

Aim:

Write a shell script to find area of circle
code:

```
read -P "Enter the radius :" r
area=$(echo "3.14 * $r * $r" | bc)
echo "Area of circle is "$area
```

Output

```
chmod +x area.sh
```

```
./area.sh
```

```
Enter the radius: 10
```

```
Area of circle is 314.00
```

Teacher's Signature :

Aim:

write a shell script to find given number is odd or even

code:

```
read -p "Enter the number : " a  
rem=$((a%2))
```

```
if [ $rem == 0 ]
```

```
then
```

```
echo "$a \"the given number is even\"
```

```
else
```

```
echo "$a \"the given number is odd\"
```

```
fi
```

Output

```
chmod +x oddeven.sh
```

```
./evenodd.sh
```

```
Enter the number : 5
```

```
5 the given number is odd.
```

Teacher's Signature:

Aim:

Write a shell script to make a menu driven calculator using case.

Code:

```
i="y"
read -p "Enter first number" n1
read -p "Enter second number" n2
while [ $i == "y" ]
do
    echo "1. Addition"
    echo "2. Subtraction"
    echo "3. Multiplication"
    echo "4. Division"
    read -p "Enter your choice" ch
    case $ch in
        1) sum=$((n1+n2))
            echo "sum = $sum";;
        2) sub=$((n1-n2))
            echo "sub = $sub";;
        3) mul=$((n1*n2))
            echo "mul = $mul";;
        4) div=$((n1/n2))
            echo "div = $div";;
        *) echo "invalid choice";;
    esac
    read -p "Do you want to continue?" i
    if [ $i == "y" ]
    then
        exit
```

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done

Output

chmod +x calcus.sh

./calcu.sh

Enter First number 5

Enter second number 5

1. Addition

2. Subtraction

3. Multiplication

4. Division

Enter your choice 1

sum = 10

do you want to continue? N

Teacher's Signature :

Aim:

write a shell script to find the greatest of three numbers

Code:

```
read -p "Enter 1st No." n1
```

```
read -p "Enter 2nd No." n2
```

```
read -p "Enter 3rd No." n3
```

```
if [ $n1 -gt $n2 -a $n1 -gt $n3 ]
```

```
then
```

```
echo "$n1 is largest"
```

```
elif [ $n2 -gt $n1 -a $n2 -gt $n3 ]
```

```
then
```

```
echo "$n2 is largest"
```

```
else
```

```
echo "$n3 is largest"
```

```
fi
```

Output

```
chmod +x largest.sh
```

```
./largest.sh
```

```
Enter 1st NO. 5
```

```
Enter 2nd NO. 8
```

```
Enter 3rd NO. 1
```

```
8 is largest
```

Teacher's Signature :

Aim:

write a shell script to compute mean and standard deviation of three numbers.

Code:

```

read -p "Enter 1st number :" n1
read -p "Enter 2nd number :" n2
read -p "Enter 3rd number :" n3
mean=$(echo "scale=3; ($n1+$n2+$n3)/3.0" | bc -l)
t1=$(echo "scale=3; ($n1 - $mean) * ($n1 - $mean)" | bc -l)
t2=$(echo "scale=3; ($n2 - $mean) * ($n2 - $mean)" | bc -l)
t3=$(echo "scale=3; ($n3 - $mean) * ($n3 - $mean)" | bc -l)
s=$(echo "scale=3; ($t1 + $t2 + $t3)/3.0" | bc -l)
sd=$(echo "scale=3; (sqrt($s))" | bc -l)
echo "mean is $mean"
echo "standard deviation is $sd"

```

Output

chmod +x mean.sh

./mean.sh

Enter 1st number : 1

Enter 2nd number : 2

Enter 3rd number : 3

mean is 2.000

standard deviation is .816

Teacher's Signature

Aim:

Write a shell script to find sum of all digits from a given number

Code:

```
read -p "Enter the No. " n
sum=0
while [ $n -gt 0 ]
do
rem=`expr $n % 10`
sum=`expr $sum + $rem`
n=`expr $n / 10`
done
echo "sum of digits is $sum"
```

