1. Write a script to show current date, time and current directory.

SOURCE CODE:

```
#!/bin/bash
echo "Hello,$LOGNAME"
echo "Current date is `date`" echo
"User is `whoami`"
echo "current directory `pwd`"
```

OUTPUT:

2. Write a script to reverse of a number.

SOURCE CODE:

```
#!/bin/bash
read -p "Enter a number: " number temp=$number
while [ $temp -ne 0 ] do
   reverse=$reverse$((temp%10))
temp=$((temp/10))
done
echo "Reverse of $number is $reverse"
```

OUTPUT:

3. Write a script to largest among three numbers.

SOURCE CODE:

```
#!/bin/bash echo "Enter
1st number:" read
first_num echo "Enter
2nd number:" read
second_num echo "Enter
3rd number:" read
third_num
if test $first_num -gt $second_num && test $first_num -gt $third_num
then     echo $first_num is the greatest number. elif test $second_num -
gt $third_num then     echo $second_num is the greaatest number. else
echo $third_num is the greatest number. fi
```

OUTPUT:

4. Write a script check whether the number is Armstrong or not.

SOURCE CODE:

```
#!/bin/bash echo "Enter
a number: "
read c x=$c
sum=0
r=0 n=0
while [ $x -gt 0 ] do
r=`expr $x % 10`
n=`expr $r \* $r \* $r`
sum=`expr $sum + $n`
x=`expr $x / 10` done
if [ $sum -eq $c ]
then
echo "It is an Armstrong Number." else
echo "It is not an Armstrong Number." fi
```

OUTPUT:

```
mca@cscc2d58: ~
mca@cscc2d58:~$ echo $BASH
/bin/bash
mca@cscc2d58:~$ ./Armstrong.sh
Enter a number:
531
It is not an Armstrong Number.
mca@cscc2d58:~$ ./Armstrong.sh
Enter a number:
1
It is an Armstrong Number.
mca@cscc2d58:~$
```

5. Write a script to check password and login

SOURCE CODE:

```
#!/bin/bash read -p
'Username: ' user read -
sp 'Password: ' pass
if (( $user == "admin" && $pass == "admin123" )) then
        echo -e "\nWelcome! You are Sucessfull login\n"
else
        echo -e "\nUnsuccessful login\n"
fi
```

OUTPUT:

```
mca@cscc2d60:~$ ./login.sh
Username: mca
Password:
Welcome! You are Sucessfull login

mca@cscc2d60:~$
```

