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Class: KHTN2021

## OPERATING SYSTEM LAB 2'S REPORT

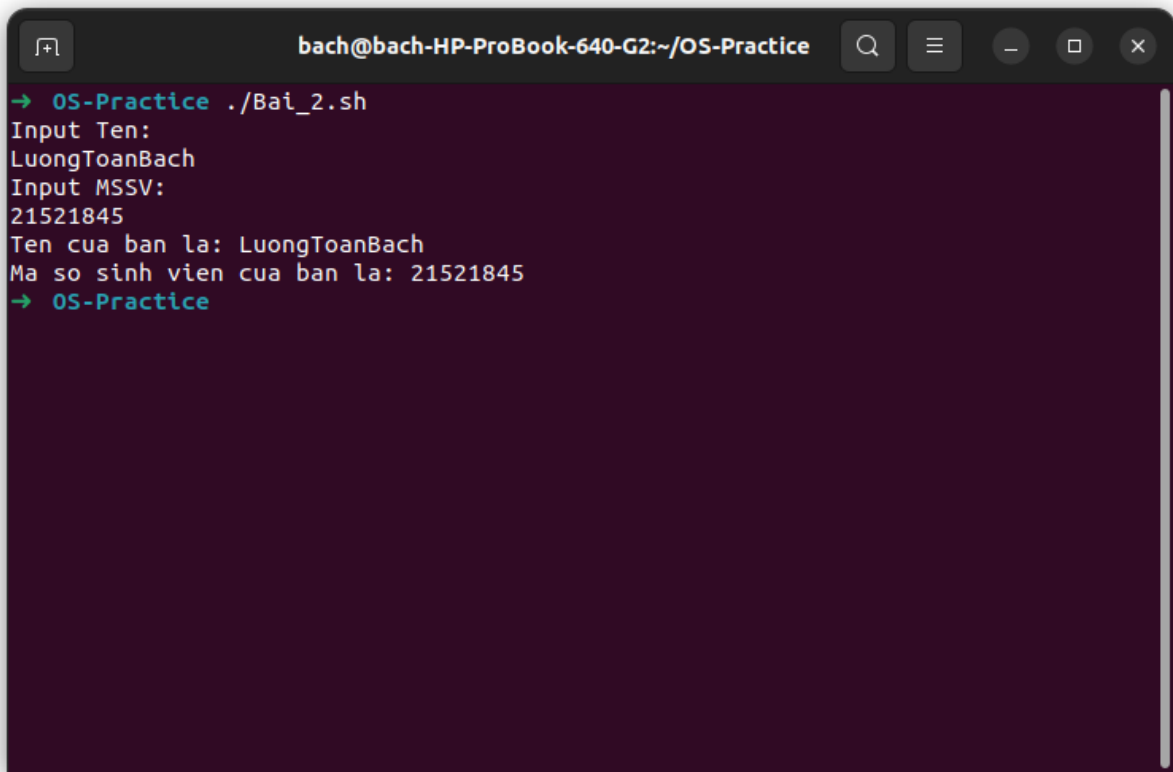
### SUMMARY

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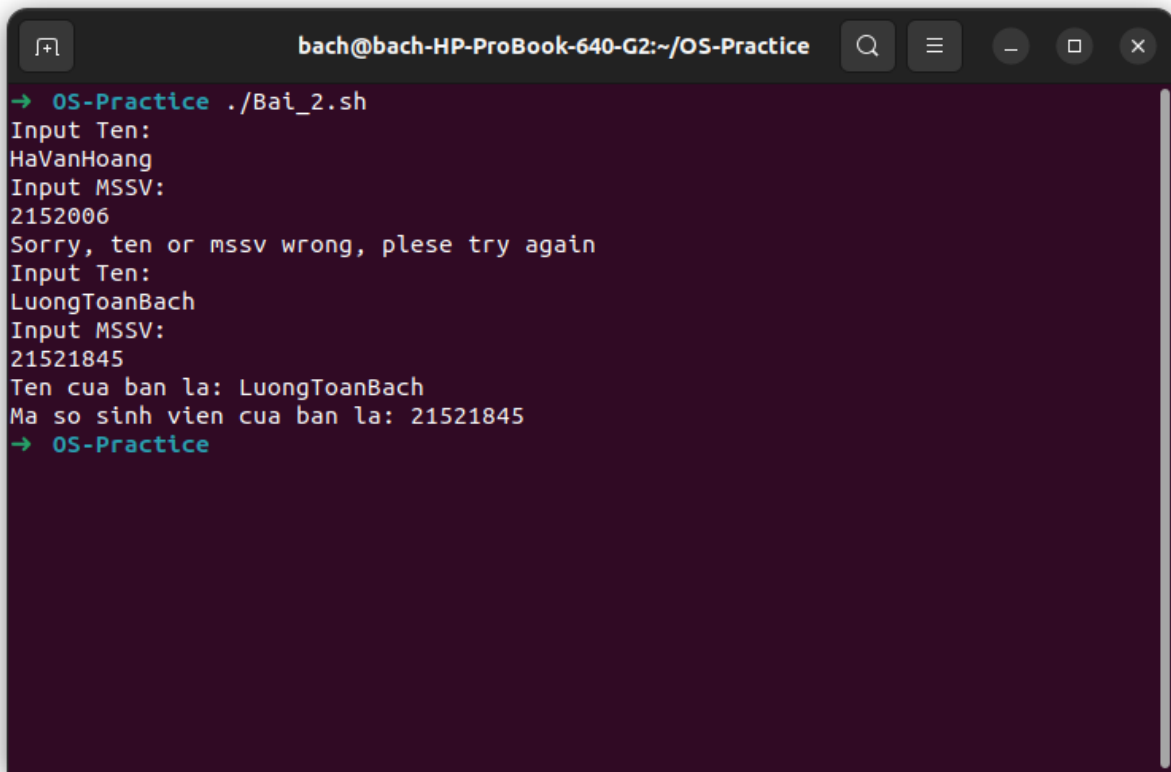
*\*Note: Export file to **PDF** and name the file by following format:  
**LAB X – <Student ID>.pdf***



A terminal window with a dark background and light-colored text. The window title bar shows the user 'bach' on a machine named 'bach-HP-ProBook-640-G2' in the directory '~/OS-Practice'. The terminal content shows a prompt '→ OS-Practice' followed by the command './Bai\_2.sh'. The script then prompts for a name, receiving 'LuongToanBach', and for a student ID, receiving '21521845'. It then outputs the name and ID. The prompt returns to '→ OS-Practice'.

```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice ./Bai_2.sh
Input Ten:
LuongToanBach
Input MSSV:
21521845
Ten cua ban la: LuongToanBach
Ma so sinh vien cua ban la: 21521845
→ OS-Practice
```

#### 2.5.2.3. Test 2



```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice ./Bai_2.sh
Input Ten:
HaVanHoang
Input MSSV:
2152006
Sorry, ten or mssv wrong, plese try again
Input Ten:
LuongToanBach
Input MSSV:
21521845
Ten cua ban la: LuongToanBach
Ma so sinh vien cua ban la: 21521845
→ OS-Practice
```

