

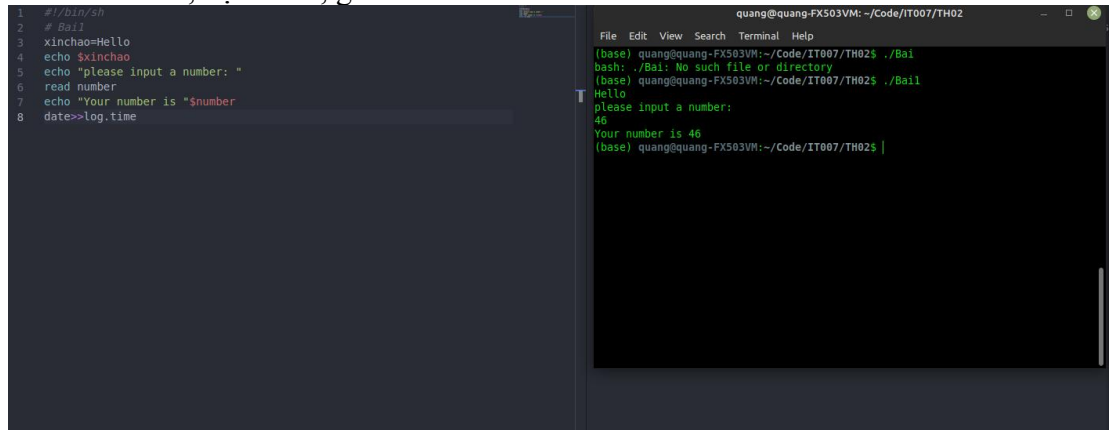
BÀI THỰC HÀNH LAB 02

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Bài tập:

Câu 1:

Khai báo biến, đọc stdin, ghi vào file

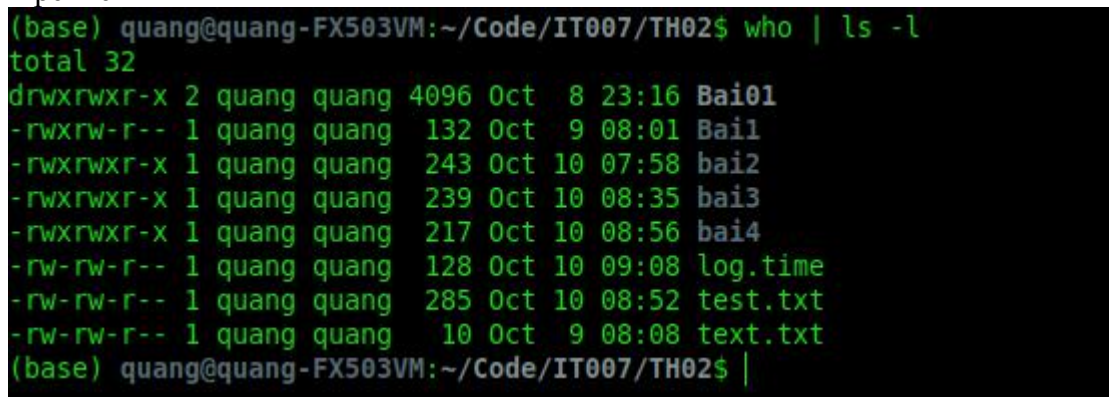


The image shows two terminal windows. The left window displays a shell script named `variables.sh` with the following content:

```
1 #!/bin/sh
2 # Bai1
3 xin chào=Hello
4 echo $xin chào
5 echo "please input a number: "
6 read number
7 echo "Your number is $number"
8 date>>log.time
```