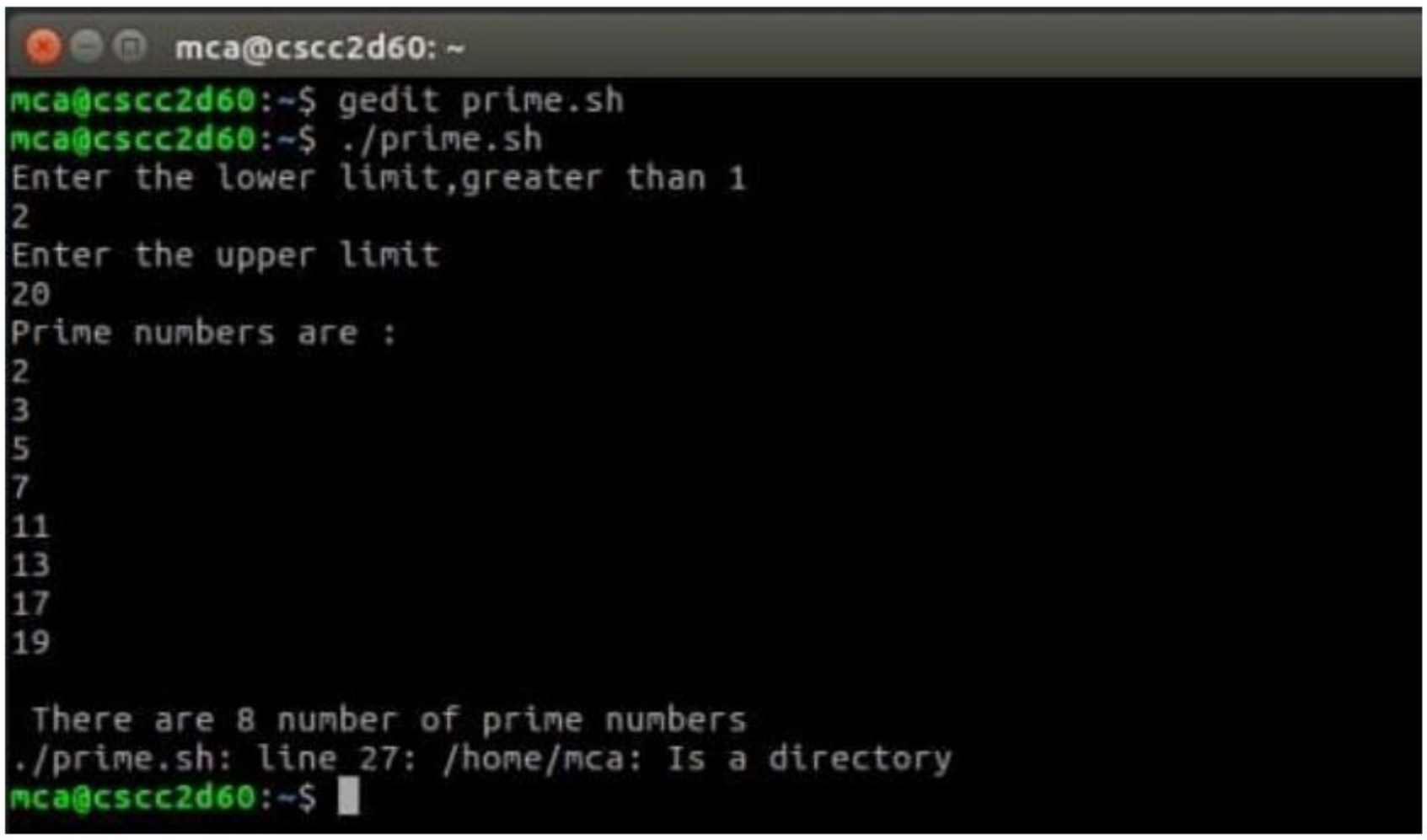
6. Write a script to count the prime numbers in specific range.

SOURCE CODE:

```
#! /bin/bash low=1
count=0 while [
$low -eq 1 ]
do
echo "Enter the lower limit,greater than 1"
read low done
echo "Enter the upper limit"
read upper echo "Prime
numbers are : " for mun in
`seq $low $upper` do
```

```
ret=$(factor $mun | grep $mun | cut -d ":" -f 2 | cut -d " " -f 2)
if [ "$ret" -eq "$mun" ] then echo "$mun"
((count++))
fi
done echo -e "\n There are $count number of prime
numbers"
```

OUTPUT:



7. Write a script to convert the contents of a given file from uppercase to lowercase and also count the number of lines, words and characters of the resultant file. Also display the resultant file in descending order.

SOURCE CODE:

```
#!/bin/bash
getfile() {
echo "enter the filename" read filename if [ ! -f
$filename ]; then        echo "File Name
$filename does not exists."        exit 1     fi
} clear
getfile
echo "Converting Upper-case to Lower-Case "
tr '[A-Z]' '[a-z]' <$filename echo "the number
of lines is:" wc -l <$filename echo "the
number of words are:" wc -w <$filename
```

```
echo "the number of characters are:" wc
-c <$filename
echo "the contend in descending order:" sort
-r <$filename
```

OUTPUT:

8. Write a script to perform following basic math operation as: Addition, subtraction, multiplication, division

SOURCE CODE:

```
echo "Enter a number : " read
x
echo "Enter another number : "
read y
echo "ADDITION"   echo
$(( $x + $y ))
echo "SUBTRACTION"   echo
$(( $x - $y ))
echo "MULTIPLICATION"
echo $(( $x * $y ))   echo
"DIVISION"
echo $(( $x / $y ))
```

OUTPUT:

9. Read 3 marks of a student and find the average. Display the grade of the student based on the average. (if..then..elif..fi)

