

Experiment 2

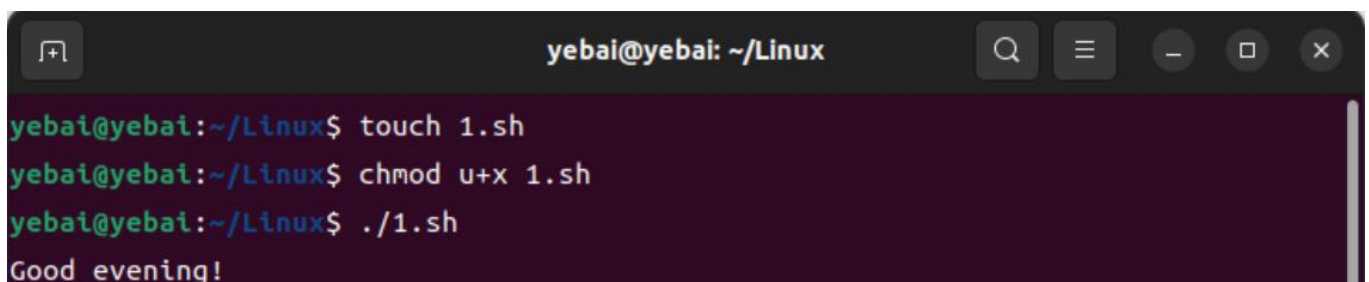
实验2

use a editor to finishe the following shell scripts, and run them in Linux system.
使用编辑器完成以下shell脚本，并在Linux系统中运行它们。

1.Obtain the system time, and check whether it is in the morning, afternoon, or evening.

1.获取系统时间，检查是在上午、下午还是晚上。

```
#!/bin/bash
hour = `date +%H`
case $hour in
0[1-9] | 1[01] )
echo "Good morining !!"
;;
1[234567] )
echo "Good afternoon !!"
;;
* )
echo "Good evening !! "
;;
Esac
```

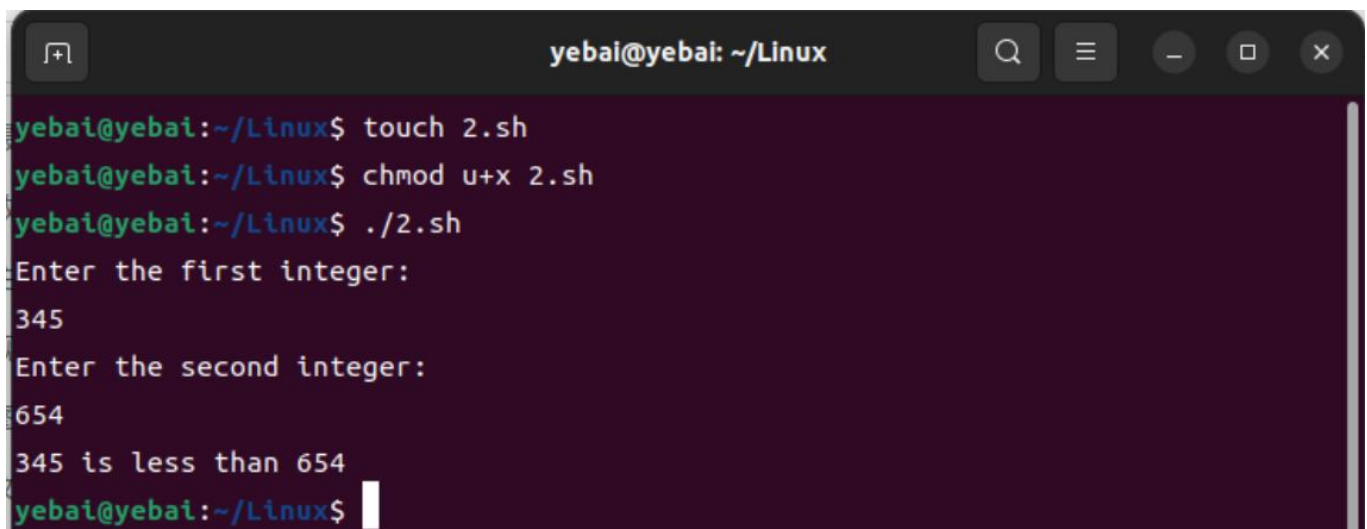
A terminal window with a dark background and light green text. The window title is 'yebai@yebai: ~/Linux'. The user has entered three commands: 'touch 1.sh', 'chmod u+x 1.sh', and './1.sh'. The output of the last command is 'Good evening!'.

```
yebai@yebai: ~/Linux
yebai@yebai:~/Linux$ touch 1.sh
yebai@yebai:~/Linux$ chmod u+x 1.sh
yebai@yebai:~/Linux$ ./1.sh
Good evening!
```

2.Input two number, check which one is greater, and output the result.

