

```

import java.util.Scanner;

public class RootsOfQuadraticEquation {

    public static void main(String args[]){

        double secondRoot = 0, firstRoot = 0;

        Scanner sc = new Scanner(System.in);

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

        double a = sc.nextDouble();


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

        double b = sc.nextDouble();


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

        double c = sc.nextDouble();


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

        double sqrt = Math.sqrt(determinant);


        if(determinant>0){

            firstRoot = (-b + sqrt)/(2*a);

            secondRoot = (-b - sqrt)/(2*a);

            System.out.printf("Roots are Real and Distinct: %.4f and %.4f",firstRoot,secondRoot);

        }else if(determinant == 0){

            System.out.printf("Roots are Real and Equal: %.4f and %.4f",firstRoot,secondRoot);

        }

        else if(determinant<0){

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

        }

    }

}

```

```
C:\windows\system32\cmd.exe
D:\Java programs>javac RootsOfQuadraticEquation.java
D:\Java programs>java RootsOfQuadraticEquation
Enter the value of a ::
2
Enter the value of b ::
-11
Enter the value of c ::
5
Roots are Real and Distinct: 5.0000 and 0.5000
D:\Java programs>java RootsOfQuadraticEquation
Enter the value of a ::
-4
Enter the value of b ::
12
Enter the value of c ::
-9
Roots are Real and Equal: 0.0000 and 0.0000
D:\Java programs>java RootsOfQuadraticEquation
Enter the value of a ::
1
Enter the value of b ::
3
Enter the value of c ::
4
Roots are complex and imaginary
D:\Java programs>
```