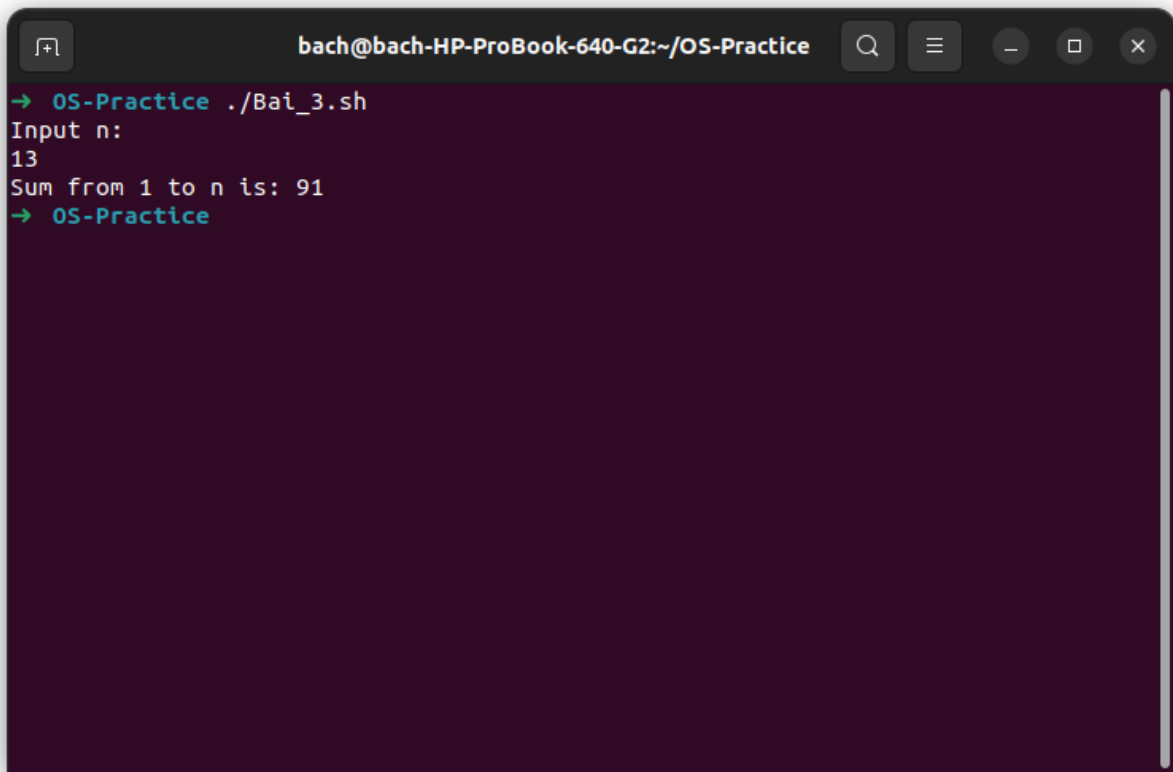
2.5.3. Calculate sum from 1 to n ( $n > 10$ )

2.5.3.1. Code file



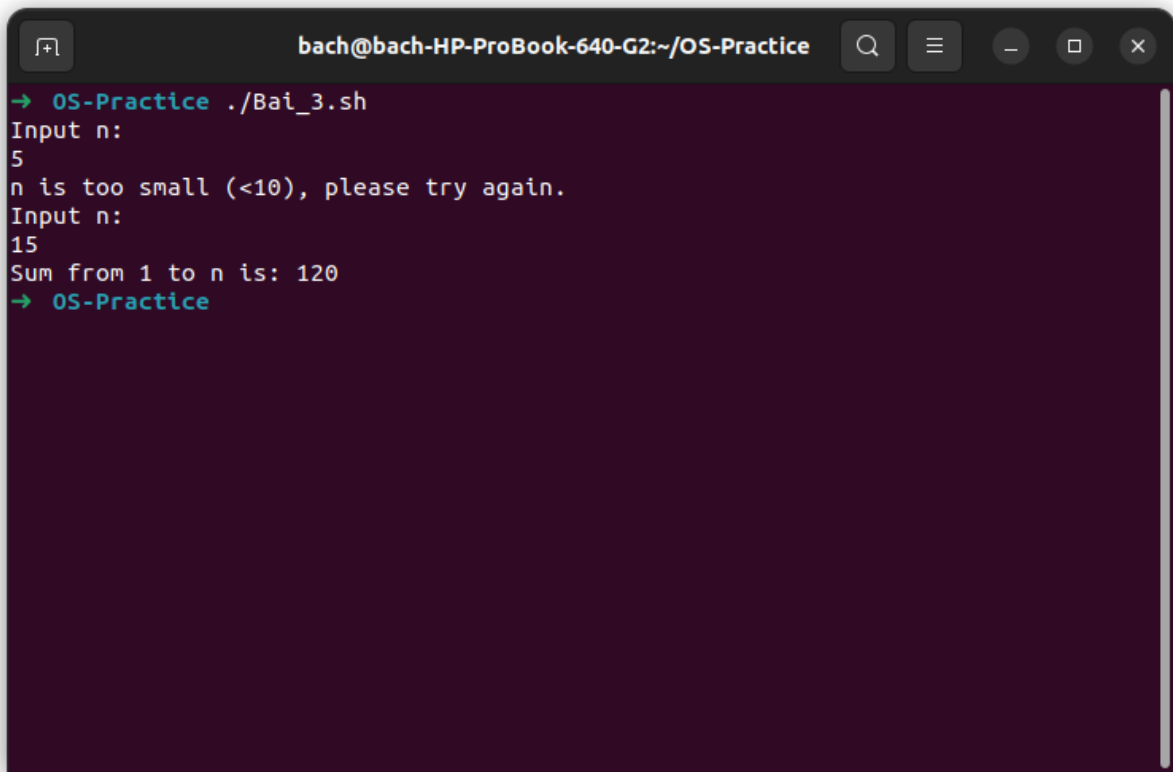
```
#!/bin/bash
while true
do
    echo "Input n:"
    read n
    if [ $n -ge 10 ]
    then
        break
    fi
    echo "n is too small (<10), please try again."
done
ans=0
i=1
while [ $i -le $n ]
do
    ans=$((ans+i))
    i=$((i+1))
done
echo "Sum from 1 to n is: $ans"
~
~
~
~
"Bai_3.sh" 19L, 240B 1,1 All
```

## 2.5.3.2. Test 1

A terminal window with a dark background and light-colored text. The window title bar shows the user 'bach' on a machine named 'bach-HP-ProBook-640-G2' in the directory '~/OS-Practice'. The terminal content shows a prompt '→ OS-Practice' followed by the command './Bai\_3.sh'. The script outputs 'Input n:', the user enters '13', and the script outputs 'Sum from 1 to n is: 91'. The prompt '→ OS-Practice' appears again at the bottom.

```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice ./Bai_3.sh
Input n:
13
Sum from 1 to n is: 91
→ OS-Practice
```

