**OS Lab Sheet**

**Shell programming**

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1. Write shell scripts for the following: a)To take your name, programme name and enrolment number as input from the user and print it on the screen.

#!/bin/bash

echo "Enter your name:"

read name

echo "Enter your rollNum:"

read rollnum

echo "Your name is: $name"

echo "Your rollnum is: $rollnum"

2. To find the sum, the average and the product of four integers

#!/bin/bash

echo "Enter 4 numbers: "

read a

read b

read c

read d

sum=`expr $a + $b + $c + $d`

avg=`expr $sum / 4`

prod=`expr $a \\* $b \\* $c \\* $d`

echo "The sum is $sum"

echo "The average is $avg"

echo "The product is $prod"

3. Write a program to check whether a number is even or odd.

#!/bin/bash

echo "Enter a number"

read a

if [ `expr $a % 2` == 0 ]

then

    echo "$a is Even"

else

    echo "$a is Odd"

fi

4. To exchange the values of two variables.

#!/bin/bash

a="5"

b="6"

echo "a=$a; b=$b"

temp=$a

a=$b

b=$temp

echo "After swap"

echo "a=$a; b=$b"

5. To concatenate two strings and find the length of the resultant string

#!/bin/bash

a="Hello"

b=" World"

c=$a$b

echo $c

6. To concatenate the contents of two files.

#!/bin/bash

cat file1 file2 > file3

7. Write a shell script that would wait 5 seconds and then display the time

#!/bin/bash

sleep 5

date

8. The length and breadth of a rectangle and radius of a circle are provided as user input. Write a shell script that will calculate the area and perimeter of the rectangle and the area and circumference of the circle.

#!/bin/bash

echo "Enter length of rectangle"

read l

echo "Enter breadth of rectangle"

read b

echo "Enter radius of the circle"

read r

rec\_a=`expr $l \\* $b`

rec\_p=`expr $l + $l + $b + $b`

echo "Rectangle area: $rec\_a"

echo "Rectangle perimeter: $rec\_p"

pi=3.14

cir\_a=$(echo "$pi \* ($r^2)" | bc)

cir\_p=$(echo "2 \* $pi \* $r" | bc)

echo "Circle area: $cir\_a"

echo "Circle perimeter: $cir\_p"