2.输入两个数字，检查哪一个更大，然后输出结果。

```
#!/bin/sh
echo "Enter the first integer:"
read first
echo "Enter the second integer:"
read second
if [ "$first" -gt "$second" ]
then
echo "$first is greater than $second"
elif [ "$first" -lt "$second" ]
then
echo "$FIRST is less than $second"
else
echo "$FIRST is equal to $second"
fi
```

A terminal window titled 'yebai@yebai: ~/Linux' with standard window controls. The user runs a series of commands: 'touch 2.sh', 'chmod u+x 2.sh', and './2.sh'. The script prompts for two integers. The first integer entered is 345, and the second is 654. The script outputs '345 is less than 654'.

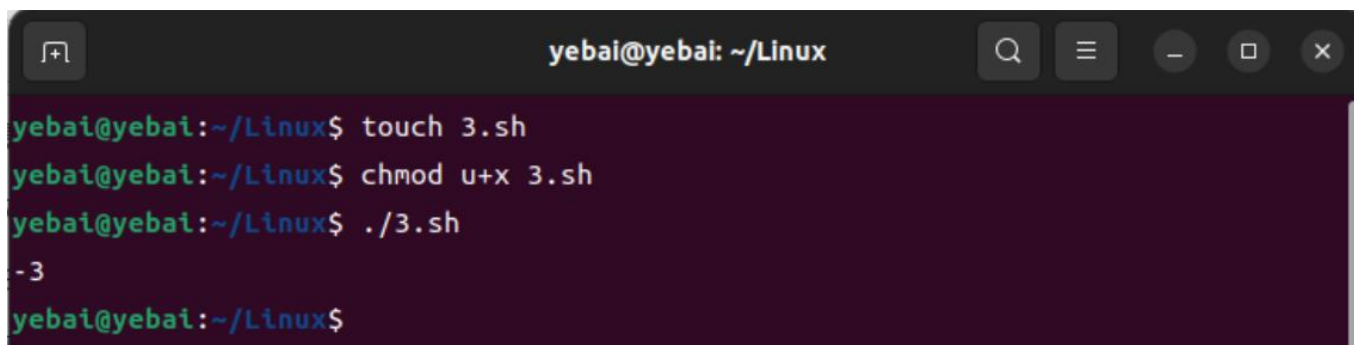
```
yebai@yebai:~/Linux$ touch 2.sh
yebai@yebai:~/Linux$ chmod u+x 2.sh
yebai@yebai:~/Linux$ ./2.sh
Enter the first integer:
345
Enter the second integer:
654
345 is less than 654
yebai@yebai:~/Linux$
```

3.Find the minimal value in a given list.

3.在一个给定的列表中找到最小的值。

```
#!/bin/bash
smallest=10000

for i in 8 2 18 0 -3 87
do
if test $i -lt $smallest
then
    smallest=$i
fi
done
echo $smallest
```



A terminal window titled 'yebai@yebai: ~/Linux' with standard window controls. The user enters the following commands:

```
yebai@yebai:~/Linux$ touch 3.sh
yebai@yebai:~/Linux$ chmod u+x 3.sh
yebai@yebai:~/Linux$ ./3.sh
```

