南京邮电大学

实 验 报 告

（ 2024/ 2025 学年 第 一 学期）

课程名称	GNU/Linux 编程
实验名称	实验二
实验时间	2024 年 11 月 15 日
指导单位	计算机学院 网络空间安全系
指导教师	王磊

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学院(系)	计算机学院	专 业	信息安全

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 morning!!"
        ;;
    1[2-7])
        echo "Good afternoon!!"
        ;;
    *)
        echo "Good evening!!"
        ;;
esac
```

运行结果：

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
```

运行结果：

```
┌──(root💀kali)-[~]
└─# ./shell
Enter the first integer:
5
Enter the second integer:
7
5 is less than 7
```

3. Find the minimal value in a given list.

```
#!/bin/bash
smallest=10000
for i in 8 2 18 0 -3 87
do
    if [ $i -lt $smallest ]; then
        smallest=$i
    fi
done
echo $smallest
```

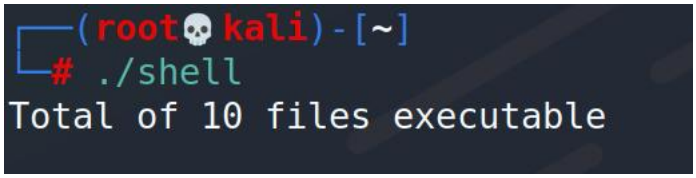
运行结果：

```
┌──(root💀kali)-[~]
└─# ./shell
-3
```

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

```
#!/bin/bash
count=0
for i in *
do
    if [ -x "$i" ]; then
        count=$((count + 1))
    fi
done
echo "Total of $count files executable"
```

运行结果：



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

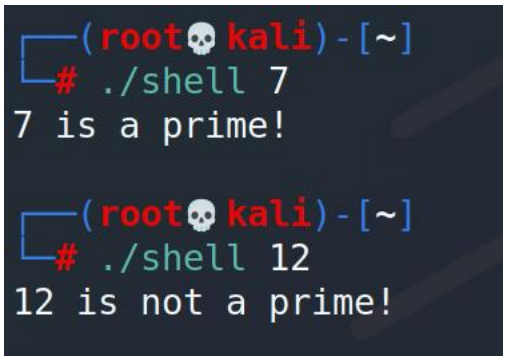
```
#!/bin/bash

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
}

if [ $# -eq 0 ]; then
    echo "Usage: $0 <number>"
    exit 1
fi

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

运行结果：


┌──(root💀kali)-[~]
└─# ./shell 7
7 is a prime!
┌──(root💀kali)-[~]
└─# ./shell 12
12 is not a prime!