2.5.3.3. Test 2

A terminal window with a dark background and light text. The window title bar shows the user 'bach' on a machine named 'bach-HP-ProBook-640-G2' in the directory '~/OS-Practice'. The terminal shows the execution of a script './Bai\_3.sh'. It prompts for 'Input n:', the user enters '5', and the script outputs 'n is too small (<10), please try again.' The user then enters '15', and the script outputs 'Sum from 1 to n is: 120'. The prompt '→ OS-Practice' is visible at the bottom.

```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice ./Bai_3.sh
Input n:
5
n is too small (<10), please try again.
Input n:
15
Sum from 1 to n is: 120
→ OS-Practice
```

2.5.4. Check if string in file text

2.5.4.1. Code file

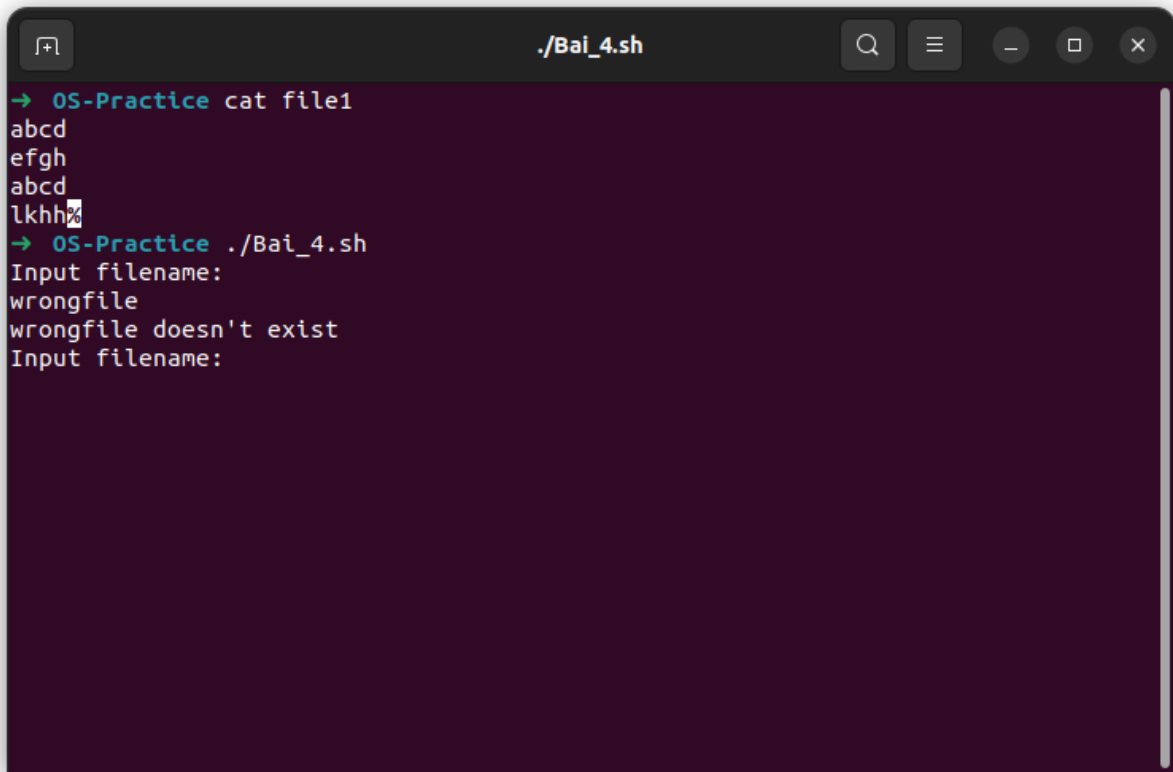


```
#!/bin/bash

while true
do
    echo "Input filename:"
    read filename
    if [ -f $filename ]
    then
        break
    fi
    echo "$filename doesn't exist"
done
echo "Input string you want to find in $filename:"
read string
if [[ `grep $string $filename` != "" ]]
then
    echo "$string exist in $filename"
else
    echo "$string doesn't exist in $filename"
fi
exit 0
~
~
"Bai_4.sh" 21L, 346B                21,5                All
```

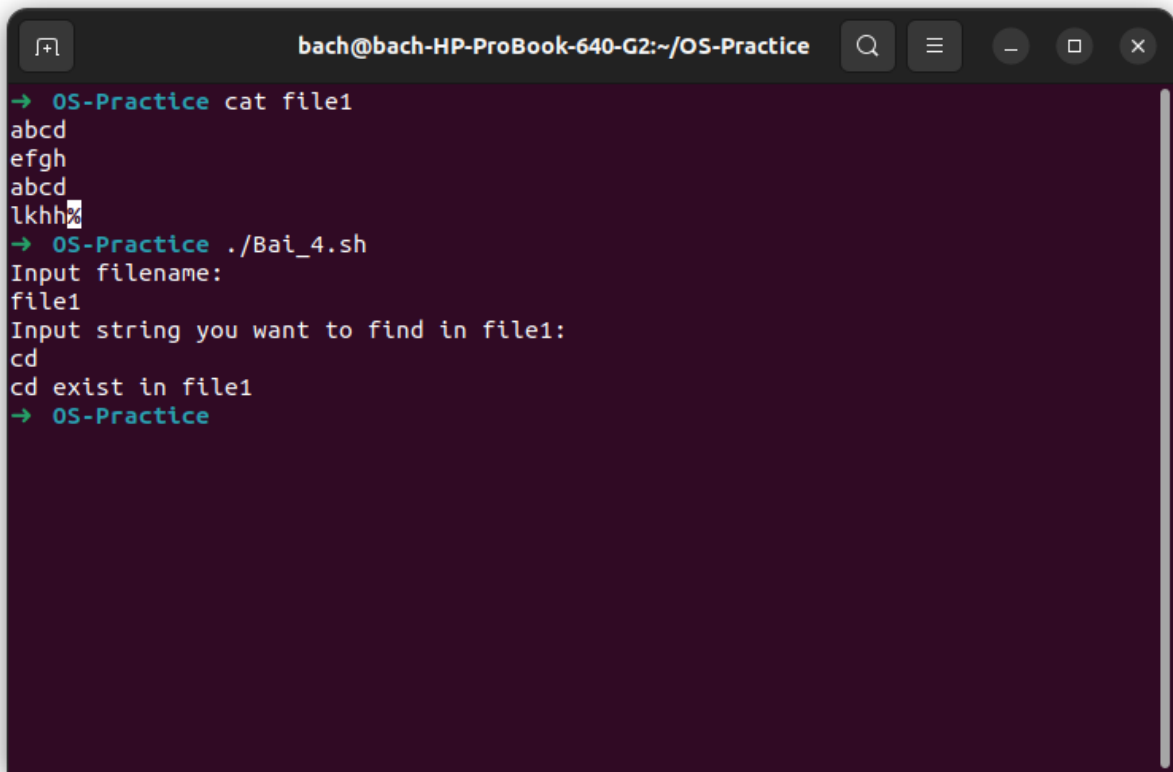
## 2.5.4.2. Test 1



A terminal window titled './Bai\_4.sh' with standard window controls (search, menu, zoom, close). The terminal shows the execution of a shell script. The first command is 'cat file1', which outputs 'abcd', 'efgh', 'abcd', and 'lkhh'. The second command is './Bai\_4.sh', which prompts for an input filename. The user enters 'wrongfile', and the script outputs 'wrongfile doesn't exist' followed by another prompt for an input filename.

