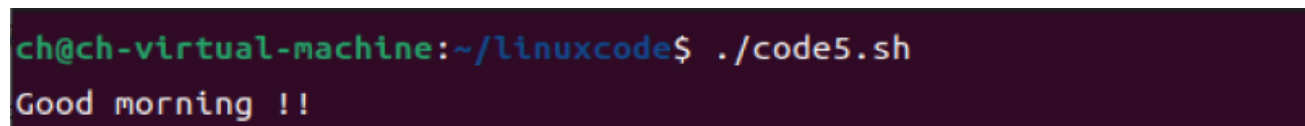


Experiment 2

use a editor to finishe the following shell scripts, and run them in Linux system.

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

```
#!/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 screenshot of a code editor window. The title bar shows the filename as 'code5.sh' and the location as '~/linuxcode'. The editor contains the same shell script code as shown in the previous block, with line numbers 1 through 14 on the left margin. The code is color-coded: comments are green, variables and backticks are blue, keywords like 'case' and 'echo' are red, and the script ends with 'esac' in red.A screenshot of a terminal window with a dark background. The prompt is 'ch@ch-virtual-machine:~/linuxcode\$'. The user has entered './code5.sh' and the output is 'Good morning !!'.

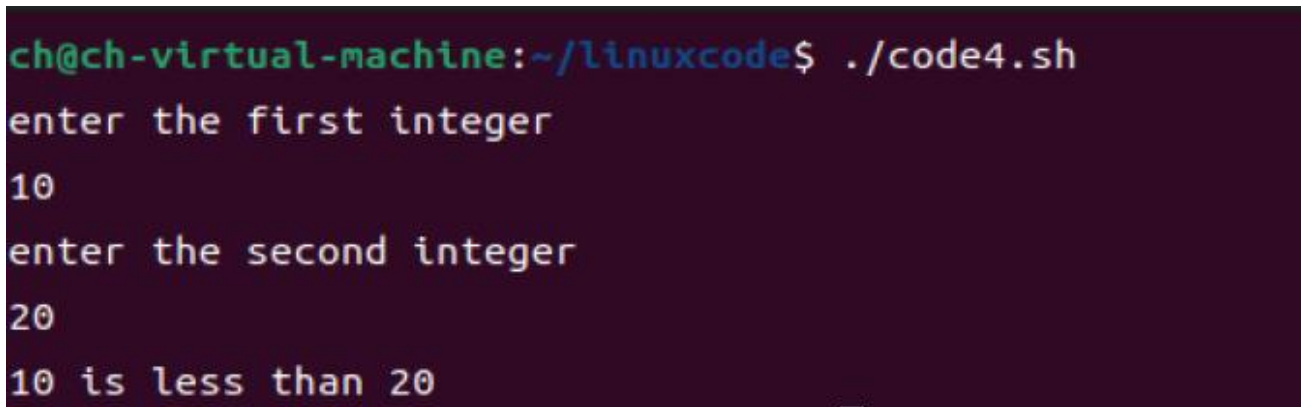
2. Input two number, check which one is greater, andoutput the result.

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

```
#!/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 screenshot of a code editor window. The title bar shows 'code4.sh' and the file path '~/.linuxcode'. The editor contains the same shell script as the first block. The interface includes a '打开(O)' (Open) button, a '保存(S)' (Save) button, and standard window controls (minimize, maximize, close).

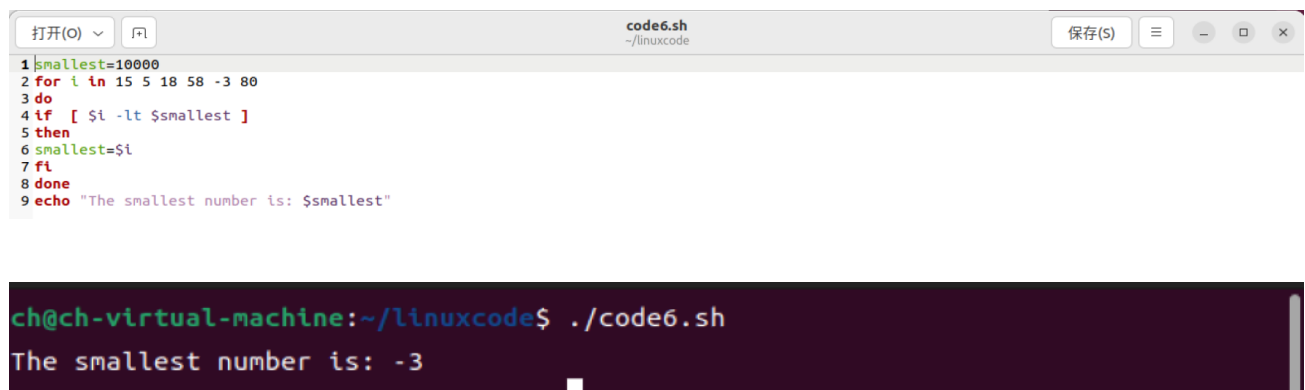
```
1 echo "enter the first integer"
2 read first
3 echo "enter the second integer"
4 read second
5 if [ "$first" -gt "$second" ]
6 then echo "$first is greater than $second "
7 elif [ "$first" -lt "$second" ]
8 then
9 echo "$first is less than $second"
10 else
11 echo "$first is equal to $second"
12 fi
```

A screenshot of a terminal window with a dark background. The prompt is 'ch@ch-virtual-machine:~/linuxcode\$'. The user has run './code4.sh'. The output shows the script's prompts and results: 'enter the first integer', '10', 'enter the second integer', '20', and '10 is less than 20'.

```
ch@ch-virtual-machine:~/linuxcode$ ./code4.sh
enter the first integer
10
enter the second integer
20
10 is less than 20
```

3. Find the minimal value in a given list.

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



The image shows a code editor window titled 'code6.sh' with the following script:

```
1 smallest=10000
2 for i in 15 5 18 58 -3 80
3 do
4 if [ $i -lt $smallest ]
5 then
6 smallest=$i
7 fi
8 done
9 echo "The smallest number is: $smallest"
```

Below the editor is a terminal window showing the execution of the script:

```
ch@ch-virtual-machine:~/linuxcode$ ./code6.sh
The smallest number is: -3
```

4. Calculate the number of executive file in the currentdirectory.



The image shows a shell script in a code editor:

```
#!/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
```

Below the editor is a terminal window showing the execution of the script:

```
zhangyumeng@zhangyumeng-virtual-machine:~/LinuxLab$ chmod u+x e2_4
zhangyumeng@zhangyumeng-virtual-machine:~/LinuxLab$ ./e2_4
Total of 7 files executable
```

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

```
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
```

```
ch@ch-virtual-machine:~/linuxcode$ chmod u+x code10.sh
```

```
ch@ch-virtual-machine:~/linuxcode$ ./code10.sh 5
```

```
5 is a prime!
```