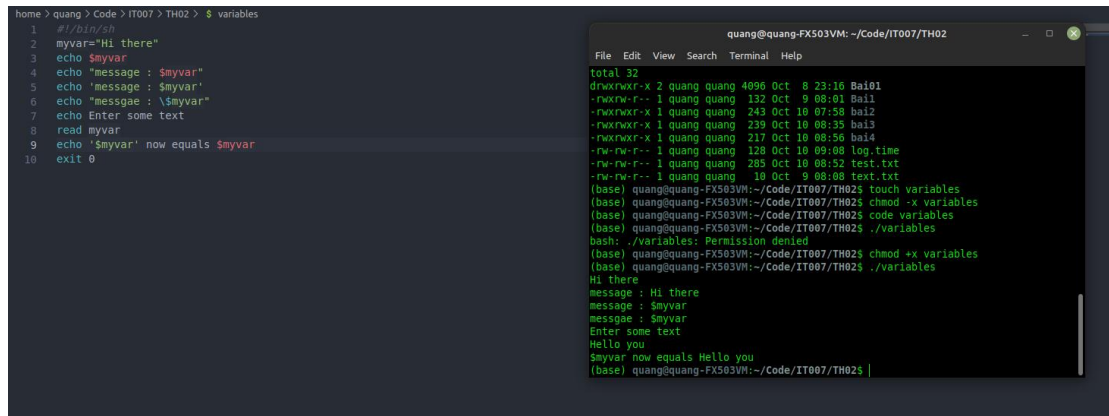
The right window shows the execution of this script. It prompts for a number, receives the input '46', and then displays the current date and time, which is appended to the `log.time` file.

Pipeline



The image shows a terminal window with the command `who | ls -l` executed. The output is a list of files and directories, including `Bai01`, `Bai1`, `bai2`, `bai3`, `bai4`, `log.time`, `test.txt`, and `test.txt`.

2.1 variables.sh



The image shows two terminal windows. The left window displays the script `variables.sh` with the following content:

```
1 #!/bin/sh
2 myvar="Hi there"
3 echo $myvar
4 echo "message : $myvar"
5 echo "message : \myvar"
6 echo Enter some text
7 read myvar
8 echo "myvar" now equals $myvar
9 exit 0
```

The right window shows the execution of this script. It prompts for a number, receives the input '46', and then displays the current date and time, which is appended to the `log.time` file.

2.2 try_variables.sh

```
home > quang > Code > IT007 > TH02 > $ try_variables
1 #!/bin/sh
2 salutation="Hello"
3 echo $salutation
4 echo "The program $0 is now running"
5 echo "The second parameter was $2"
6 echo "The first parameter was $1"
7 echo "The parameter list was $*"
8 echo "The user's home directory is $HOME"
9 echo "Please enter a new greeting"
10 read salutation
11 echo $salutation
12 echo "The script is now complete"
13 exit 0
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ code try_variables
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./try_variables
Hello
The program ./try_variables is now running
The second parameter was
The first parameter was
The parameter list was
The user's home directory is /home/quang
Please enter a new greeting
How's it going
The script is now complete
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./try_variables foo bar baz
Hello
The program ./try_variables is now running
The second parameter was bar
The first parameter was foo
The parameter list was foo bar baz
The user's home directory is /home/quang
Please enter a new greeting
Howdy
The script is now complete
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.3 if control.sh

```
home > quang > Code > IT007 > TH02 > $ if_control
1 #!/bin/sh
2 echo "Is it morning? Please answer yes or no"
3 read timeofday
4 if [ $timeofday = "yes" ]; then
5     echo "Good morning"
6 else
7     echo "Good afternoon"
8 fi
9 exit 0
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./if_control
Is it morning? Please answer yes or no
yes
Good morning
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./if_control
Is it morning? Please answer yes or no
no
Good afternoon
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.4: elif control.sh

```
home > quang > Code > IT007 > TH02 > $ elif_control
1 #!/bin/sh
2 echo "Is it morning? Please answer yes or no"
3 read timeofday
4 if [ $timeofday = "yes" ]; then
5     echo "Good morning"
6 elif [ $timeofday = "no" ]; then
7     echo "Good afternoon"
8 else
9     echo "Sorry, $timeofday not recognized. Enter yes or no"
10 exit 1
11 fi
12 exit 0
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ touch elif_control
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ chmod +x elif_control
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ code elif_control
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./elif_control
Is it morning? Please answer yes or no
no
Good afternoon
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./elif_control
Is it morning? Please answer yes or no
dsad
Sorry, dsad not recognized. Enter yes or no
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.5: elif control2.sh

