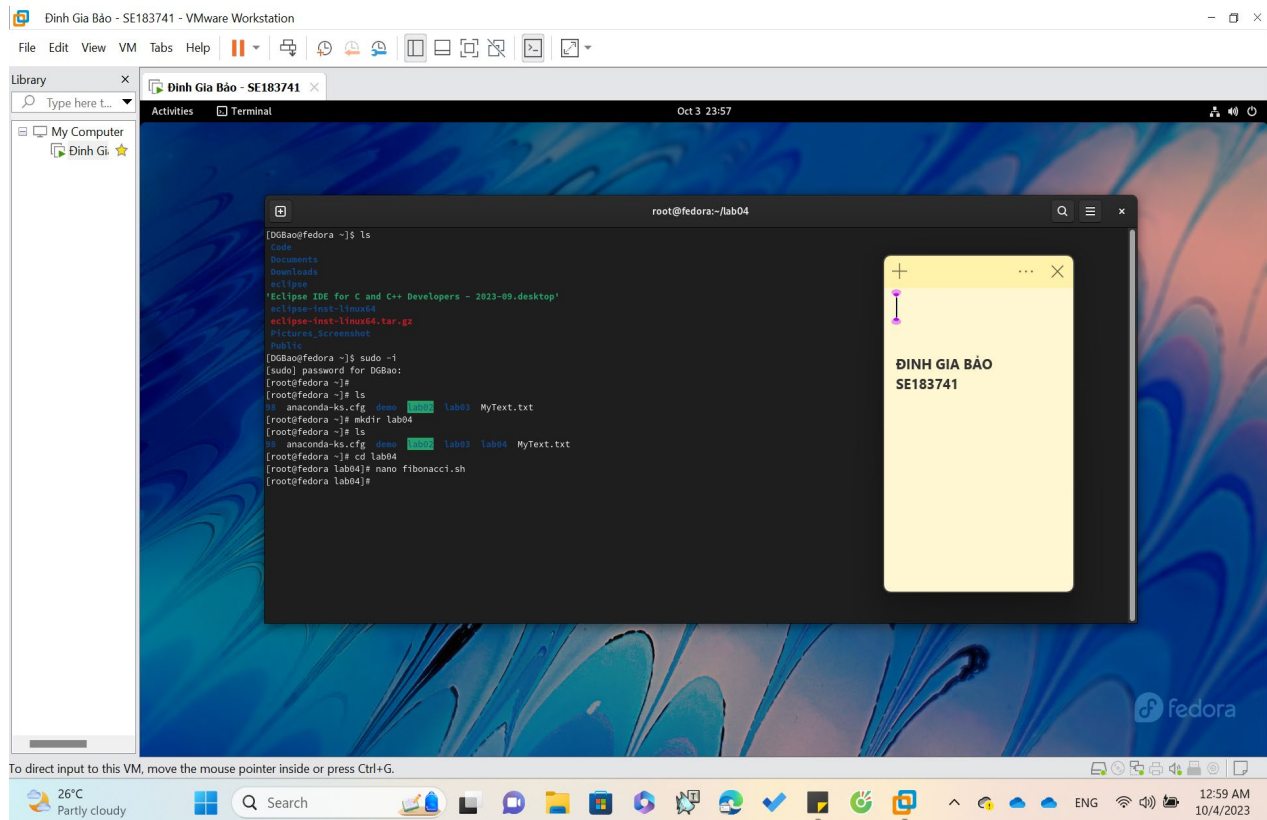
#### Requirement :

All the capture must be combination with full the windows **including your accounts on the windows and the Linux OS(if it is not, you will be taken 0 mark)**. Should be use the capture in windows with jpg format to reduce the file size with your submitting.