Output

```
chmod +x sum.sh
```

```
./sum.sh
```

```
Enter the No. 123
```

```
Sum of digits is 6
```

Teacher's Signature :

Aim:

Write a shell script to find reverse of a number

Code:

```
read -p "Enter the No." n
```

```
rev=0
```

```
while [ $n -gt 0 ]
```

```
do
```

```
rem=$((n%10))
```

```
rev=$((rev*10+$rem))
```

```
n=$((n/10))
```

```
done
```

```
echo "Reverse of number is $rev"
```

Output

```
chmod +x reverse.sh
```

```
./reverse.sh
```

```
Enter the No. 231
```

```
Reverse of number is 132
```

Teacher's Signature :

Aim:

write a shell script to find prime numbers up to a given number

code:

```
read -p "Enter the limit :" n
```

```
r=2
```

```
while [ $r -le $n ]
```

```
do
```

```
temp=2
```

```
f=0
```

```
rem=0
```

```
while [ $temp -le $(($r-1)) ]
```

```
do
```

```
rem=`expr $r % $temp`
```

```
if [ $rem -eq 0 ]
```

```
then
```

```
f=1
```

```
fi
```

```
temp=`expr $temp + 1`
```

```
done
```

```
if [ $f -eq 0 ]
```

```
then
```

```
echo "$r"
```

```
fi
```

```
r=`expr $r + 1`
```

```
done
```

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Output

closed & prime.sh

.1prime.sh

Enter the limit : 7

2

3

5

7

Teacher's Signature :.....



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Aim:

write a shell script to find n Fibonacci numbers

Code:

```
read -p "Enter the limit : " n
```

```
f=0
```

```
s=1
```

```
while [ $n -gt 0 ]
```

```
do
```

```
echo "$f "
```

```
E=$(( f + s ))
```

```
n=$(( n - 1 ))
```

```
f=$s
```

```
s=$E
```

```
done
```

Output

```
chmod +x fibonaci.sh
```

```
./fibonaci.sh
```

```
Enter the limit : 4
```

0

1

1

2

Teacher's Signature:

Aim:

write a shell script to check whether a given number is armstrong or not

code:

```
read -p "Enter the number" n  
arm=$n
```

```
b=0
```

```
while [ $n -gt 0 ]
```

```
do
```

```
c=`expr $b + $c \* $c \* $c`
```

```
n=`expr $n / 10`
```

```
done
```

```
if [ $arm -eq $b ]
```

```
then
```

```
echo "$arm is armstrong number"
```

```
else
```

```
echo "$arm is not an armstrong"
```

```
fi
```

Output

```
chmod +x armstrong.sh
```

```
./armstrong.sh
```

```
Enter the number 153
```

```
153 is armstrong number
```

Teacher's Signature:

Aim:

Write a shell script to reverse a string and check whether a given string is palindrome or not

Code:

```
read -p "Enter the string : " str
st='echo ${str##*}'"
rev=`echo ${st%?} | rev`"
r=echo "${str##*} | rev`"
echo "Reverse of $str is $r"
if [ ${st##*} == $rev ]
then
    echo "string is not palindrome"
else
    echo "string is palindrome"
fi
```

Output

```
cloned +x palindrome.sh
•/palindrome.sh
Enter the string : malayalam
Reverse of malayalam is malayalam
String is palindrome.
```

Teacher's Signature :.....

Aim:

Write a shell script to count no. of line, words and characters of a input file.

code:

```
read -p "Enter a file name :" fn
```

```
echo "Number of lines : "
```

```
wc -l $fn
```

```
echo "Number of words : "
```

```
wc -w $fn
```

```
echo "Number of character : "
```

```
wc -c $fn
```

Output

```
chmod +x length.sh
```

```
./length.sh
```

Enter a file name : word-length

Number of lines :

1 word-length

Number of words :

5 word-length

Number of character :

33 word-length

Teacher's Signature

Aim:

write a shell script to convert all the contents into the uppercase in a particular file in UNIX.

