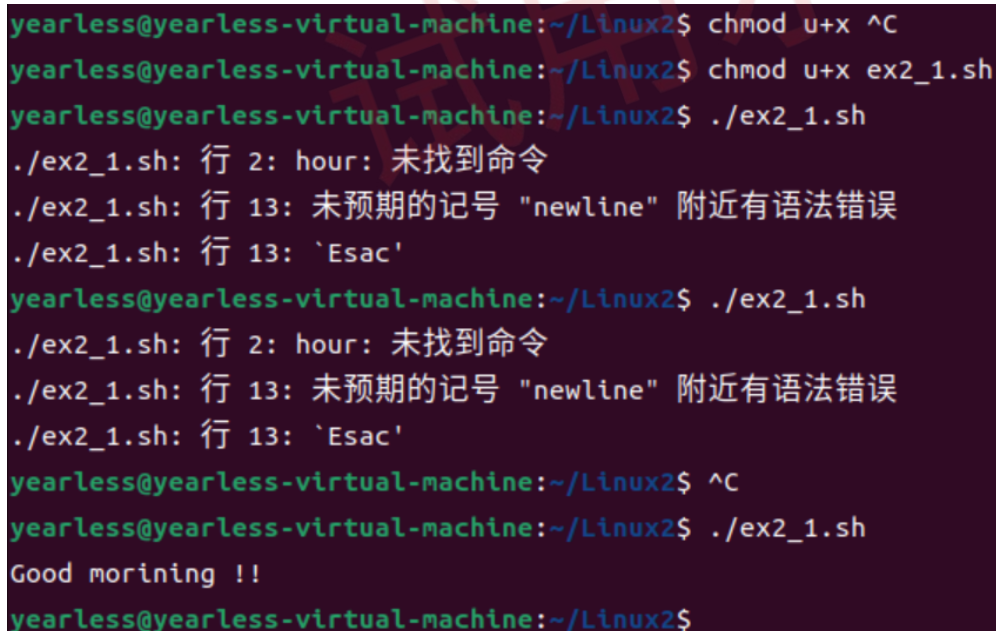


Experiment 2

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 the morning, 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 terminal window showing the execution of a shell script. The user is in a virtual machine named 'yearless' with the directory ~/Linux2. The script 'ex2_1.sh' is being run. The first two runs show errors: 'hour: 未找到命令' (hour: command not found) and '未预期的记号 "newline" 附近有语法错误' (unexpected token 'newline' near syntax error). The third run shows the output 'Good morining !!'.

```
yearless@yearless-virtual-machine:~/Linux2$ chmod u+x ^C
yearless@yearless-virtual-machine:~/Linux2$ chmod u+x ex2_1.sh
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_1.sh
./ex2_1.sh: 行 2: hour: 未找到命令
./ex2_1.sh: 行 13: 未预期的记号 "newline" 附近有语法错误
./ex2_1.sh: 行 13: `Esac'
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_1.sh
./ex2_1.sh: 行 2: hour: 未找到命令
./ex2_1.sh: 行 13: 未预期的记号 "newline" 附近有语法错误
./ex2_1.sh: 行 13: `Esac'
yearless@yearless-virtual-machine:~/Linux2$ ^C
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_1.sh
Good morining !!
yearless@yearless-virtual-machine:~/Linux2$
```

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

```
#!/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
```

```
yearless@yearless-virtual-machine:~/Linux2$ touch ex2_2.sh
yearless@yearless-virtual-machine:~/Linux2$ chmod u+x ex2_2.sh
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_2.sh
Enter the first integer:
1
Enter the second integer:
5
1 is less than 5
yearless@yearless-virtual-machine:~/Linux2$
```

3. Find the minimal value in a given list.

```
#!/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
```

```
yearless@yearless-virtual-machine:~/Linux2$ touch ex2_3.sh
yearless@yearless-virtual-machine:~/Linux2$ chmod u+x ex2_3.sh
yearless@yearless-virtual-machine:~/Linux2$ ./ ex2_3.sh
bash: ./: 是一个目录
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_3.sh
-3
```

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

```
#!/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
```

```
yearless@yearless-virtual-machine:~/Linux2$ touch ex2_4.sh
yearless@yearless-virtual-machine:~/Linux2$ chmod u+x ex2_4.sh
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_4.sh
Total of 4 files executable
yearless@yearless-virtual-machine:~/Linux2$
```

5. Check whether a given number is a prime, you have to write 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
```

```
yearless@yearless-virtual-machine:~/Linux2$ touch ex2_5.sh
yearless@yearless-virtual-machine:~/Linux2$ chmod u+x ex2_5.sh
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_5.sh
expr: 语法错误: 未预期的参数 "2"
./ex2_5.sh: 第 5 行: [: 2: 需要一元运算符
is a prime!
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_5.sh 21
21 is not a prime!
yearless@yearless-virtual-machine:~/Linux2$ ./ex2_5.sh 7
7 is a prime!
yearless@yearless-virtual-machine:~/Linux2$
```

试用水印