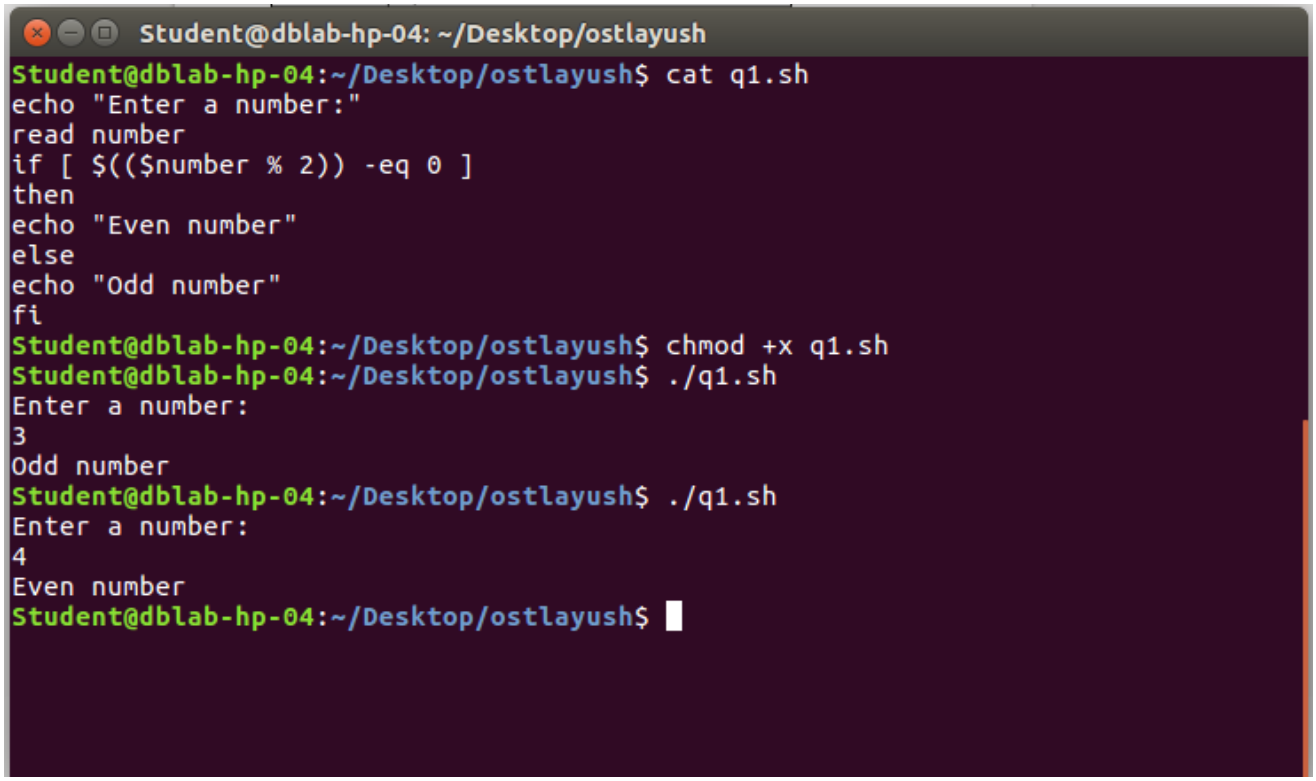
Ayush Goyal
190905522

OST LAB 3 (Week 3)

