LAB PROGRAM 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 message stating that there are no real solutions.

```java
import java.util.Scanner;
Class Equation
{
    public static void main (Strings args[])
    {
        Scanner sc = new Scanner(System.in);
        double root 1, root 2;
        double
System.out.println(" Enter value of a:\n");
        double a = sc.nextDouble();
System.out.println("Enter value of b:\n");
        double b= sc.nextDouble();
System.out.println(" Enter value of c:\n");
        double c= sc.nextDouble();
        double det= (b*b) - (4* a*c);
        double sqrt = Math.sqrt(det);
        if (det>0)
        {
            root 1 = (-b + sqrt)/(2*a);
            root 2 = (-b - sqrt)/(2*a);
System.out.println("Roots are : " + root 1 + " and"
                                    + root2);
        }
        else if (det ==0)
        {
            System.out.println("Root is :" + (-b +sqrt)/
```

```java
                                          + root2);
            }
            else if (det == 0)
            {
                System.out.println("Root is :" + (-b + sqrt)/
                                                    (2*a));
            }
            else if (det < 0)
            { system.out.println("Roots No real sol" ");
        } }    }
```

```
Enter the value of a :
1
Enter the value of b :
0
Enter the value of c :
1
No Real Solutions
```