Linux 实验 2

（每个程序内部注释学号、运行前在界面打印学号证明）

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

a.题目要求程序

```
#!/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
```

b.文件 2_1.sh 内容

```
#B22040702

#!/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
```

c.实验结果

```
zoey@zoey:~/experiment2$ echo b22040702
b22040702
zoey@zoey:~/experiment2$ ./2_1.sh
Good morining !!
zoey@zoey:~/experiment2$
```

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

a. 题目要求程序

```
#!/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
```

b. 文件 2_2.sh 内容

```
#B22040702张欣雨

#!/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
```

c.实验结果

```
zoey@zoey:~/experiment2$ echo b22040702
b22040702
zoey@zoey:~/experiment2$ ./2_2.sh
Enter the first integer:
2
Enter the second integer:
3
2 is less than 3
zoey@zoey:~/experiment2$
```

（3）Find the minimal value in a given list

a. 题目要求程序

```
#!/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
```

b. 文件 2_3.sh 内容

```
#B22040702张欣雨

#!/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
```

c.实验结果

```
zoey@zoey:~/experiment2$ echo b22040702
b22040702
zoey@zoey:~/experiment2$ chmod u+x 2_3.sh
zoey@zoey:~/experiment2$ ./2_3.sh
-3
zoey@zoey:~/experiment2$
```

（4）Calculate the number of executive file in the current directory

a.题目要求程序

```
#!/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
```

b.文件 2_4.sh 内容

```
#B22040702张欣雨

#!/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
```

c.实验结果

```
zoey@zoey:~/experiment2$ echo b22040702
b22040702
zoey@zoey:~/experiment2$ chmod u+x 2_4.sh
zoey@zoey:~/experiment2$ ./2_4.sh
Total of 4 files executable
zoey@zoey:~/experiment2$
```

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

a.题目要求程序

```
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
```

b.文件 2_5.sh 内容

```
#B22040702张欣雨

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
```

c.实验结果

```
zoey@zoey:~/experiment2$ echo b22040702
b22040702
zoey@zoey:~/experiment2$ ./2_5.sh 13
13 is a prime!
zoey@zoey:~/experiment2$
```