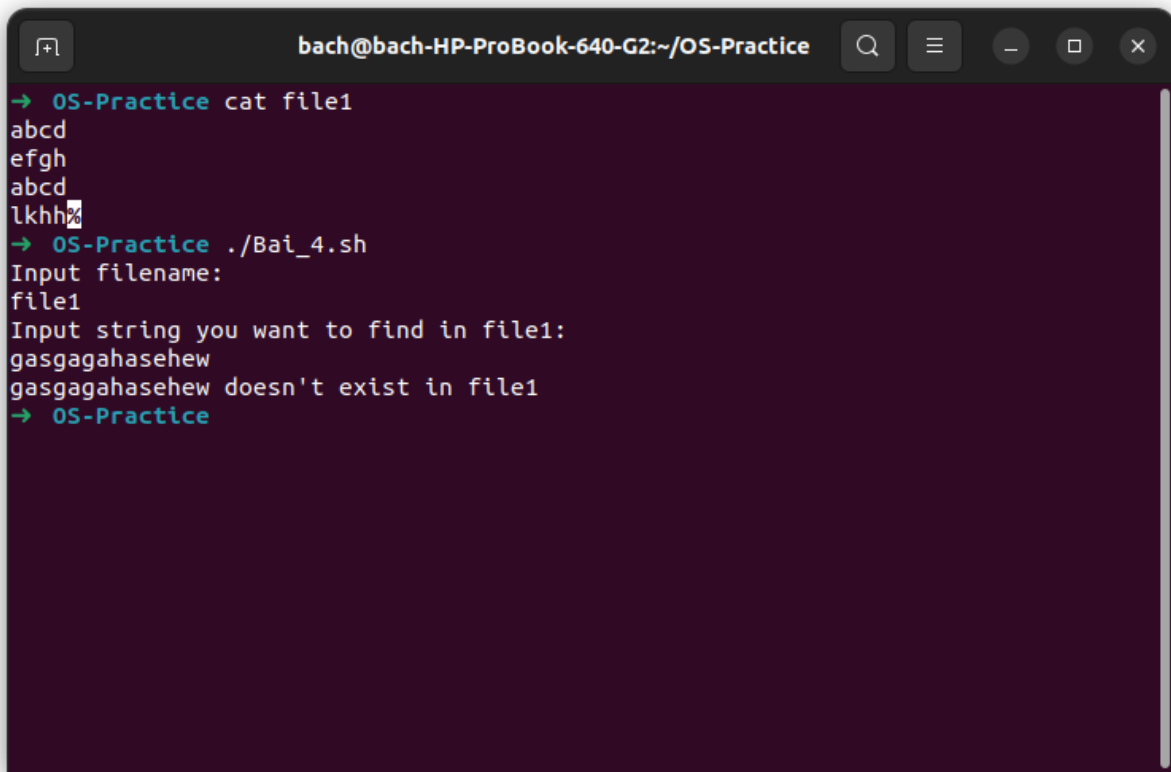
```
→ OS-Practice cat file1
abcd
efgh
abcd
lkhh
→ OS-Practice ./Bai_4.sh
Input filename:
wrongfile
wrongfile doesn't exist
Input filename:
```

## 2.5.4.3. Test 2



```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice cat file1
abcd
efgh
abcd
lkhkh
→ OS-Practice ./Bai_4.sh
Input filename:
file1
Input string you want to find in file1:
cd
cd exist in file1
→ OS-Practice
```

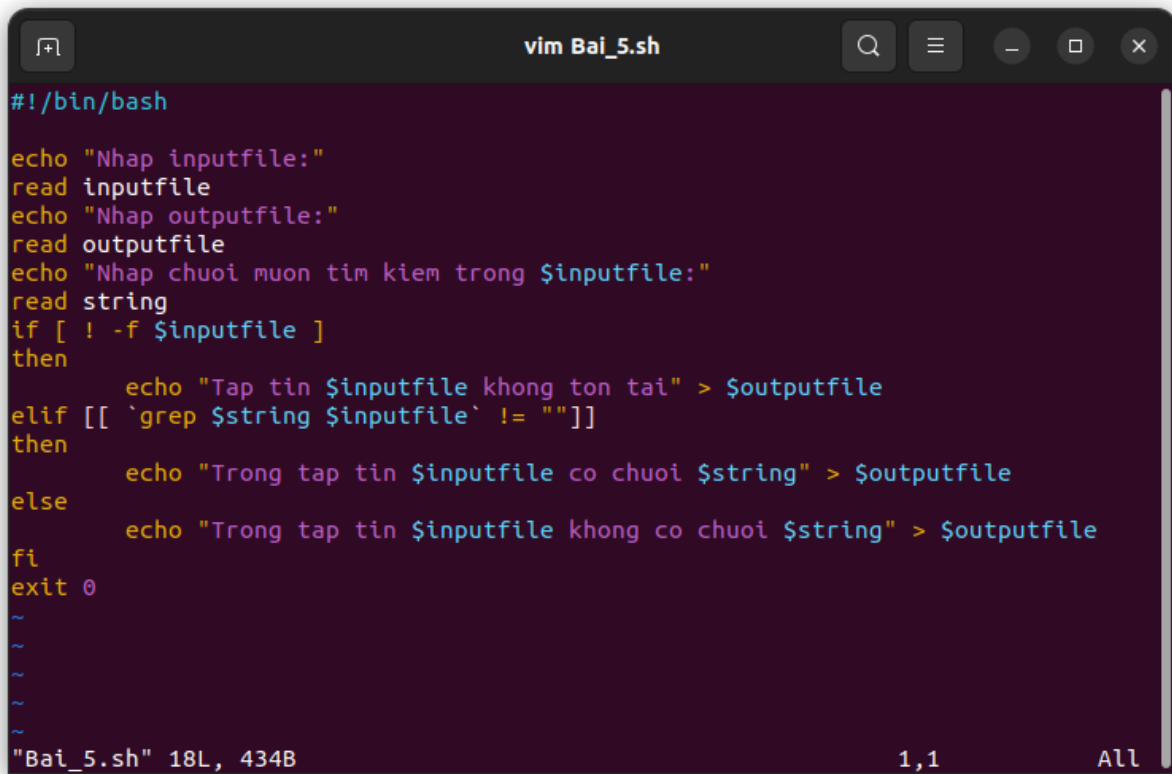
2.5.4.4. Test 3



```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice cat file1
abcd
efgh
abcd
lkhkh
→ OS-Practice ./Bai_4.sh
Input filename:
file1
Input string you want to find in file1:
gasgagahasehew
gasgagahasehew doesn't exist in file1
→ OS-Practice
```

