

Week 3

PART 1

```
read -p "Enter a number to check for odd-even : " number
if [  $$(number\%2)$  -eq 0 ]
then
    echo "Number is even."
else
    echo "Number is odd."
fi
echo " "
```

PART 2

```
read -p "Enter a Number for odd loop max : " number
j=1
while [  $\$j$  -le  $$(number)$  ]
do
    echo -n " $$(2*j-1)$ "

    j= $$(j + 1)$ 
done
echo " "
echo " "
```

PART 3

```
echo "Enter a (a, b, c) in ( $ax^2 + bx + c$ ) : "
read a
read b
read c
echo " "

d= $$(b*b-4*a*c)$ 

if [  $$(d)$  -gt 0 ]; then
    dis=1
elif [  $$(d)$  -lt 0 ]; then
    dis=-1
else
    dis=0
fi

case  $$(dis)$  in
    "0") x1= $$( (-b/2*a)$ 
        x2= $$(x1)$ 
        echo "Root 1 :  $\$x1$  ", Root 2 :  $\$x2$ ";;

    "-1") echo "No roots Found";;

    *) calc= $$(echo "sqrt ( $\$d$ )" | bc )$ 
        x1= $$( (-b/2*a+calc/2*a)$ 
        x2= $$( (-b/2*a-calc/2*a)$ 
        echo "Root 1 :  $\$x1$  ", Root 2 :  $\$x2$ ";;
esac
echo " "
```

PART 4

```
read -p "Enter a number to find factorial : " num
```

```
fact=1
```

```
while [ $num -gt 1 ]
```

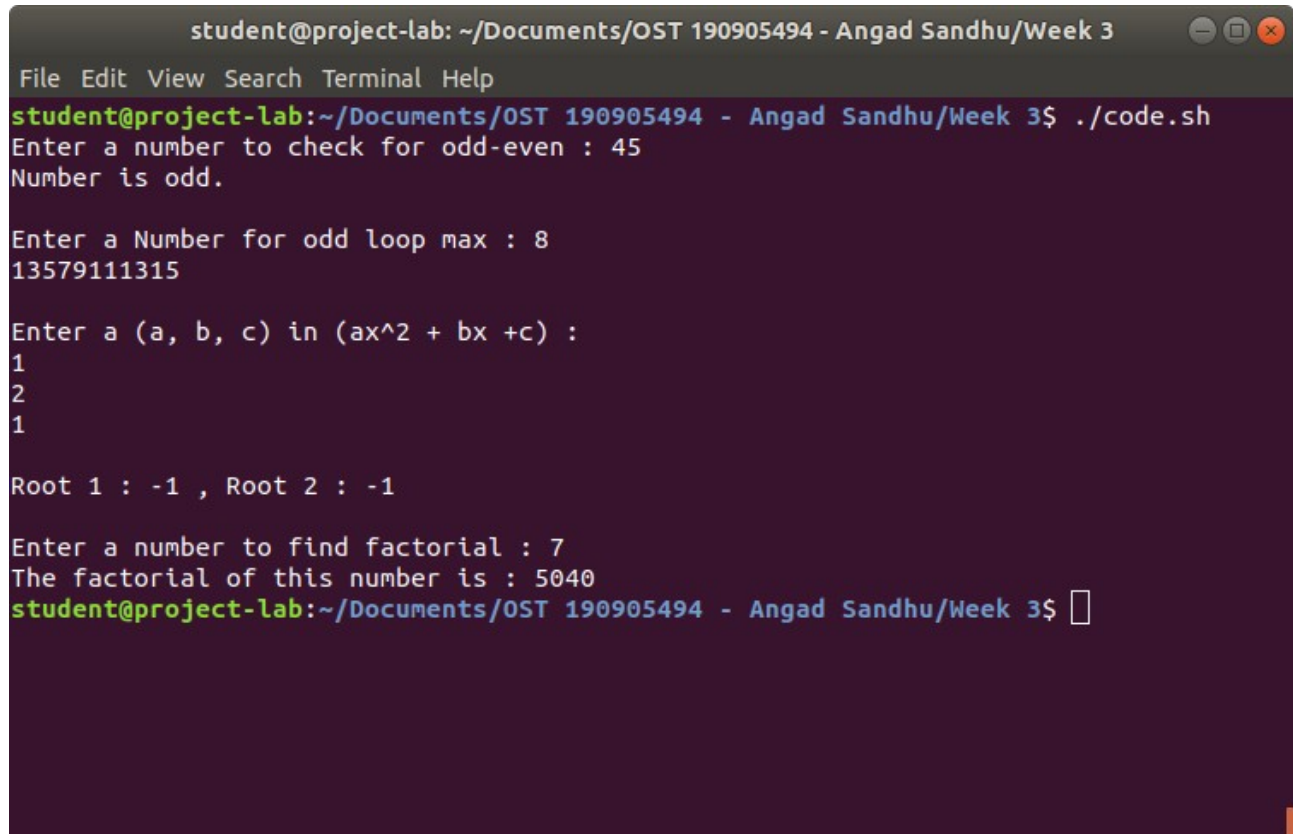
```
do
```

```
fact=$((fact * num)) #fact = fact * num
```

```
num=$((num - 1))    #num = num - 1
```

```
done
```

```
echo "The factorial of this number is : $fact"
```

A terminal window titled 'student@project-lab: ~/Documents/OST 190905494 - Angad Sandhu/Week 3'. The window contains the output of a script. It prompts for a number to check for odd-even (45), then for a number for an odd loop max (8), then for coefficients a, b, c (1, 2, 1) to find roots (-1, -1), and finally for a number to find factorial (7), outputting 5040.

```
student@project-lab: ~/Documents/OST 190905494 - Angad Sandhu/Week 3
File Edit View Search Terminal Help
student@project-lab:~/Documents/OST 190905494 - Angad Sandhu/Week 3$ ./code.sh
Enter a number to check for odd-even : 45
Number is odd.

Enter a Number for odd loop max : 8
13579111315

Enter a (a, b, c) in (ax^2 + bx +c) :
1
2
1

Root 1 : -1 , Root 2 : -1

Enter a number to find factorial : 7
The factorial of this number is : 5040
student@project-lab:~/Documents/OST 190905494 - Angad Sandhu/Week 3$
```