LAB 1

```java
import java.util.Scanner;
class quadratic_equation

{   public static void main (String [] args)
    {

        double a,b,c, sum, root 1, root 2;
        Scanner in = new Scanner (System.in);
        System.out.println (" Enter the constants a,b and c
        for the quadratic expression ax² + bx + c ");

        a = in.nextDouble ( );
        b = in.next Double ( );
        c = in.nextDouble ( );

        sum = (b * b) - (4 * a * c);

        if (sum > 0)

        {  System.out.println ( "Roots are Real and
        unequal "+ sum);
            root1 = ( - b + Math.sqrt(sum))/(2*a);
            root2 = (-b - Math.sqrt (sum))/2 *a);
            System.out.println (" Roots are real and unequal.
                + root1  +  root2);
        }
```

```java
else if (sum == 0)
{
    System.out.println ( " Roots are real and equal
    root1 = root2 = (b) /(2 * a);
    System.out.println ( "Roots of the quadratic
    equation are + root1 + "and" + root2 ; +sum);
}
else if (sum < 0)
{
    System.out.println ( "Roots are Un real"}
    + sum);
}
}
}
```