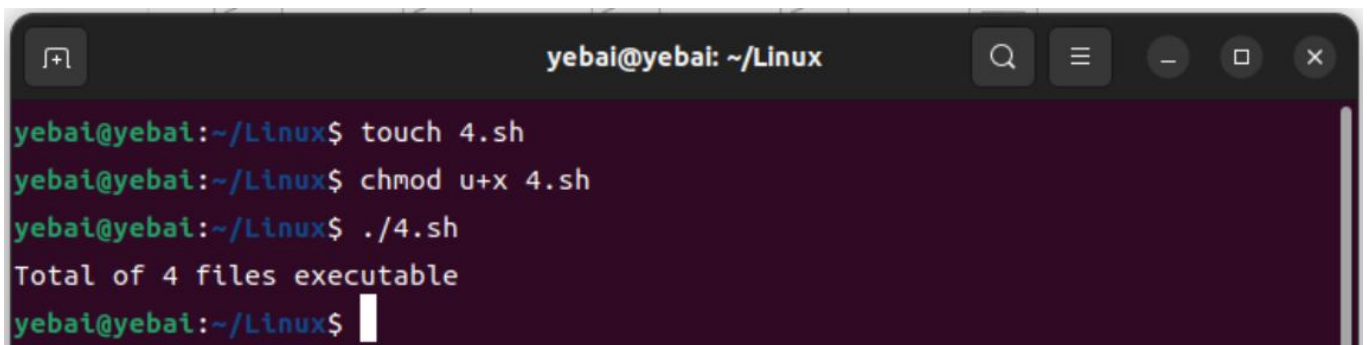
The output of the script is '-3', which is printed on the line following the command execution.

```
-3
yebai@yebai:~/Linux$
```

4. Calculate the number of executive file in the current directory.

4. 计算当前目录中的执行文件的数量。

```
#!/bin/bash
count=0
for i in *
do
if test -x $i
then
count=`expr $count + 1`
fi
done
echo Total of $count files executable
```

A terminal window titled 'yebai@yebai: ~/Linux' with standard window controls. The terminal shows the following commands and output:

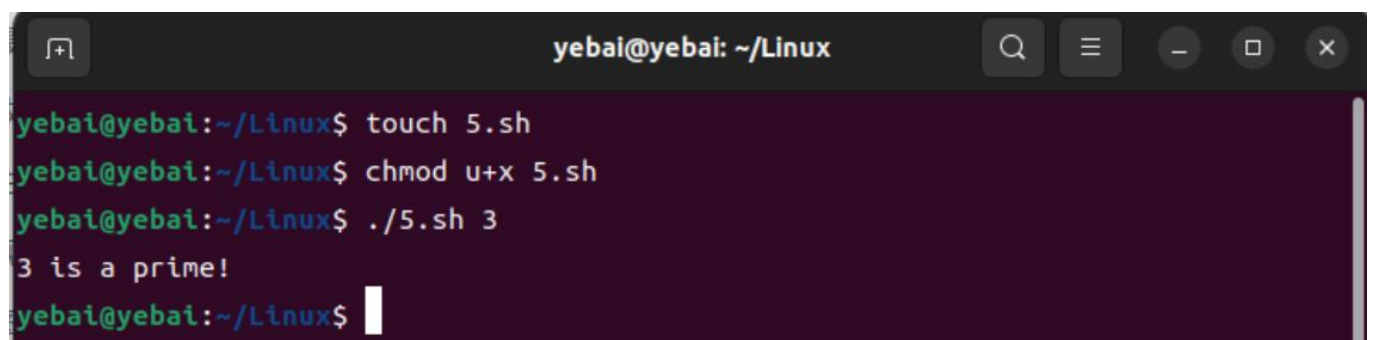
```
yebai@yebai:~/Linux$ touch 4.sh
yebai@yebai:~/Linux$ chmod u+x 4.sh
yebai@yebai:~/Linux$ ./4.sh
Total of 4 files executable
yebai@yebai:~/Linux$
```

5.Check whether a given number is a prime, you have to write a function, and call the function.

5.检查一个给定的数字是否为素数，您必须写一个函数，然后调用该函数。

```
prime( )
{
    flag=1
    j=2
    while [ $j -le `expr $1 / 2` ]
    do
        if [ `expr $1 % $j` -eq 0 ]
        then
            flag=0
            break
        fi
        j=`expr $j + 1`
    done
    if [ $flag -eq 1 ]
    then
        return 1
    else
        return 0
    fi
}
prime $1

if [ $? -eq 1 ]
then
    echo "$1 is a prime!"
else
    echo "$1 is not a prime!"
fi
```

A terminal window titled 'yebai@yebai: ~/Linux' with standard window controls. It shows the following commands and output:

```
yebai@yebai:~/Linux$ touch 5.sh
yebai@yebai:~/Linux$ chmod u+x 5.sh
yebai@yebai:~/Linux$ ./5.sh 3
3 is a prime!
yebai@yebai:~/Linux$
```