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import java.util.Scanner;
import java.lang.Math;

public class QuadEq {
    public static void main (String ss[]) {
        Scanner x = new Scanner(System.in);
        System.out.print("Enter the value of a: ");
        double a=x.nextDouble();
        System.out.print("Enter the value of b: ");
        double b=x.nextDouble();
        System.out.print("Enter the value of c: ");
        double c=x.nextDouble();

        double d=b*b-(4*a*c);
        double r1,r2;

        if(d>0) {
            r1=(-b + Math.sqrt(d))/(2*a);
            r2=(-b - Math.sqrt(d))/(2*a);
            System.out.println("Roots are: "+r1+" and "+r2);
        }

        else if(d==0) {
            r1=r2=-b/(2*a);
            System.out.println("Root is: "+r1);
        }
        else {
            r1=-b/(2*a);
            r2=Math.sqrt(Math.abs(d))/(2*a);
            System.out.println("There are no real solutions");
            System.out.println("Root 1 is: "+r1+" + i"+r2);
            System.out.println("Root 2 is: "+r1+" - i"+r2);
        }
    }
}

```

```
PS C:\Users\Admin\Documents\1BM21CS024> javac QuadEq.java
PS C:\Users\Admin\Documents\1BM21CS024> java QuadEq
Enter the value of a: 1
Enter the value of b: -2
Enter the value of c: 1
Root is: 1.0
PS C:\Users\Admin\Documents\1BM21CS024> java QuadEq
Enter the value of a: 3
Enter the value of b: 8
Enter the value of c: 2
Roots are: -0.2792407799438735 and -2.3874258867227933
PS C:\Users\Admin\Documents\1BM21CS024> java QuadEq
Enter the value of a: 2
Enter the value of b: 4
Enter the value of c: 7
There are no real solutions
Root 1 is: -1.0 + i3.1622776601683795
Root 2 is: -1.0 - i3.1622776601683795
PS C:\Users\Admin\Documents\1BM21CS024>
```