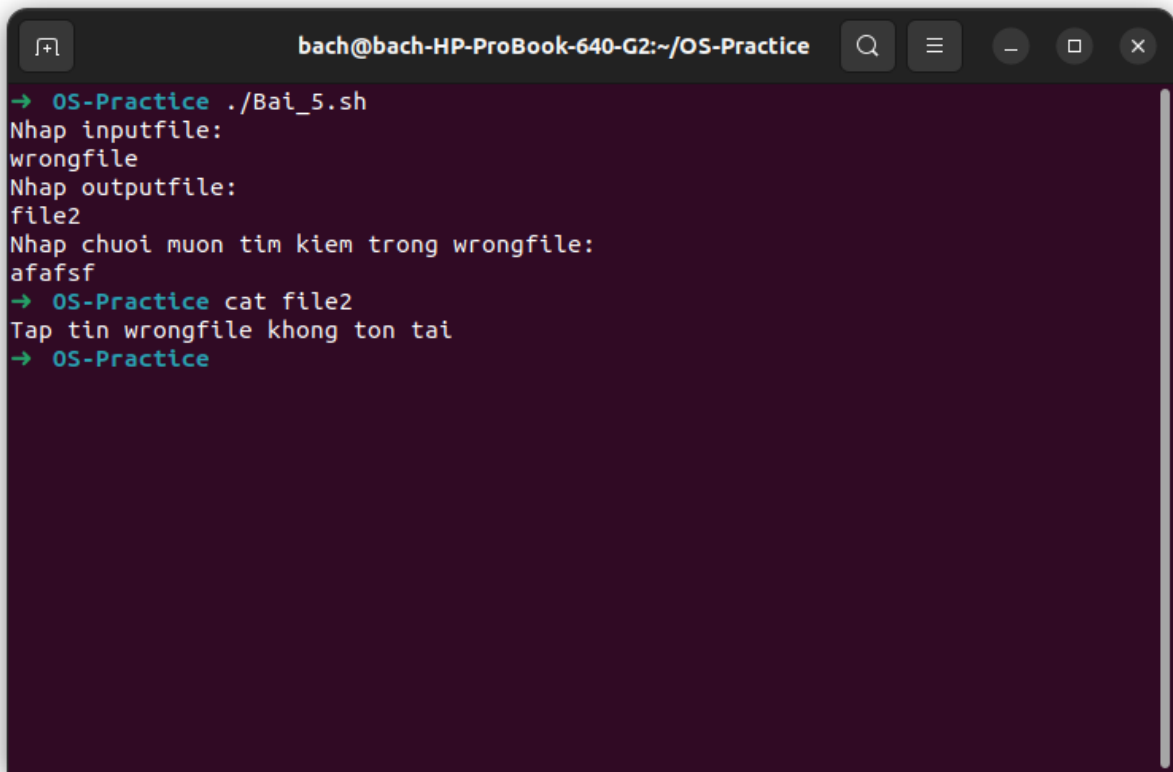
## 2.5.5. Check if string in file

### 2.5.5.1. Code file



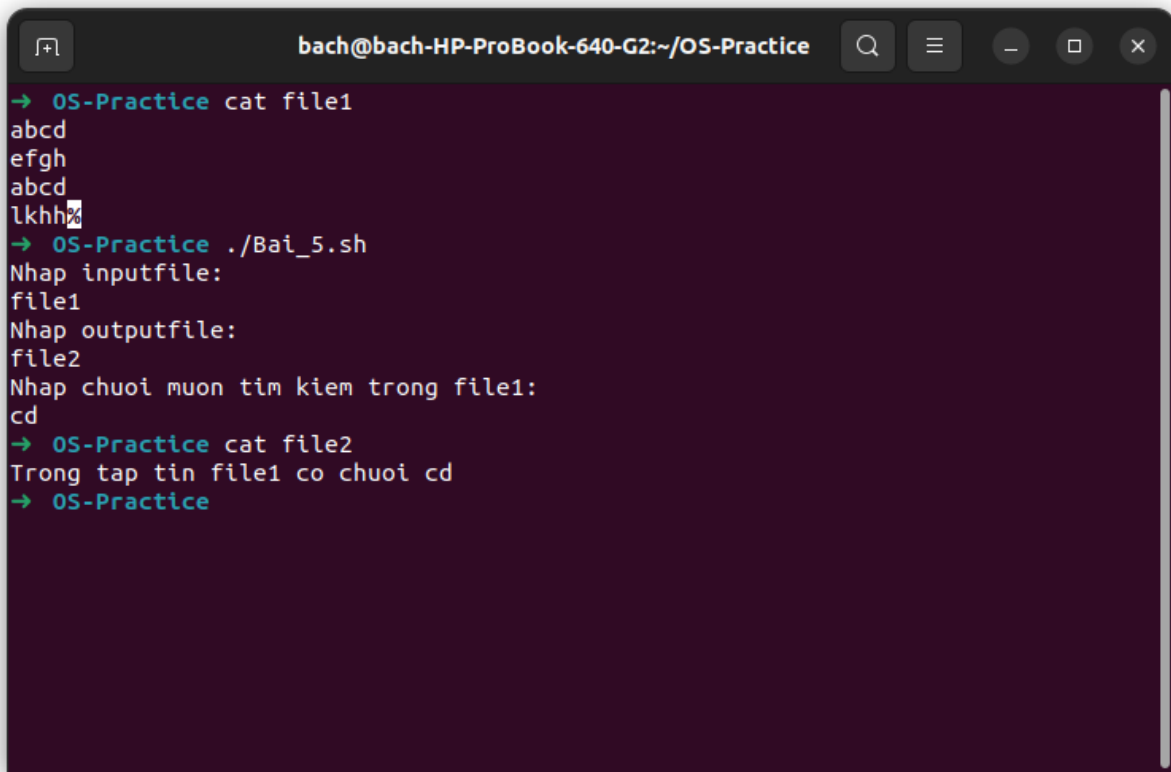
```
#!/bin/bash
echo "Nhap inputfile:"
read inputfile
echo "Nhap outputfile:"
read outputfile
echo "Nhap chuoi muon tim kiem trong $inputfile:"
read string
if [ ! -f $inputfile ]
then
    echo "Tap tin $inputfile khong ton tai" > $outputfile
elif [[ `grep $string $inputfile` != "" ]]
then
    echo "Trong tap tin $inputfile co chuoi $string" > $outputfile
else
    echo "Trong tap tin $inputfile khong co chuoi $string" > $outputfile
fi
exit 0
~
~
~
~
~
"Bai_5.sh" 18L, 434B                               1,1                               All
```

## 2.5.5.2. Test 1

A terminal window with a dark background and light text. The window title is 'bach@bach-HP-ProBook-640-G2:~/OS-Practice'. The prompt is '→ OS-Practice'. The user enters './Bai\_5.sh'. The script prompts for 'Nhập inputfile:' and the user enters 'wrongfile'. The script prompts for 'Nhập outputfile:' and the user enters 'file2'. The script then prompts for 'Nhập chuỗi muốn tìm kiếm trong wrongfile:' and the user enters 'afafsf'. The script then runs 'cat file2' and outputs 'Tập tin wrongfile không tồn tại'. The prompt returns to '→ OS-Practice'.