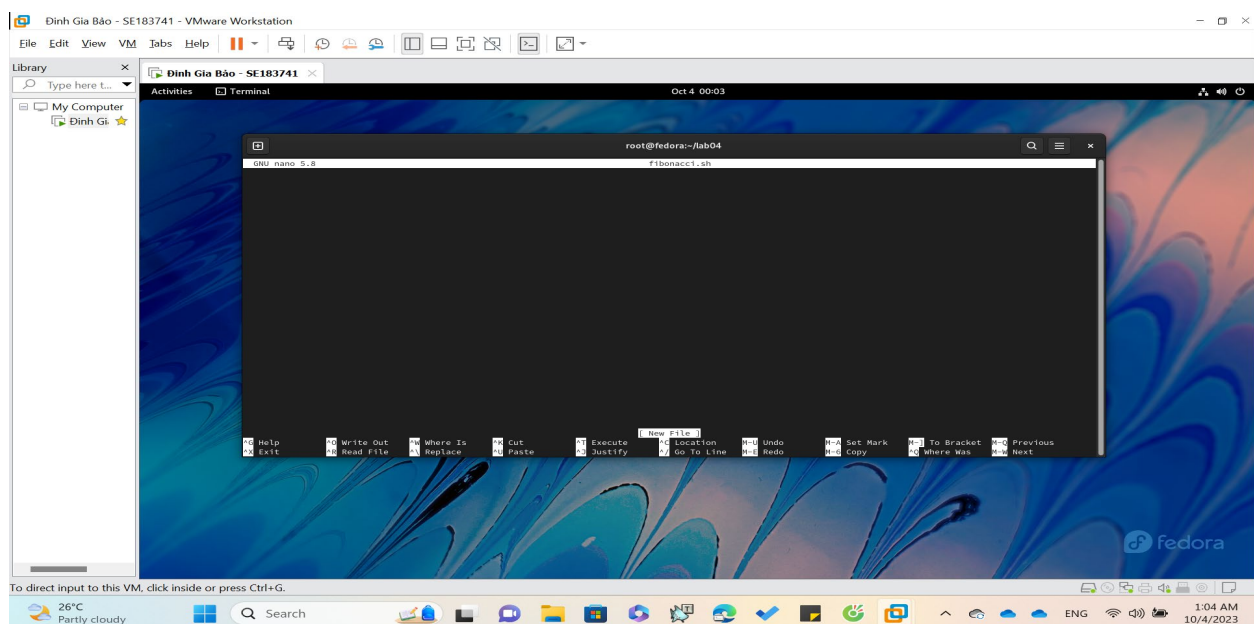
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Firstly, I will create a **Shell script program of Fibonacci ( fibonacci.sh )** in **lab04** directory