Code:

```
read -p "Enter the file name :" file
if [ -f $file ]
then
cat $file | tr "[lower]" "[upper]" > upper.$file
echo "converted to uppercase and save in upper.$file"
else
echo "file doesnot exist"
fi
```

Output

chmod +x uppercase.sh

• uppercase.sh

Enter the file name : word-length

converted to uppercase and save in upper_word-length

Teacher's Signature :

Aim:

write a shell script to find the value of one number raised to the power of another two numbers are entered through the keyboard.

Code:

```
read -p "Enter the base number :" base
```

```
read -p "Enter the exponent :" exponent
```

```
result=$((base ** exponent))
```

```
echo "$base raised to the power of $exponent: $result"
```

Output

```
chmod +x power.sh
```

```
./power.sh
```

```
Enter the base number: 2
```

```
Enter the exponent: 2
```

```
2 raised to the power of 2 : 4
```

Teacher's Signature

Aim:

write a shell script find the factorial of a given number

Code:

f=1

n=1

read -p "Enter the number : " n

while [\$i -le \$n]

do

f=`expr \$f * \$i`

i=`expr \$i + 1`

done

echo "Factorial of \$n is \$f"

Output

chmod +x factorial.sh

./factorial.sh

Enter no number : 5

Factorial of 5 is 120

Teacher's Signature :

Aim:

An employee's Basic pay is input through keyboard where DA is 40% of basic pay and HRA is 20% of basic pay. Write a shell script to calculate gross salary, Gross salary = Basic Pay + DA + HRA
code :

```
read -p "Enter the base salary" salary
da='echo $salary * 40/100 | bc'
hra='echo $salary * 20/100 | bc'
grossal='echo $salary + $da + $hra | bc'
echo "basic salary is $salary"
echo "DA is $da"
echo "HRA is $hra"
echo "current salary is $grossal"
```

Output

chmod +x salary.sh

./salary.sh

Enter the base salary 25000

basic salary is 25000

DA is 10000

HRA is 5000

Current salary is 40000

Teacher's Signature :

Aim:

write a shell script to find the average of the numbers entered as command line arguments.

Code:

```
s=0
```

```
for i in $*
```

```
do
```

```
s='expr $s + $i'
```

```
done
```

```
echo "sum of numbers is $s"
```

```
avg='expr $s / $#'
```

```
echo "average is $avg"
```

Output

```
chmod +x average.sh
```

```
./average.sh 1 2 3
```

```
sum of numbers is 6
```

```
average is 2
```

Teacher's Signature :

Aim:

write a shell script which whenever gets executed displays the message Good Morning / Good afternoon / Good Evening depending on the time it gets executed.

Code:

```
date=$(date +'%T')
echo "It's $date now!!"
check=$(date +'%H')
if [ $check -ge 06 -a $check -le 12 ]
then
    echo "Good morning!!"
elif [ $check -ge 12 -a $check -le 17 ]
then
    echo "Good afternoon!!"
else
    echo "Good evening!!"
fi
```

Output

```
chmod +x date.sh
./date.sh
It's 01:06:21 now!!
Good evening!!
```

Teacher's Signature :

Aim:

write a shell script to Display Banner, calendar of given year.

code:

```
echo "welcome to the calendar program"
echo "-----"
read -p "Enter year : " y
cal $y
```

output

chmod +x calendar.sh

./calendar.sh

welcome to the calendar programs

Enter year : 2003

2003

January

SU MO TU WE TH FR SA

1 2 3 4

5 6 7 8 9 10 11

12 13 14 15 16 17 18

19 20 21 22 23 24 25

26 27 28 29 30 31

Teacher's Signature

Aims:

write a shell script to display current date and time, number of users, terminal name, login date and time
code:

```
date=$(date + "%d/%m/%Y %H:%M:%S")
echo "current date $date"
time=$(date + "%T")
echo "current time $time"
echo "As of now `who | wc -l` user are login to the system"
echo "current terminal `tty`"
echo "login date and time"
echo "who"
```

Output

```
chmod +x login.sh
```

```
./login.sh
```

```
current date 29/11/23
```

```
current time 01:17:00
```

```
As of now 1 user are login to the system
```

```
current terminal /dev/pts/0
```

```
login date and time
```

```
C815 :0 2023-11-29 00:40 (:0)
```

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Aim:

write a shell script which uses all the file test operators.

Teacher's Signature :.....



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