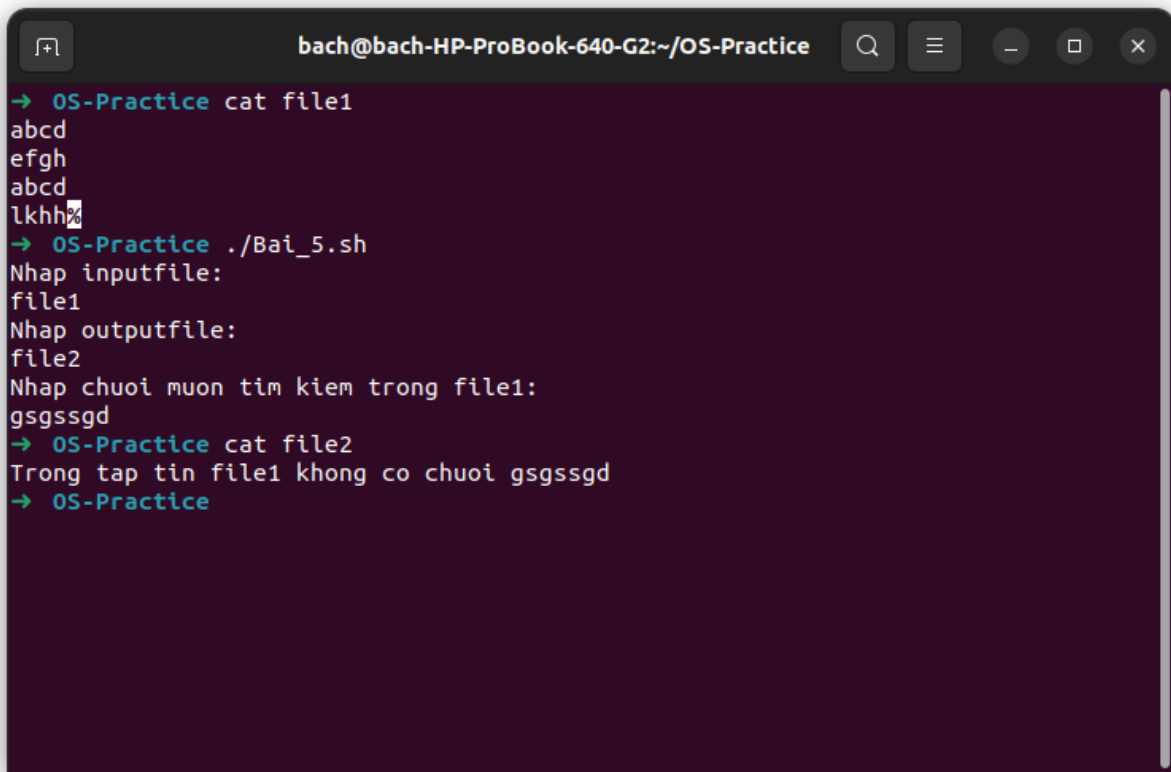
```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice ./Bai_5.sh
Nhập inputfile:
wrongfile
Nhập outputfile:
file2
Nhập chuỗi muốn tìm kiếm trong wrongfile:
afafsf
→ OS-Practice cat file2
Tập tin wrongfile không tồn tại
→ OS-Practice
```

## 2.5.5.3. Test 2

A terminal window with a dark purple background and white text. The window title is 'bach@bach-HP-ProBook-640-G2:~/OS-Practice'. The terminal shows the following sequence of commands and outputs:

```
→ OS-Practice cat file1
abcd
efgh
abcd
lkhkh
→ OS-Practice ./Bai_5.sh
Nhap inputfile:
file1
Nhap outputfile:
file2
Nhap chuoi muon tim kiem trong file1:
cd
→ OS-Practice cat file2
Trong tap tin file1 co chuoi cd
→ OS-Practice
```

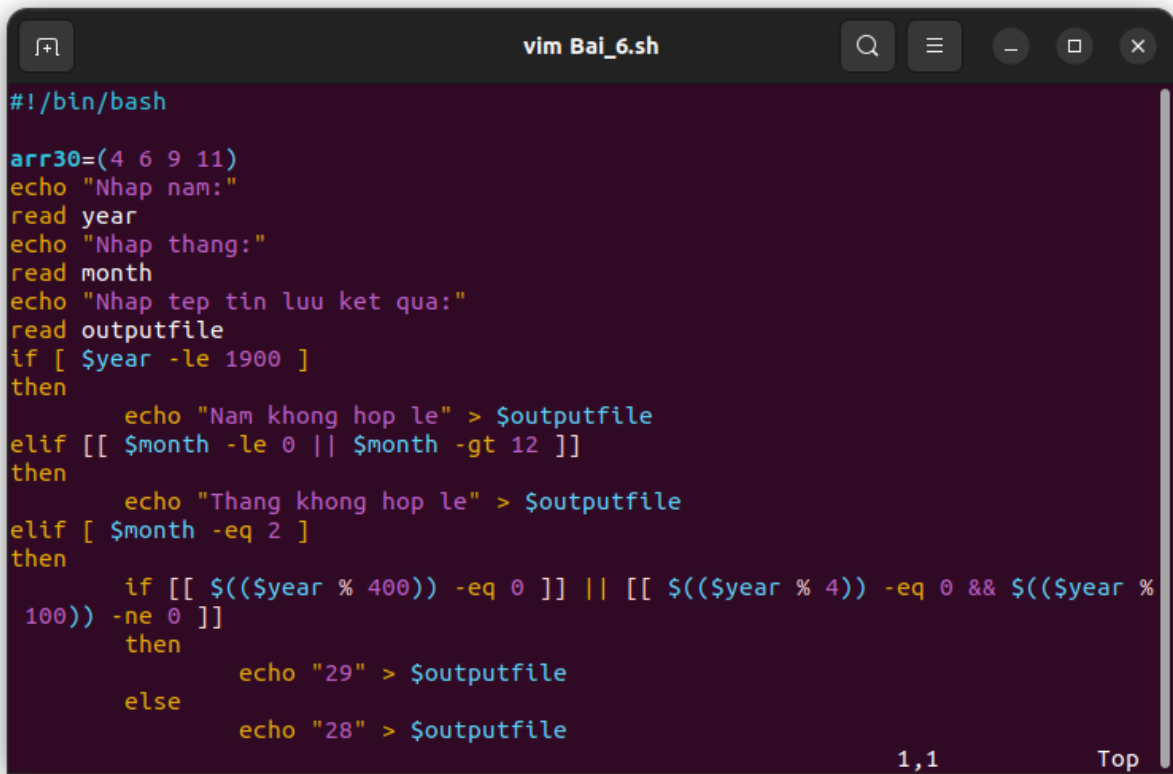
## 2.5.5.4. Test 3



```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice cat file1
abcd
efgh
abcd
lkhkh
→ OS-Practice ./Bai_5.sh
Nhap inputfile:
file1
Nhap outputfile:
file2
Nhap chuỗi muốn tìm kiếm trong file1:
gsgssgd
→ OS-Practice cat file2
Trong tập tin file1 không có chuỗi gsgssgd
→ OS-Practice
```