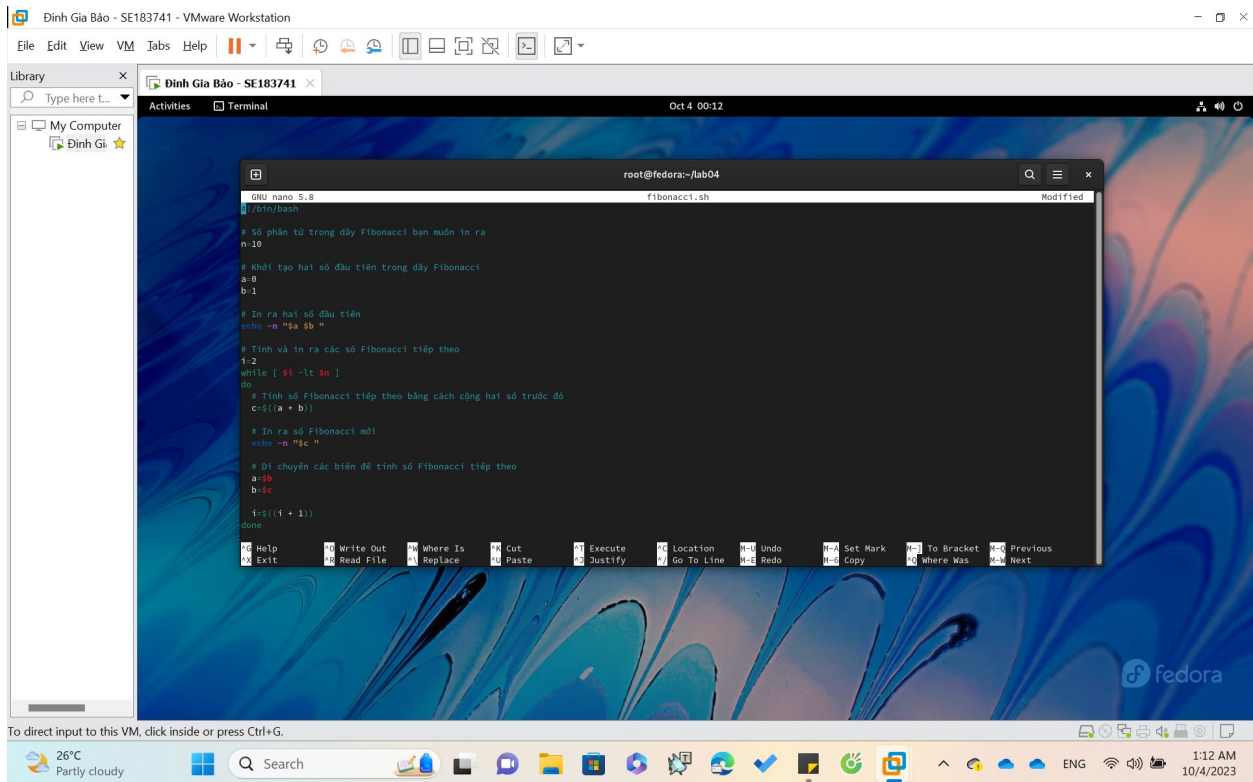
**\$ nano fibonacci.sh**



*create shell script file named "fibonacci"*



Secondly, I code a Fibonacci program and save the file.



```
root@fedora:~/lab04
GNU nano 5.8 Fibonacci.sh
#!/bin/bash

# Số phần tử trong dãy Fibonacci bạn muốn in ra
n=10

# Khởi tạo hai số đầu tiên trong dãy Fibonacci
a=0
b=1

# In ra hai số đầu tiên
echo -n "a $a b $b "

# Tính và in ra các số Fibonacci tiếp theo
i=2
while [ $i -lt $n ]
do
    # Tính số Fibonacci tiếp theo bằng cách cộng hai số trước đó
    c=$((a + b))

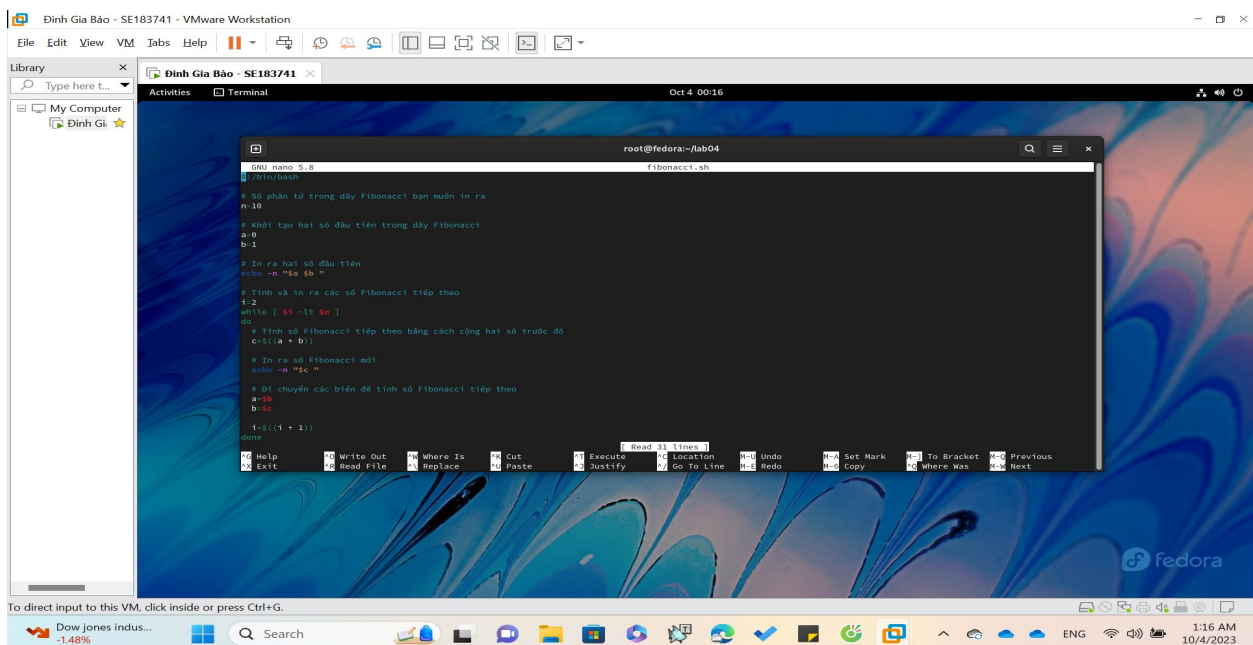
    # In ra số Fibonacci mới
    echo -n " $c "

    # Di chuyển các biến để tính số Fibonacci tiếp theo
    a=$b
    b=$c

    i=$((i + 1))
done
```