```
home > quang > Code > IT007 > TH02 > $ elif_control2
1 #!/bin/sh
2 echo -n "Is it morning? Please answer yes or no: "
3 read timeofday
4 if [ "$timeofday" = "yes" ]; then
5     echo "Good morning"
6 elif [ "$timeofday" = "no" ]; then
7     echo "Good afternoon"
8 else
9     echo "Sorry, $timeofday not recognized. Enter yes or no"
10 exit 1
11 fi
12 exit 0
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ touch elif_control
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ chmod +x elif_control
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ code elif_control
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./elif_control
Is it morning? Please answer yes or no
no
Good afternoon
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./elif_control
Is it morning? Please answer yes or no
dsad
Sorry, dsad not recognized. Enter yes or no
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ touch elif_control2
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ chmod +x elif_control2
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ code elif_control2
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./elif_control2
Is it morning? Please answer yes or no:
Sorry, not recognized. Enter yes or no
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./elif_control2
Is it morning? Please answer yes or no: yes
Good morning
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./elif_control2
Is it morning? Please answer yes or no: no
Good afternoon
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.6 for_loop.sh

```
home > quang > Code > IT007 > TH02 > $ for_loop
1 #!/bin/sh
2 for foo in bar fud 13
3 do
4 |   echo $foo
5 done
6 exit 0
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./for_loop
bar
fud
13
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.7 for loop2.sh

```
home > quang > Code > IT007 > TH02 > $ for_loop2
1 #!/bin/sh
2 for file in $(ls f*.sh); do
3 |   lpr $file
4 done
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./for_loop
bar
fud
13
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ touch for_loop2
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ chmod +x for_loop2
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ code for_loop2
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./for_loop2
ls: cannot access 'f*.sh': No such file or directory
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./for_loop2
lpr: Error - No default destination.
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./for_loop2
lpr: Error - No default destination.
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./for_loop2
lpr: Error - No default destination.
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.8 password.sh

```
home > quang > Code > IT007 > TH02 > $ password
1 #!/bin/sh
2 echo "Enter password"
3 read trythis
4 while [ "$trythis" != "secret" ]; do
5 echo "Sorry, try again"
6 read trythis
7 done
8 exit 0
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./password
Enter password
fajjsad
Sorry, try again
fjlkaf
Sorry, try again
secret
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.9 while_for.sh

```
home > quang > Code > IT007 > TH02 > $ while_for
1 #!/bin/sh
2 foo=1
3 while [ "$foo" -le 16 ]
4 do
5 echo "Here $foo"
6 foo=$((foo+1))
7 done
8 exit 0
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
fjlkaf
Sorry, try again
secret
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ touch while_for
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ chmod +x while_for
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ code while_for
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./while_for
Here 1
Here 2
Here 3
Here 4
Here 5
Here 6
Here 7
Here 8
Here 9
Here 10
Here 11
Here 12
Here 13
Here 14
Here 15
Here 16
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.10 until_user.sh

```
home > quang > Code > IT007 > TH02 > $ unbl_user
1 #!/bin/sh
2 echo "Locate for user ..."
3 until who | grep "$1" > /dev/null
4 do
5 sleep 60
6 done
7 echo -e \\a
8 echo "***** $1 has just logged in *****"

quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
Here 3
Here 4
Here 5
Here 6
Here 7
Here 8
Here 9
Here 10
Here 11
Here 12
Here 13
Here 14
Here 15
Here 16
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ touch until_user
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ chmod +x until_user
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ code until_user
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./until_user
bash: ./: Is a directory
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./until_user
Locate for user ...
+e
***** has just logged in *****
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.11 case1.sh

```
TH02 > $ case1.sh
1 #!/bin/sh
2 echo "Is it morning? Please answer yes or no"
3 read timeofday
4 case "$timeofday" in
5 "yes") echo "Good Morning";;
6 "no" ) echo "Good Afternoon";;
7 "y" ) echo "Good Morning";;
8 "n" ) echo "Good Afternoon";;
9 * ) echo "Sorry, answer not recognised";;
10 esac
11 exit 0

quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./case1.sh
Is it morning? Please answer yes or no
jkds
Sorry, answer not recognised
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./case1.sh
Is it morning? Please answer yes or no
no
Good Afternoon
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.12 case2.sh

```
TH02 > $ case2
1 #!/bin/sh
2 echo "Is it morning? Please answer yes or no"
3 read timeofday
4 case "$timeofday" in
5 "yes" | "y" | "Yes" | "YES" ) echo "Good Morning";;
6 "n" | "N" ) echo "Good Afternoon";;
7 * ) echo "Sorry, answer not
8 recognised";;
9 esac
10 exit 0

quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./case2
Is it morning? Please answer yes or no
y
Good Morning
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

2.13 case3.sh