2.5.6. Print day of given month, year

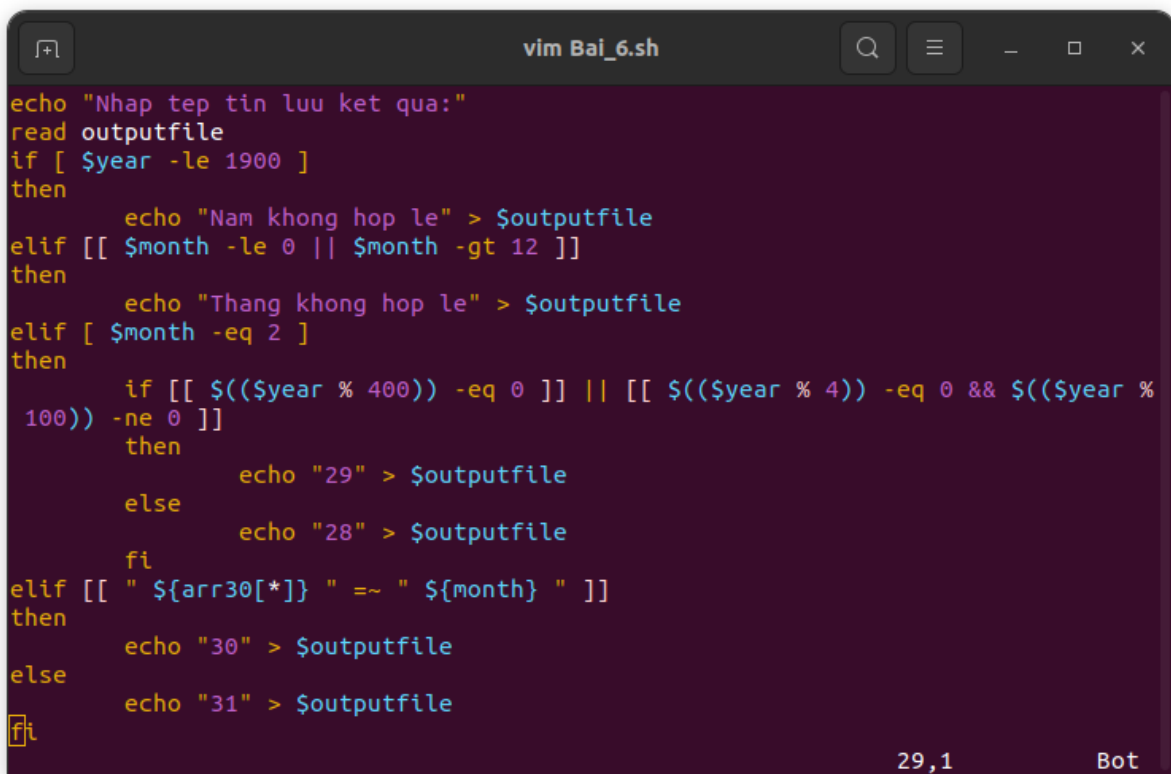
2.5.6.1. Code file



```
#!/bin/bash
arr30=(4 6 9 11)
echo "Nhap nam:"
read year
echo "Nhap thang:"
read month
echo "Nhap tep tin luu ket qua:"
read outputfile
if [ $year -le 1900 ]
then
    echo "Nam khong hop le" > $outputfile
elif [[ $month -le 0 || $month -gt 12 ]]
then
    echo "Thang khong hop le" > $outputfile
elif [ $month -eq 2 ]
then
    if [[ $((($year % 400)) -eq 0)] || [[ $((($year % 4)) -eq 0 && $((($year % 100)) -ne 0)]]
    then
        echo "29" > $outputfile
    else
        echo "28" > $outputfile
    fi
fi
```

1,1 Top

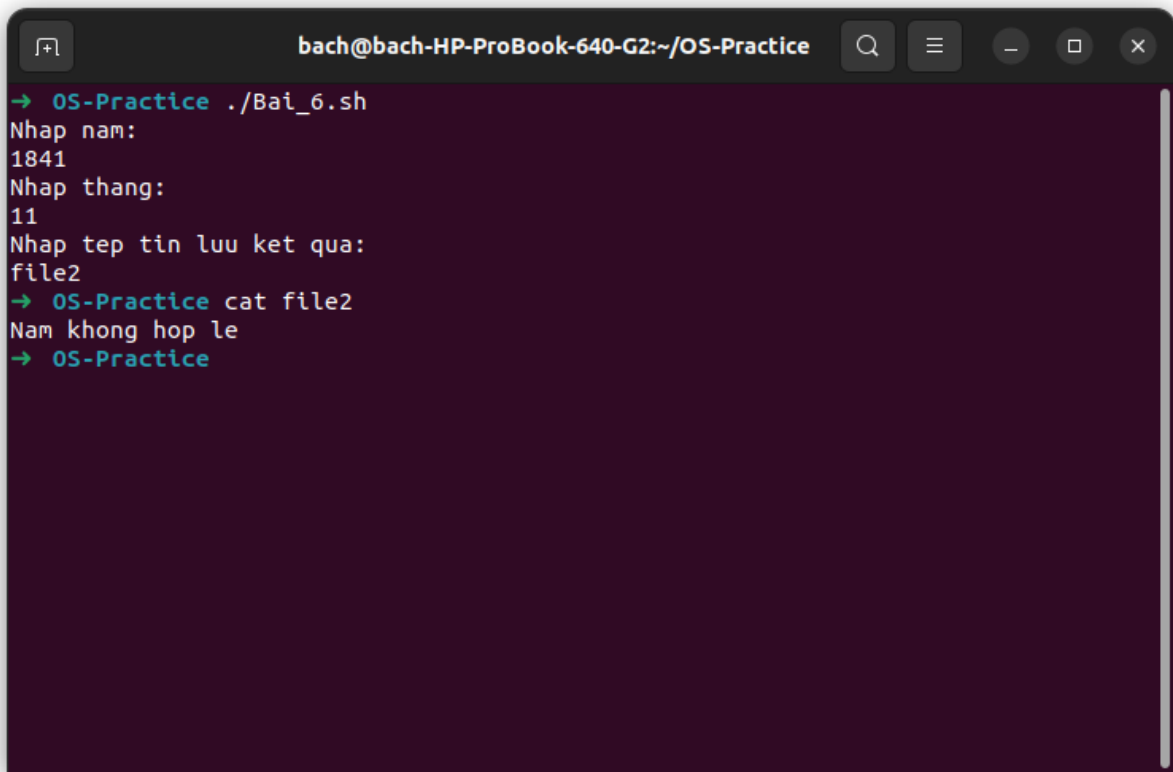




```
vim Bai_6.sh
echo "Nhap tep tin luu ket qua:"
read outputfile
if [ $year -le 1900 ]
then
    echo "Nam khong hop le" > $outputfile
elif [[ $month -le 0 || $month -gt 12 ]]
then
    echo "Thang khong hop le" > $outputfile
elif [ $month -eq 2 ]
then
    if [[ $((($year % 400)) -eq 0 )) || [[ $((($year % 4)) -eq 0 && $((($year %
100)) -ne 0 ))
    then
        echo "29" > $outputfile
    else
        echo "28" > $outputfile
    fi
elif [[ " ${arr30[*]} " =~ " ${month} " ]]
then
    echo "30" > $outputfile
else
    echo "31" > $outputfile
fi
```