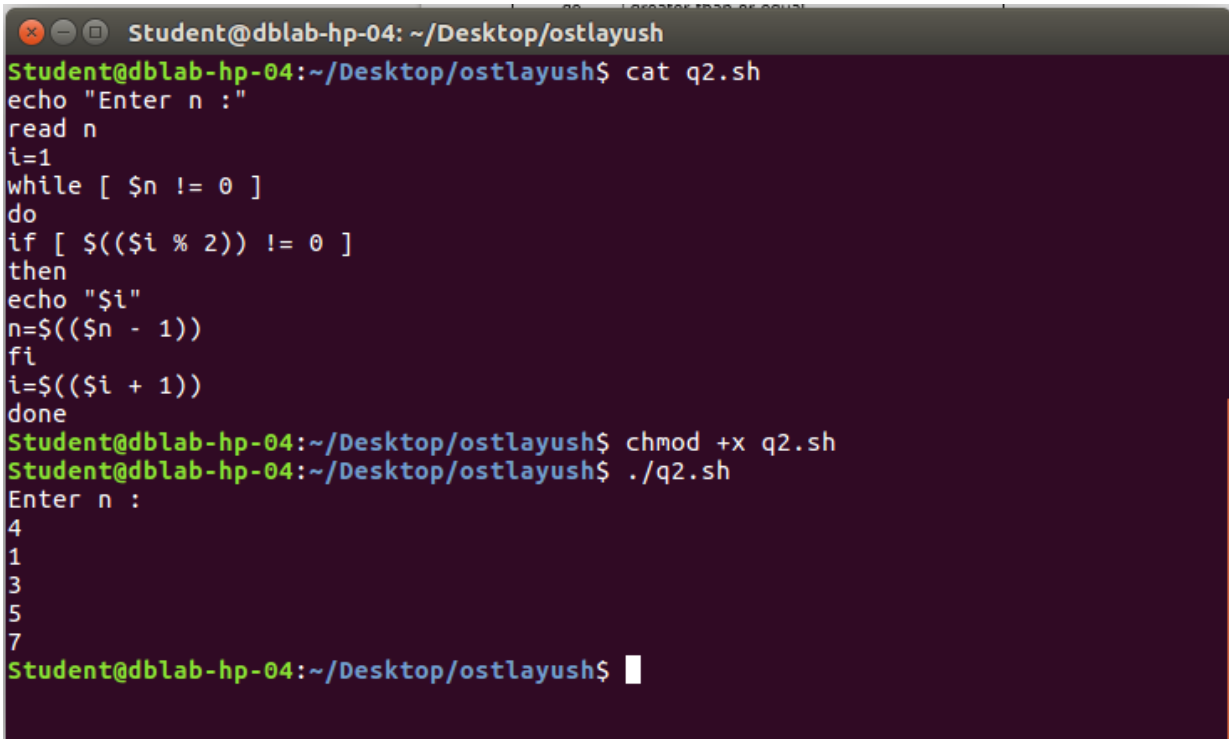
Q1)

```
echo "Enter a number:"
read number
if [ $(($number % 2)) -eq 0 ]
then
echo "Even number"
else
echo "Odd number"
fi
```