To save, “ **Ctrl+O** ” -> click Enter

To exit, Click “ **Ctrl + X** ”



```
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    c=$((a + b))

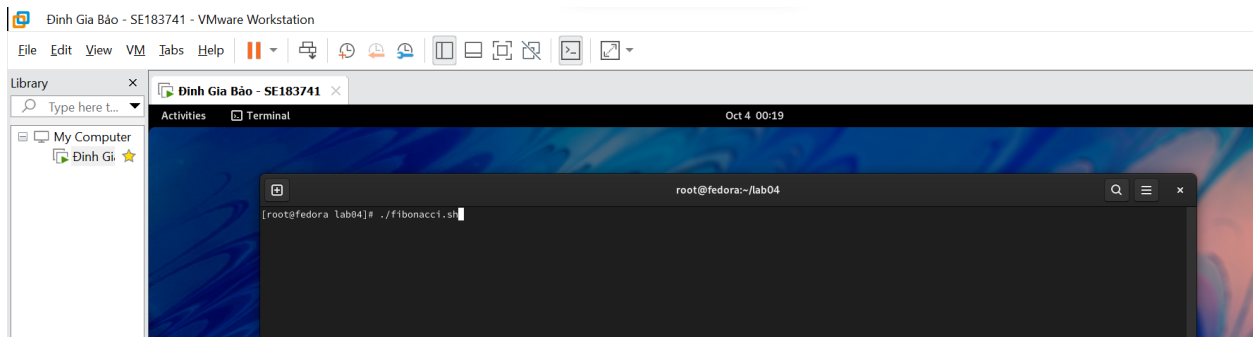
    # In ra số Fibonacci mới
    echo -n " $c "

    # Di chuyển các biến để tính số Fibonacci tiếp theo
    a=$b
    b=$c

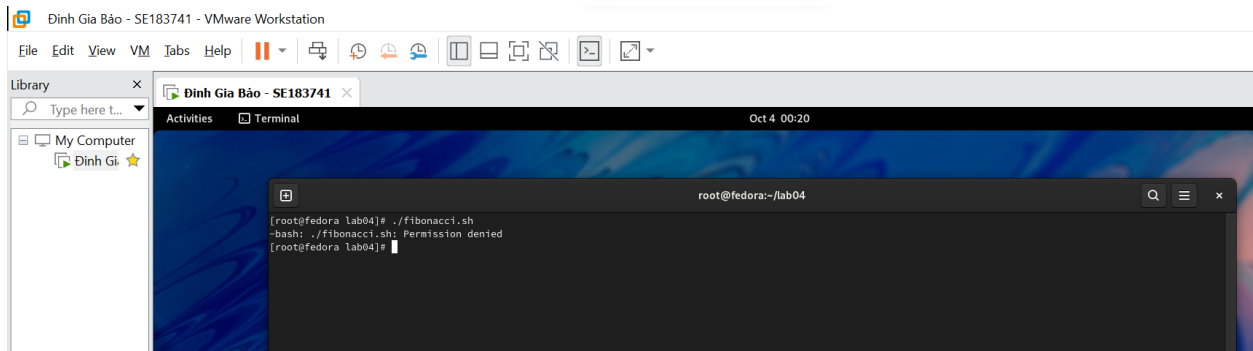
    i=$((i + 1))
done
```

Thirdly, to **run** the shell script.

