

### **SET1**

- Q1) Write a shell script function to check whether a number is prime or not.
- Q2) Count the number of lines, words and characters from a given file input.

### **SET2**

- Q1) Write a shell script function to print the fibonacci series.
- Q2) Create two files and enter contents. Print all the difference between two files and copy to a third file.

### **SET3**

- Q1) Write a shell script to find the LCM of two numbers.
- Q2) Write a shell script to concatenate two strings and extract a substring from the resultant string.

### **SET4**

- Q1) Write a shell script to find the reverse of a number.
- Q2) Create a file and enter some contents. Print lines matching certain word pattern.

### **SET5**

- Q1) Write a shell script to find the largest among three numbers.
- Q2) Write a shell script to show the count of users logged in.

### **SET6**

- Q1) Write a shell script(menu driven) to develop a simple calculator to perform addition, subtraction, multiplication and division.
- Q2) Write a shell script to concatenate two strings and find the length of the resultant string.

## PROGRAM

### SET1

#### Q1 Prime or not

```
i=2
rem=1
echo "Enter a number"
read num
if [ $num -lt 2 ]
then
echo -e "$num is not prime\n"
exit 0
fi
while [ $i -le `expr $num / 2` -a $rem -ne 0 ]
do
rem=`expr $num % $i`
i=`expr $i + 1`
done
if [ $rem -ne 0 ]
then
echo -e "$num is prime\n"
else
echo -e "$num is not prime\n"
fi
```

#### Q2) no of lines, words and characters

Taking input from user

```
read text
```

```
# Counting words
```

```
word=$(echo -n "$text" | wc -w)
```

```
# Counting characters
```

```
char=$(echo -n "$text" | wc -c)
```

```
lines=$(echo -n "$text" | wc -l)
```

## **SET2**

Q1) Write a shell script function to print the fibonacci series.

```
echo "Program to Find Fibonacci Series"
echo "How many number of terms to be generated ?"
read n
x=0
y=1
i=2
echo "Fibonacci Series up to $n terms : "
echo "$x"
echo "$y"
while [ $i -lt $n ]
do
    i=`expr $i + 1 `
    z=`expr $x + $y `
    echo "$z"
    x=$y
    y=$z
done
```

Q2) Create two files and enter contents. Print all the difference between two files and copy to a third file.

**(iii) Print all the difference between two file, copy the two files at \$USER/CSC/2007 directory.**

**Solution:-**

```
echo "enter first file name"
read file1
echo "enter second file name"
read file2
echo "enter third file name"
read file3
echo "Enter contains to $file1"
cat > $file1
echo "Enter contains to $file2"
cat > $file2
echo "Display difference between $file1 and $file2 copy to $file3"
diff -a $file1 $file2 > $file3
cat $file3
```