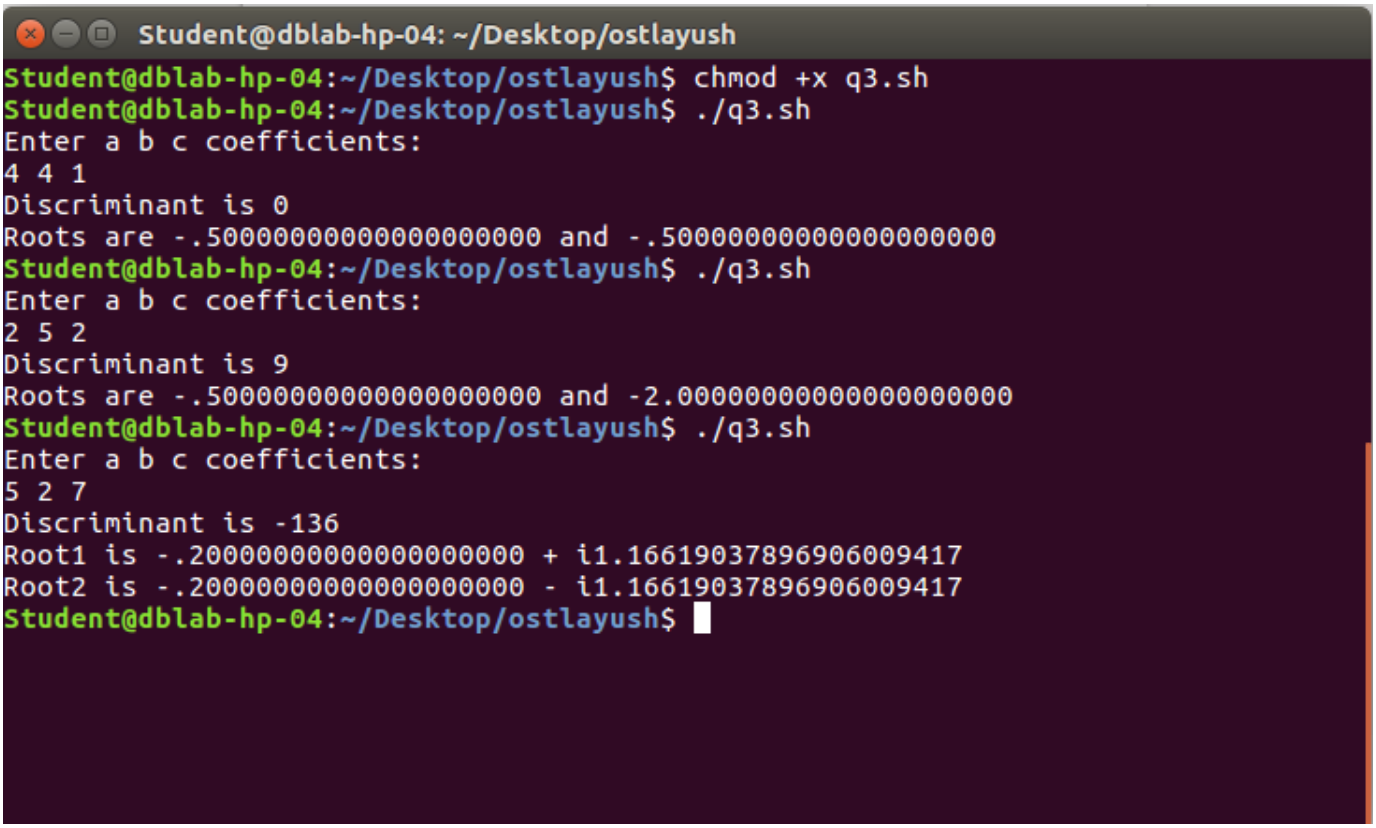
Q2)

```
echo "Enter n:"
read n
i=1
while [ $n != 0 ]
do
if [ $(($i % 2)) != 0 ]
then
echo "$i"
n=$(($n – 1))
fi
i=$(($i + 1))
done
```



Q3)

```
echo "Enter a b c coefficients"
read a b c
D=`expr $((b*b-4*a*c))`
echo "Discriminant is $D"
disc="e"
if [ $D -gt 0 ]
then
disc="r"
elif [ $D -lt 0 ]
then
disc="i"
fi
case $disc in
"e")
root1=$(echo "((-1*$b)/(2*$a))" | bc -l)
root2=$(echo "((-1*$b)/(2*$a))" | bc -l)
echo "Roots are $root1 and $root2"
;;
"r")
rootD=$(echo "sqrt($D)" | bc -l)
root1=$(echo "((-1*$b+$rootD)/(2*$a))" | bc -l)
root2=$(echo "((-1*$b-$rootD)/(2*$a))" | bc -l)
echo "Roots are $root1 and $root2"
;;
"i")
rootD=$(echo "sqrt(-1*$D)" | bc -l)
real=$(echo "((-1*$b)/(2*$a))" | bc -l)
img=$(echo "$rootD/(2*$a)" | bc -l)
echo "Root1 is $real + i$img"
echo "Root2 is $real – i$img"
;;
esac
```



Q4)

```
echo "Enter number :"
read n
f=1
while [ $n != 0 ]
do
f=$(($n*$f))
n=$(($n – 1))
done
echo "Factorial is $f"
```