Experiment 2

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

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

sh:

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

```

Output:

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

sh 脚本:

```
#!/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
```

Output :

```
Enter the first integer:
1
Enter the second integer:
2
1 is less than 2
yyy@canghaihuaovo:~/文档$ ./1.sh
Enter the first integer:
3
Enter the second integer:
3
3 is equal to 3
yyy@canghaihuaovo:~/文档$ ./1.sh
Enter the first integer:
2
Enter the second integer:
5
2 is less than 5
yyy@canghaihuaovo:~/文档$ ./1.sh
Enter the first integer:
5
Enter the second integer:
1
5 is greater than 1
```

3. Find the minimal value in a given list.

Sh 脚本：

```
#!/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
```

Output：

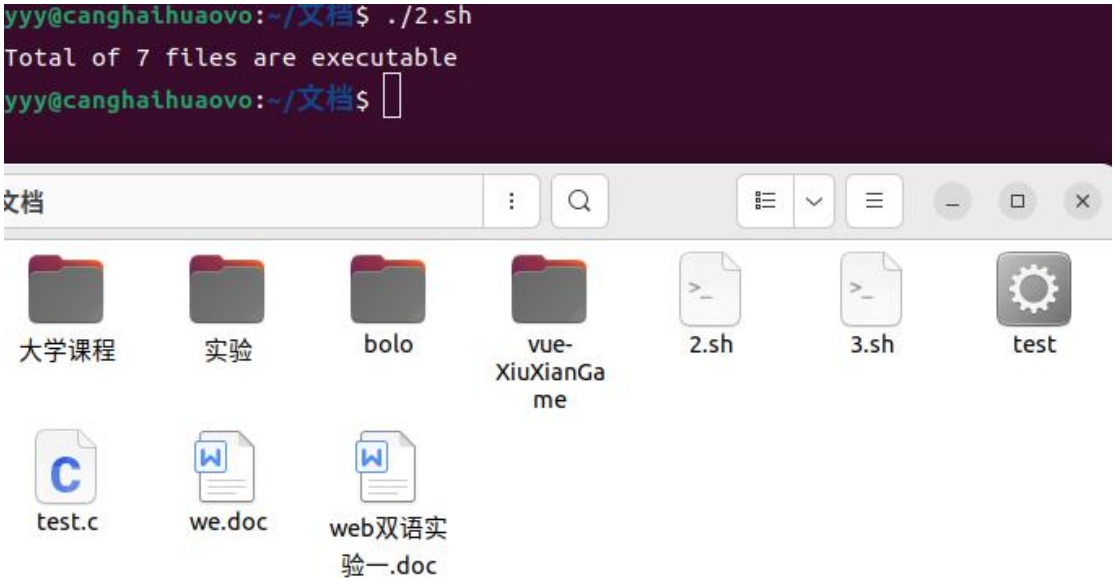
```
yyy@canghaihuaovo:~/文档$ ./2.sh
-3
```

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

sh 脚本：

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

Output：



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

sh 脚本：

```
#!/bin/bash

prime() {
    flag=1
    j=2
    while [ $j -le $(( $1 / 2 )) ]
    do
        if [ $(( $1 % $j )) -eq 0 ]  #
        then
            flag=0
            break
        fi
        j=$(( 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

```

Output :

```
yyy@canghaihuaovo:~/文档$ ./5.sh 10
10 is not a prime!
yyy@canghaihuaovo:~/文档$ ./5.sh  11
11 is a prime!
```