**Use command : \$ ./filename.sh**



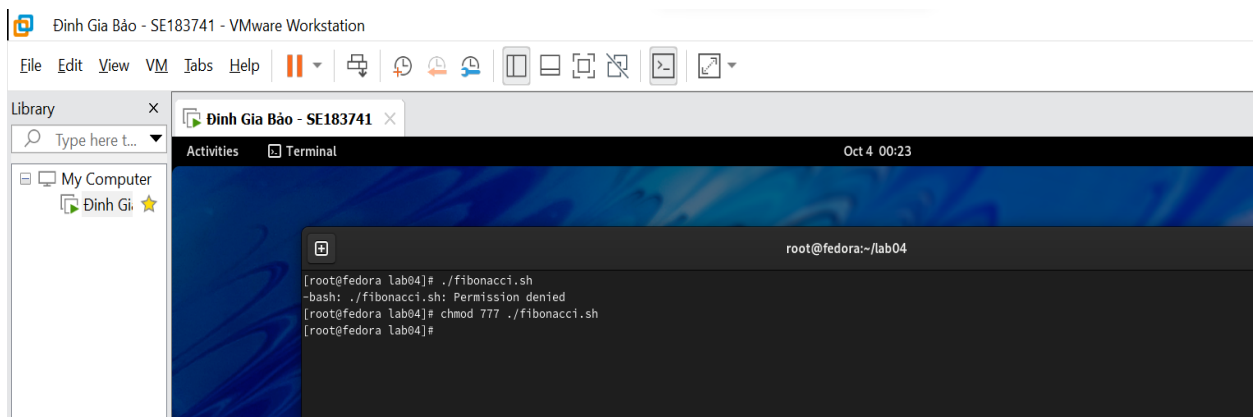
With the program above, type **\$ ./fibonacci.sh**



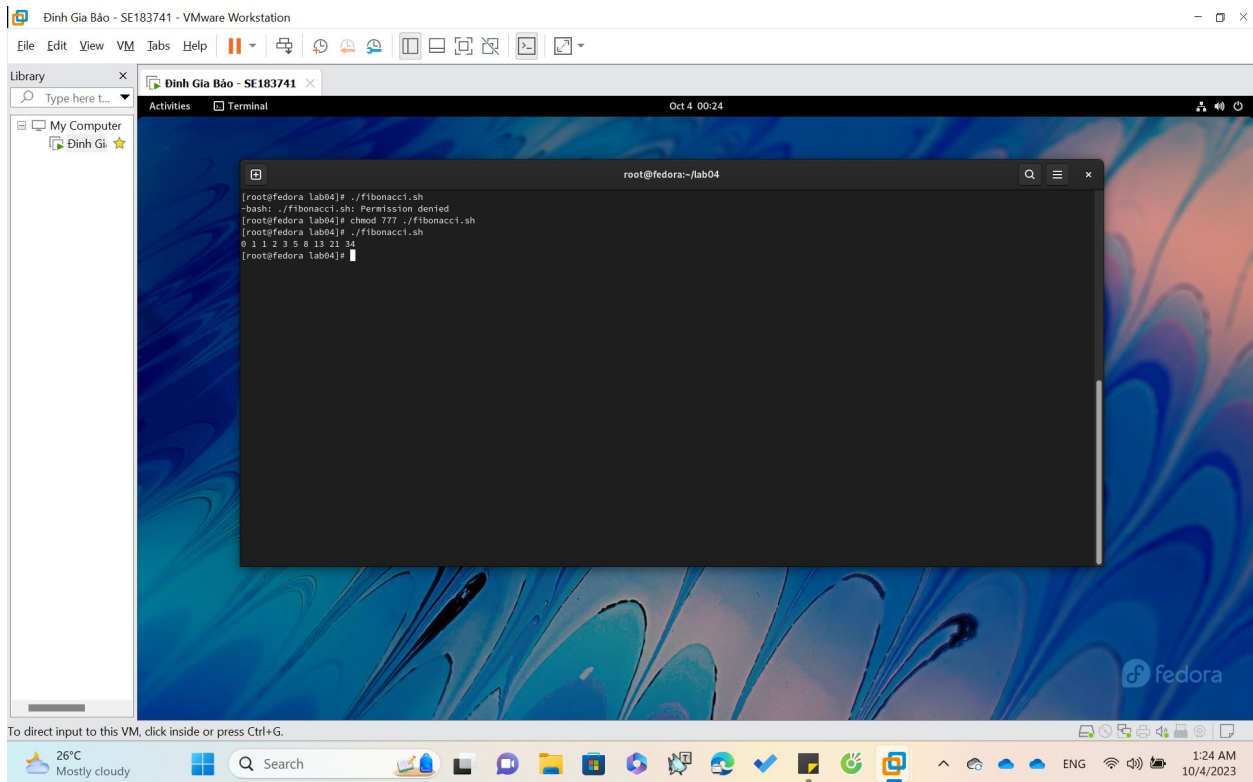
*It announces that the **fibonacci shell** needs permission.*