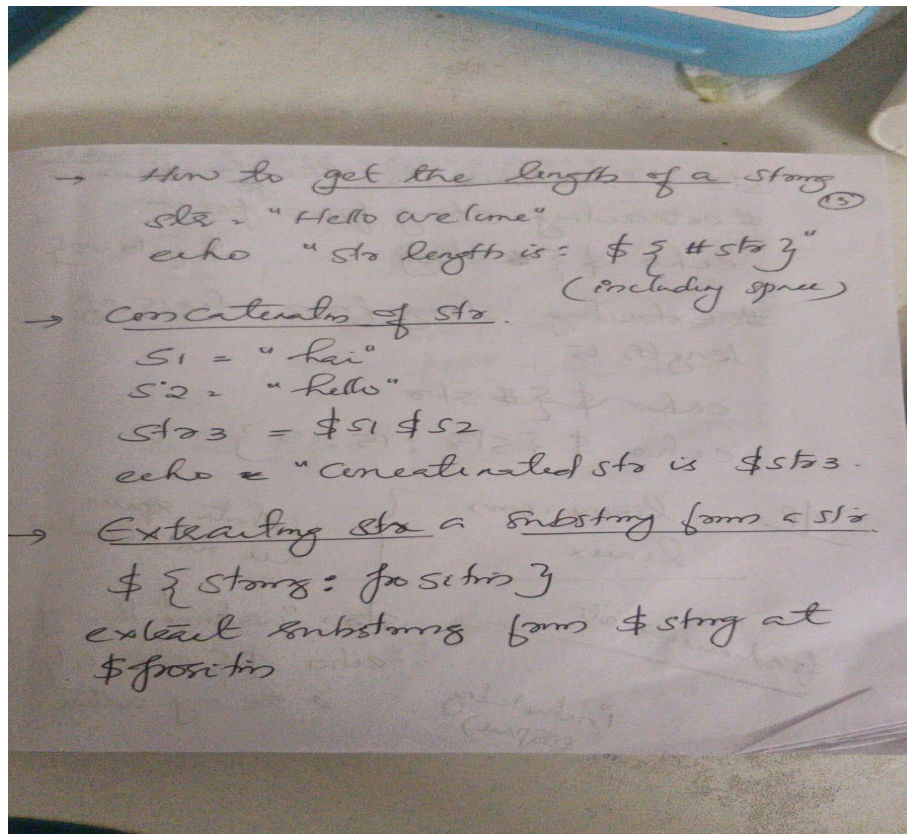
### **SET3**

Q1) Write a shell script to find the LCM of two numbers.

**Write a shell script to compute LCM of two numbers.**

```
echo "Enter first no"
read a
echo "Enter 2nd no"
read b
p='expr $a \* $b'
while [ $b -ne 0]
do
r='expr $a % $b'
a=$b
b=$r
done
LCM='expr $p / $a'
echo "LCM = $LCM"
```

Q2) Write a shell script to concatenate two strings and extract a substring from the resultant string.



#### **SET4**

Q1) Write a shell script to find the reverse of a number.

```
echo enter n
read n
num=0
while [ $n -gt 0 ]
do
num=$((expr $num \* 10))
k=$((expr $n % 10))
num=$((expr $num + $k))
n=$((expr $n / 10))
done
echo number is $num
```

Q2) Create a file and enter some contents. Print lines matching certain word pattern.

**iv )Print lines matching certain word pattern.**

Solution :-

```
#mkdir IT
```

```
#cd IT
```

```
#vim assignmentno4.4.sh
```

```
echo "create a file "
```

```
read file1
```

```
echo "inputs contains in file $file1"
```

```
cat> $file1
```

```
echo "Enter word we findout "
```

```
read f
```

```
grep -ni $f $file1
```

**SET5**

Q1) Write a shell script to find the largest among three numbers.

```
echo "Enter first number: " read a
```

```
echo "Enter second number: " read b
```

```
echo "Enter third number: " read c
```

```
if [ $a -ge $b -a $a -ge $c ] then
```

```
echo "$a is largest integer"
```

```
elif [ $b -ge $a -a $b -ge $c ]
```

```
then
```

```
echo "$b is largest integer"
```

```
elif [ $c -ge $a -a $c -ge $b ]
```

```
then
```

```
echo "$c is largest integer"
```

```
fi
```

Q2) Write a shell script to show the count of users logged in.

**(i) Showing the count of users logged in,**

```
sol-> echo "Show all users login"
```

```
who
```

```
echo "count all login name"
```

```
who | wc -l
```

Q1) Write a shell script(menu driven) to develop a simple calculator to perform addition, subtraction, multiplication and division.

```
echo "Enter Two numbers : "
```

```
read a
```

```
read b
```

```
# Input type of operation
```

```
echo "Enter Choice :"
```

```
echo "1. Addition"
```

```
echo "2. Subtraction"
```

```
echo "3. Multiplication"
```

```
echo "4. Division"
```

```
read ch
```

```
# Switch Case to perform
```

```
# calculator operations
```

```
case $ch in
```

```
1)res=`echo $a + $b | bc`
```

```
;;
```

```
2)res=`echo $a - $b | bc`
```

```
;;
```

```
3)res=`echo $a \* $b | bc`
```

```
;;
```

```
4)res=`echo "scale=2; $a / $b" | bc`
```

```
;;
```

```
esac
```

```
echo "Result : $res"
```

Q2) Write a shell script to concatenate two strings and find the length of the resultant string.

→ How to get the length of a string (5)

str = "Hello welcome"

echo "str length is: \${#str}"  
(including space)

→ Concatenation of str.

s1 = "hai"

s2 = "hello"

str3 = \$s1 \$s2

echo "Concatenated str is \$str3"

→ Extracting str a substring from str

\${str:position}

extract substring from \$str at  
\$position