Day 8 coding Statement:

Write a program to find roots of a quadratic equation

Description

Get the values of a, b and c (coefficients of quadratic equation) as input from the user and calculate the roots and print as the output.

Input

Enter the value of a, b and c : 1 -6 9

Output

Roots are equal

Root 1= root 2 = 3.00

Solution

```
import java.util.Scanner;

public class Day8 {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the value of a b c");

        int a = sc.nextInt();

        int b = sc.nextInt();

        int c = sc.nextInt();

        long determinant = ((b*b)-4*a*c);

        if(determinant>0){

            System.out.println("Roots are real and distinct.");

        }else if(determinant==0){

            System.out.println("Roots are real and equal.");

        }else{

            System.out.println("Roots are imaginary.");

        }

        double root1 = (((-b + Math.sqrt(determinant))/2*a));

        double root2 = (((-b - Math.sqrt(determinant))/2*a));
```

```java
    if(determinant==0){

        System.out.println("Root1 = Root2 = "+root1);

    }else

    System.out.println("Roots of the quadratic equation are "+root1+" "+root2);

    sc.close();

    }

}
```