**Syntax for giving permission :**

**\$ chmod 777 ./<filename.sh>**



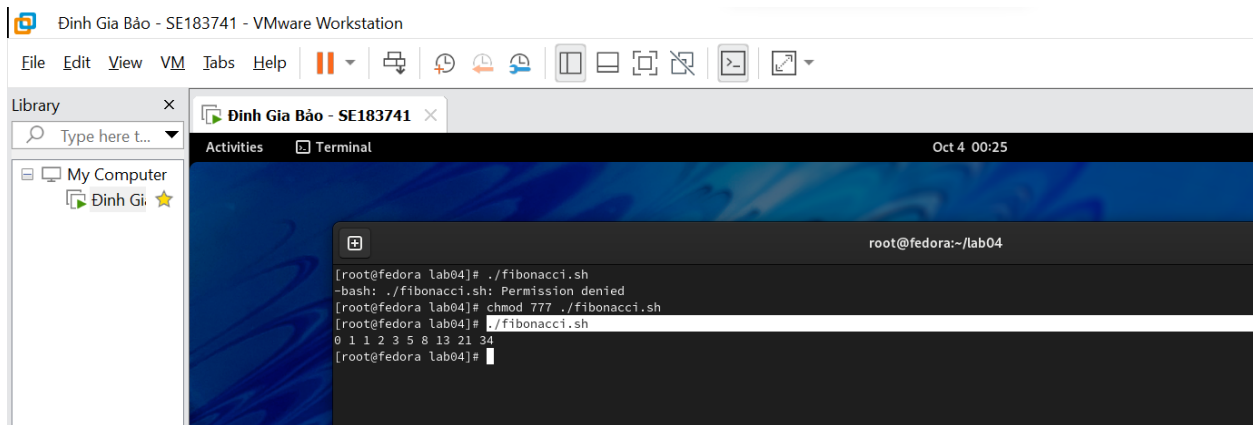
## Run the shell script again



The screenshot shows a VMware Workstation window titled "Đinh Gia Bảo - SE183741 - VMware Workstation". The main display area shows a terminal window titled "root@fedora:~/lab04" with the following output:

```
[root@fedora lab04]# ./fibonacci.sh
-bash: ./fibonacci.sh: Permission denied
[root@fedora lab04]# chmod 777 ./fibonacci.sh
[root@fedora lab04]# ./fibonacci.sh
0 1 1 2 3 5 8 13 21 34
[root@fedora lab04]#
```

The terminal window is overlaid on a desktop background with a blue and red marbled pattern. The VMware interface includes a menu bar (File, Edit, View, VM, Tabs, Help), a toolbar, and a sidebar with a "Library" section showing "My Computer" and "Đinh Gi". The bottom status bar shows system information: "26°C Mostly cloudy", "Search", and "1:24 AM 10/4/2023".



This screenshot is identical to the one above, showing the same VMware Workstation window and terminal output. The terminal window is titled "root@fedora:~/lab04" and displays the same sequence of commands and output: running the script, getting a permission error, changing permissions with chmod, and then successfully running the script to print the first 10 elements of the Fibonacci sequence (0 1 1 2 3 5 8 13 21 34).

**Print the first 10 elements of fibonacci sequence.**

**END .**