```
TH02 > $ case3
1 #!/bin/sh
2 echo "Is it morning? Please answer yes or no"
3 read timeofday
4 case "$timeofday" in
5 "yes" | "y" | "Yes" | "YES" )
6 echo "Good Morning"
7 echo "Up bright and early this morning?"
8 ;;
9 [nN]* )
10 echo "Good Afternoon"
11 ;;
12 * )
13 echo "Sorry, answer not recognised"
14 echo "Please answer yes or no"
15 exit 1
16 ;;
17 esac

quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./case2
Is it morning? Please answer yes or no
y
Good Morning
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ chmod +x case3
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./case3
Is it morning? Please answer yes or no
YES
Good Morning
Up bright and early this morning?
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./case3
Is it morning? Please answer yes or no
N
Good Afternoon
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

Câu 2: Nhập tên và mã sinh viên

```
home > quang > Code > IT007 > TH02 > $ bai2
1 #!/bin/sh
2 echo "Nhập tên của bạn:"
3 read ten
4 echo "Nhập mã số sinh viên của bạn:"
5 read mssv
6 while [ $mssv != 20520720 ]
7 do
8     echo "Hãy nhập lại MSSV:"
9     read mssv
10 done
11 echo "Xin chào bạn $ten có MSSV: $mssv"
12 exit 0
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./bai2
Nhập tên của bạn:
Nguyễn Đỗ Quang
Nhập mã số sinh viên của bạn:
202456
Hãy nhập lại MSSV:
1231
Hãy nhập lại MSSV:
20520720
Xin chào bạn Nguyễn Đỗ Quang có MSSV: 20520720
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```

Câu 3: Viết bằng BASH script

```
ome > quang > Code > IT007 > TH02 > $ bai3
1 #!/bin/bash
2 echo "Nhập vào số n:"
3 read n
4 while [ $n -lt 10 ]
5 do
6     echo "Hãy nhập lại(n phải lớn hơn 10):"
7     read n
8 done
9
10 sum=0;
11 for ((i=1;i<=n;i++))
12 do
13     sum=$((sum+i))
14 done
15
16 echo "Tổng của n số hạng là: $sum"
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./bai3
Nhập vào số n:
6
Hãy nhập lại(n phải lớn hơn 10):
5
Hãy nhập lại(n phải lớn hơn 10):
12
Tổng của n số hạng là: 78
(base) quang@quang-FX503VM:~/Code/IT007/TH02$
```

Câu 4: Kiểm tra chuỗi

```
home > quang > Code > IT007 > TH02 > $ bai4
1 #!/bin/sh
2
3 file="/home/quang/Code/IT007/TH02/test.txt"
4 echo "Nhập vào chuỗi cần tìm:"
5 read string
6 if grep -q $string $file
7 then
8     echo "Chuỗi có tồn tại"
9 else
10    echo "Chuỗi không tồn tại"
11 fi
12
```

```
home > quang > Code > IT007 > TH02 > test.txt
1 This is a test file.
2 As researchers at the Minnesota Department of Health in St. Paul were s
3
```

```
quang@quang-FX503VM: ~/Code/IT007/TH02
File Edit View Search Terminal Help
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./bai4
Nhập vào chuỗi cần tìm:
drlkdsjf
Chuỗi không tồn tại
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./bai4
Nhập vào chuỗi cần tìm:
As
Chuỗi có tồn tại
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ code test.txt
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ ./bai4
Nhập vào chuỗi cần tìm:
researchers
Chuỗi có tồn tại
(base) quang@quang-FX503VM:~/Code/IT007/TH02$ |
```