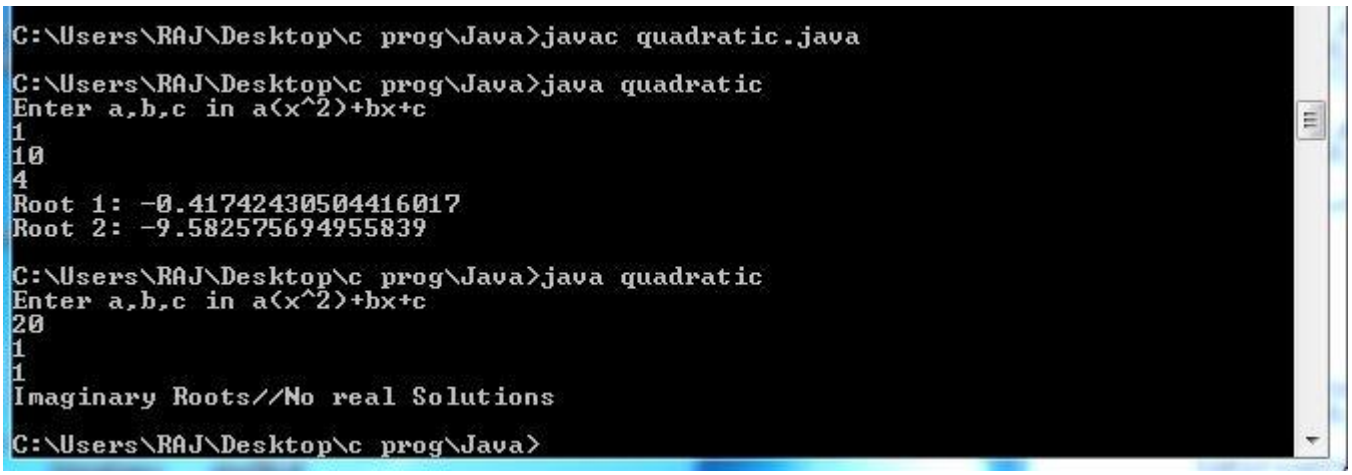
LAB 1

Develop a Java program that prints all real solutions to the quadratic equation ax2 +bx+c = 0. Read in a, b, c and use the quadratic formula. If the discriminate b2-4ac is negative, display a message stating that there are no real solutions.

```
import java.util.*;
class quadratic
{
  public static void main(String[] args)
  {
        int a,b,c;
        double d,x1,x2;
        Scanner in=new Scanner(System.in);
        System.out.println("Enter a,b,c in a(x^2)+bx+c");
        a=in.nextInt();
        b=in.nextInt();
        c=in.nextInt();
        d=(b*b)-(4*a*c);
        if(d<0)
        {
          System.out.println("Imaginary Roots//No real Solutions");
          return;
        }
        x1=((-1*b)+Math.sqrt(d))/(2*a);
        x2=((-1*b)-Math.sqrt(d))/(2*a);
        System.out.println("Root 1: "+x1+"\nRoot 2: "+x2);
  }
}
```


C:\Users\RAJ\Desktop\c prog\Java>javac quadratic.java
C:\Users\RAJ\Desktop\c prog\Java>java quadratic
Enter a,b,c in a(x^2)+bx+c
1
10
4
Root 1: -0.41742430504416017
Root 2: -9.582575694955839
C:\Users\RAJ\Desktop\c prog\Java>java quadratic
Enter a,b,c in a(x^2)+bx+c
20
1
1
Imaginary Roots//No real Solutions
C:\Users\RAJ\Desktop\c prog\Java>