Python lab cycle 1

11.Write a Python program to solve a quadratic equation.

```
import math
a=int(input("Enter  coefficent of x^2  "))
b=int(input("Enter coefficent of x  "))
c=int(input("Enter the constant  "))
if a==0:
    print("Value of a must be  non zero ")
else:
    d=(b*b)-(4*a*c)
    sol1=(-b+math.sqrt(d))/2*a
    sol2=(-b-math.sqrt(d))/2*a
print("the solution for this quadratic equation is  ",sol1," and ",sol2)
```

10.Write a Python program to determine the rate of entry-ticket in a trade fair based on age as follows:

```
age=int(input("Enter your age  "))
if age<10:
    print("Your ticket rate is  7")
elif age>=10 and age<60:
    print("Your ticket rate is  10")
```

```
else:
    print("your ticket rate is 5")
```

9.Program to determine whether a year is a leap year or not.

```
year=int(input("Enter a year  "))
if (year%4==0 and year%100!=0) or (year%40==0):
    print(year," is a leap year")
else:
    print(year," is not a leap year")
```

8.Find biggest of 3 numbers entered.

```
n=int(input("enter 1st  numbers "))
n1=int(input("enter 2nd  numbers "))
n2=int(input("enter 3rd  numbers "))
print("maximun of the 3 numbers is ",max(n,n1,n2))
```

7.Program to accept an integer n and compute n+nn+nnn.

[Hint : n = 5, then compute 5 + 55 + 555]

```
n=int(input("enter a number\n"))
```

```
n1=int("%s%s"%(n,n))
n2=int("%s%s%s"%(n,n,n))
sum=n+n1+n2
print("sum of ",n,n1,n2," is ",sum)
```

6.Write a Python program to get a string which is n (non-negative integer) copies of a given string.

```
n = input("Enter a string: ")
k = int(input("Enter how many times you want to print it: "))

print((n + '\n') * k)
```

5.Write a Python program to perform arithmetic operations on two integer numbers.

```
a=int(input("Enter the 1st number :  "))
b=int(input("Enter the 2nd number :  "))
print("sum ",a+b)
print("differnece  ",a-b)
print("product ",a*b)
print("quotient ",a/b)
print("modulus ",a%b)
print("a//b" ,b//a)
```

```
print("b^a ",b**a)
```

4.Write a program to calculate the salary of an employee given his basic pay (to be entered by the user) . HRA = 10 percent of the basic pay, TA = 5 percent of the basic pay.

```
bp=float(input("enter the basic pay  "))
hra=(bp*10/100)
ta=(bp*5/100)
bp=bp+hra+ta
print("Total Basic pay  is ",bp)
```

3.Write a program to calculate the area of a circle by reading inputs from the user.

```
r=float(input("Enter the radius "))
are=3.14*r*r
print("area of the circle with radius ",r," is ",are)
```

2.Write a program to demonstrate different number data types in python?

```
a=int(input("enter a integer  "))
b=float(input("enter a  float  "))
c=complex(input("enter a  complex number  "))
d=bool(input("enter a boolean  "))
print(a," is of  the class ",type(a))
```

```
print(b, " is the  class ",type(b))

print(c," is the class ",type(c))

print(d," is the class ",type(d))
```

1. Write a program that prompts the user to enter his first name and last name and then

displays a message “Greetings!!! First name Last name”.

```
fname=input(("Enter your first name "))

lname=input(("Enter your last name "))

print("Greeting ",fname,lname)
```