

Week-3

IBMI9CSI43

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// Java Program to find the roots of the given quadratic equation by the user.

```
import java.util.*;
class QuadraticEquation {
    public static void main (String args []) {
        Scanner in = new Scanner (System.in);
        int a, b, c, det;
        System.out.println ("Enter the values of a, b and c:");
        a = in.nextInt();
        b = in.nextInt();
        c = in.nextInt();
        det = b*b - 4*a*c;
        double r1, r2;
        if (det > 0) {
            r1 = (-b + Math.sqrt(det)) / (2*a);
            r2 = (-b - Math.sqrt(det)) / (2*a);
            System.out.println ("Root 1: " + r1 + " \n Root 2: "
+ r2);
        }
        else if (det == 0) {
            r1 = -b / (2*a);
            System.out.println ("Both the roots are same
and equal to: " + r1);
        }
        else if (det < 0) {
            System.out.println ("Real roots do not exist");
        }
        else { System.out.println ("Invalid input!");
        }
    }
}
```