S >= 90%

A < 90%, but >= 80%

B < 80%, but >= 60%

P < 80%, but >= 40%

F < 40%

SOURCE CODE:

```
#!/bin/bash
echo "Enter the first mark: " read
mark1
echo "Enter the second mark: " read
mark2
echo "Enter the third mark: "
read mark3
average=$(((($mark1 + $mark2 + $mark3) / 3))
if [ $average -ge 90 ]; then   echo "Grade: S"
elif [ $average -ge 80 ]; then   echo "Grade: A"
elif [ $average -ge 60 ]; then   echo "Grade: B"
elif [ $average -ge 40 ]; then   echo "Grade: P"
else   echo "Grade:F" fi
```

OUTPUT:

```
mca@ubuntu01:~$ chmod +x mark.sh
mca@ubuntu01:~$ ./mark.sh
Enter the first mark:
45
Enter the second mark:
46
Enter the third mark:
78
Grade: P
mca@ubuntu01:~$
```

10. Read the name of an Indian state and display the main language according to the table.For other states, the output may be “Unknown”. Use “|” to separate states with same language (case..esac).

State	Main Language
Andhra Pradesh	Telugu
Assam	Assamese
Bihar	Hindi
Himachal Pradesh	Hindi
Karnataka	Kannada
Kerala	Malayalam
Lakshadweep	Malayalam
Tamil Nadu	Tamil

SOURCE CODE:

```
#!/bin/bash
read -p "Enter the name of an Indian state: " state
case $state in     "Andhra Pradesh")        echo
"Main Language: Telugu"
        ;;
   "Assam")        echo "Main
Language: Assamese"
        ;;
   "Bihar")        echo "Main
Language: Hindi"
        ;;
   "Himachal Pradesh")
      echo "Main Language: Hindi"
        ;;
```

```
   "Karnataka")        echo "Main
Language: Kannada"
        ;;
   "Kerala")        echo "Main Language:
Malayalam"
        ;;
   "Lakshadweep")        echo "Main
Language: Malayalam"
        ;;
    "Tamil Nadu")        echo "Main
 Language: Tamil"
        ;;
    *)
        echo "Unknown"
        ;;
esac
```

OUTPUT:

```
mca@ubuntu01:~$ ./state.sh
Enter the name of an Indian state: Kerala
Main Language: Malayalam
mca@ubuntu01:~$
```

11. Change the home folder of all users whose name start with stud from /home/username to /usr/username. Also change the password of username to username123 (e.g., /home/stud25 changes to /usr/stud25 and his/her password changes to stud25123) - (Use for .. in)

SOURCE CODE:

```
#!/bin/bash
for username in /home/stud*;  do
   if [ -d "$username" ]; then
new_home="/usr${username#/home}"
new_password="${username#/home/stud}"
new_password="${new_password}123"

      usermod -d "$new_home" "$username"        echo
"$username:$new_password" | chpasswd        echo "Changed
home folder and password for $username"   fi
done
```

OUTPUT:

```
Changed home folder and password for /home/stud25
Changed home folder and password for /home/stud42
Changed home folder and password for /home/stud99
mca@ubuntu01:~$
```

12. Read a number and display the multiplication table of the number up to 10 lines. (Use for((..)))

SOURCE CODE:

```
#!/bin/bash
echo "Enter the number -"
read n i=1
while [ $i -le 10 ] do
res=`expr $i \* $n` echo
"$n * $i = $res"
((++i))  done
```

OUTPUT:

```
mca@cscc2d60:~$ gedit multable.sh
mca@cscc2d60:~$ chmod +x multable.sh
mca@cscc2d60:~$ ./multable.sh
Enter the number -
9
9 * 1 = 9
9 * 2 = 18
9 * 3 = 27
9 * 4 = 36
9 * 5 = 45
9 * 6 = 54
9 * 7 = 63
9 * 8 = 72
9 * 9 = 81
9 * 10 = 90
mca@cscc2d60:~$
```

13. Read a Decimal number. Convert it to Binary and display the result. -(Use while)

SOURCE CODE:

```
    echo "enter a number : "
read n     c=$(echo
"obase=2;$n" | bc)     echo
binary $c
```

OUTPUT:

```
mca@cscc2d60:~$ gedit DeciToBin.sh
mca@cscc2d60:~$ ./DeciToBin.sh
enter a number :
12
binary 1100
mca@cscc2d60:~$
```