南京邮电大学

实验报告

（ 2024 / 2025 学年 第 一 学期）

专 业 _____信息安全_____

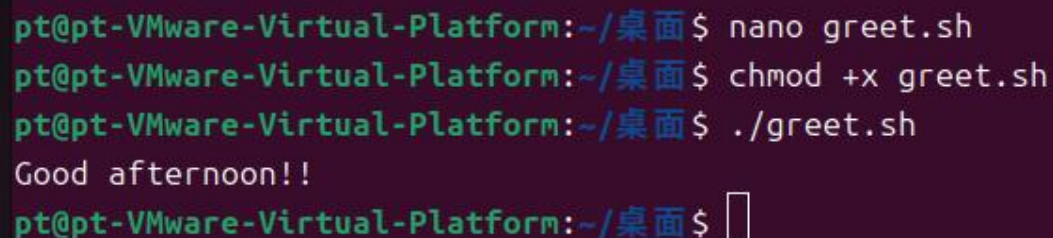学 生 姓 名 _____潘韬_____

班 级 学 号 _____B22041622_____

指 导 教 师 _____王磊_____

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.

```bash
#!/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
```

```
pt@pt-VMware-Virtual-Platform:~/桌面$ nano greet.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ chmod +x greet.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ ./greet.sh
Good afternoon!!
pt@pt-VMware-Virtual-Platform:~/桌面$ ☐
```

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

```sh
#!/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
```

```
pt@pt-VMware-Virtual-Platform:~/桌面$ nano great.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ chmod +x great.sh
```

```
pt@pt-VMware-Virtual-Platform:~/桌面$ ./great.sh
Enter the first integer:
9
Enter the second integer:
5
9 is greater than 5
   终端  VMware-Virtual-Platform:~/桌面$ ./great.sh
Enter the first integer:
9
Enter the second integer:
9
9 is equal to 9
pt@pt-VMware-Virtual-Platform:~/桌面$ ./great.sh
Enter the first integer:
2
Enter the second integer:
4
2 is less than 4
```

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
```

```
pt@pt-VMware-Virtual-Platform:~/桌面$ nano min.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ chmod +x min.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ ./min.sh
0#!/bin/bash
0
```

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
```

```
pt@pt-VMware-Virtual-Platform:~/桌面$ nano calculate.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ chmod +x calculate.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ ./calculate.sh
Total of 7 files are executable
```

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
```



```
pt@pt-VMware-Virtual-Platform:~/桌面$ nano prime.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ chomd +x prime.sh
找不到命令 "chomd"，您的意思是：
  "chmod" 命令来自 Debian 软件包 coreutils (9.4-2ubuntu2)
尝试 sudo apt install <deb name>
pt@pt-VMware-Virtual-Platform:~/桌面$ chmod +x prime.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ ./prime.sh
Usage: ./prime.sh <number>
pt@pt-VMware-Virtual-Platform:~/桌面$ nano prime.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ chmod +x prime.sh
pt@pt-VMware-Virtual-Platform:~/桌面$ ./prime.sh
Usage: ./prime.sh number
pt@pt-VMware-Virtual-Platform:~/桌面$ ./prime.sh -7
-7 is a prime!
pt@pt-VMware-Virtual-Platform:~/桌面$ ./prime.sh 7
7 is a prime!
pt@pt-VMware-Virtual-Platform:~/桌面$ ./prime.sh 9
9 is not a prime!
```