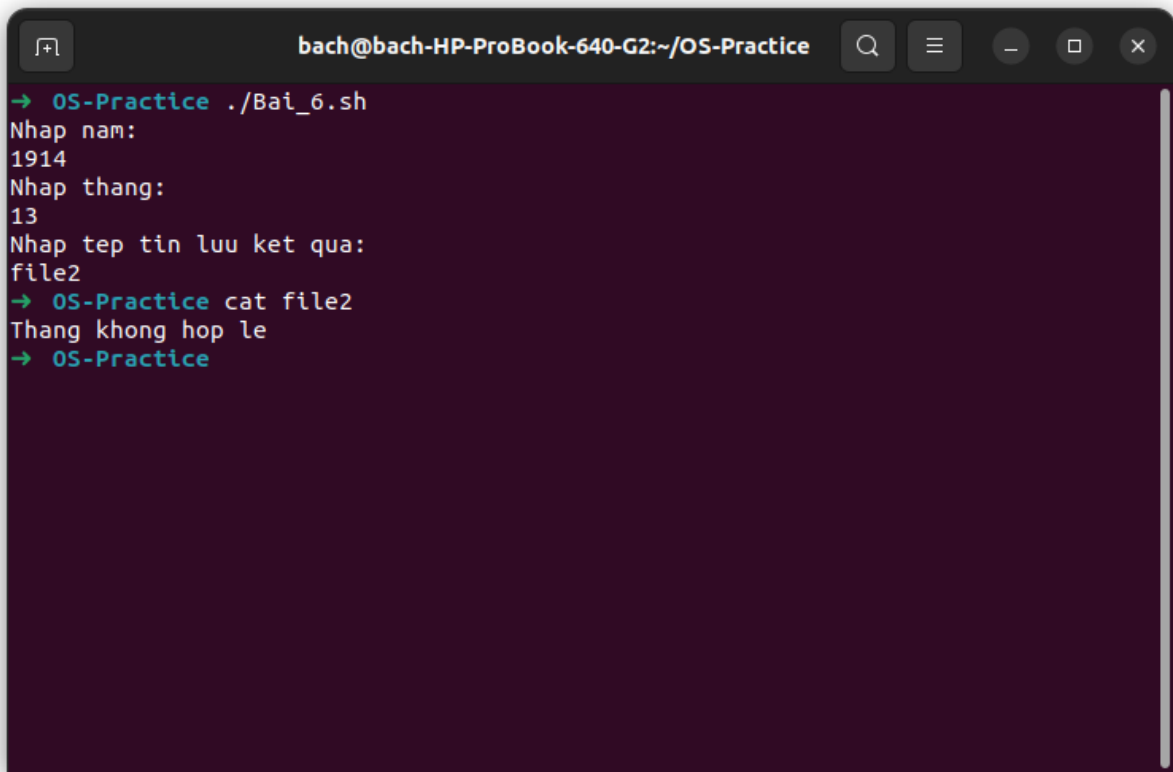
29,1 Bot

#### 2.5.6.2. Test 1



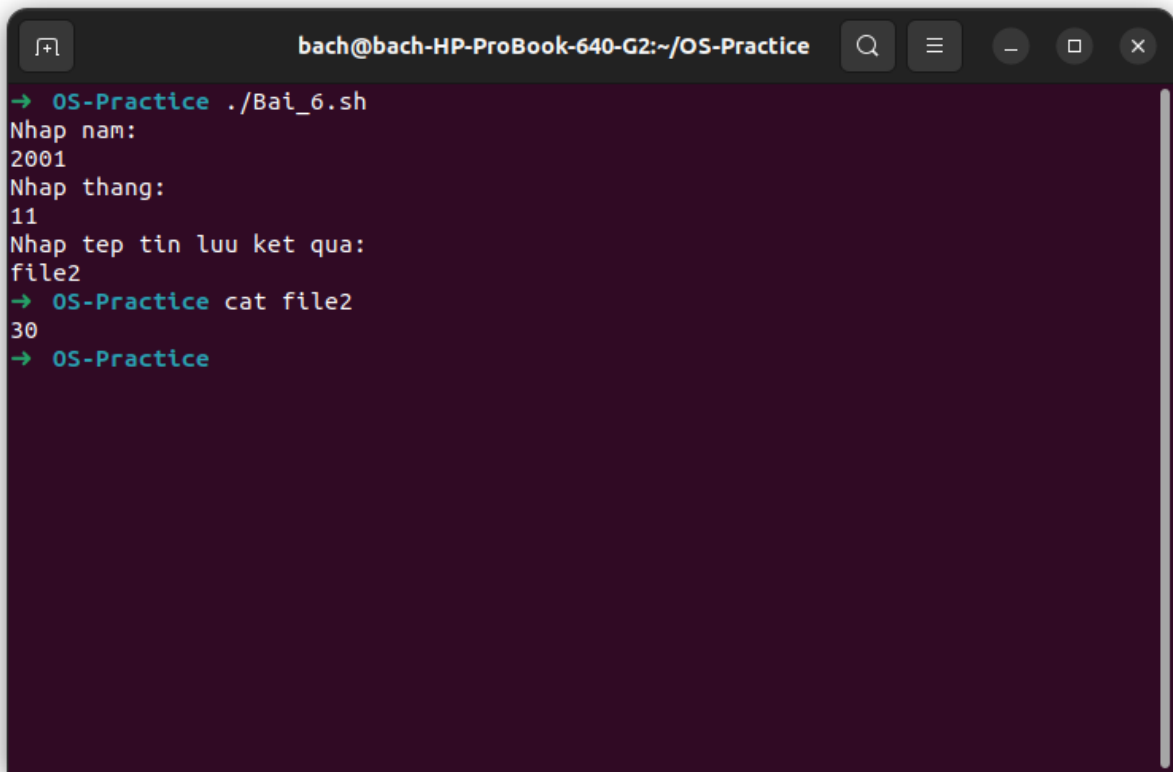
```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice ./Bai_6.sh
Nhap nam:
1841
Nhap thang:
11
Nhap tep tin luu ket qua:
file2
→ OS-Practice cat file2
Nam khong hop le
→ OS-Practice
```

## 2.5.6.3. Test 2

A terminal window with a dark background and light text. The title bar shows the user 'bach' on a machine named 'bach-HP-ProBook-640-G2' in the directory '~/OS-Practice'. The terminal shows the execution of a script './Bai\_6.sh'. The script prompts for a year ('Nhap nam:'), which is '1914', and a month ('Nhap thang:'), which is '13'. It then prompts for an output file name ('Nhap tep tin luu ket qua:'), which is 'file2'. Finally, it runs 'cat file2' and outputs 'Thang khong hop le'. The prompt returns to the shell.

```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice ./Bai_6.sh
Nhap nam:
1914
Nhap thang:
13
Nhap tep tin luu ket qua:
file2
→ OS-Practice cat file2
Thang khong hop le
→ OS-Practice
```

#### 2.5.6.4. Test 3



```
bach@bach-HP-ProBook-640-G2:~/OS-Practice
→ OS-Practice ./Bai_6.sh
Nhap nam:
2001
Nhap thang:
11
Nhap tep tin luu ket qua:
file2
→ OS-Practice cat file2
30
→ OS-Practice
```