

Lab Program-1

```
import java.util.Scanner;

class Quadratic {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter coefficient a:");
        double a = sc.nextDouble();
        if (a == 0) {
            System.out.println("Not a quadratic equation");
            return;
        }
        System.out.println("Enter coefficient b:");
        double b = sc.nextDouble();
        System.out.println("Enter coefficient c:");
        double c = sc.nextDouble();
        double discriminant = b * b - 4 * a * c;
        if (discriminant > 0) {
            double root1 = (-b + Math.sqrt(discriminant)) / (2 * a);
            double root2 = (-b - Math.sqrt(discriminant)) / (2 * a);

            System.out.println("Roots are real and distinct");
            System.out.println("Root 1 = " + root1);
            System.out.println("Root 2 = " + root2);
        } else if (discriminant == 0) {
            double root = -b / (2 * a);
            System.out.println("Roots are real and equal");
            System.out.println("Root = " + root);
        }
    }
}
```

```

} else {

    double realPart = -b / (2 * a);

    double imaginaryPart = Math.sqrt(-discriminant) / (2 * a);

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

    System.out.println("Root 1 = " + realPart + " + " + imaginaryPart + "i");

    System.out.println("Root 2 = " + realPart + " - " + imaginaryPart + "i");

}

}

}

```

The screenshot shows a terminal window with the following content:

```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260> javac Quadratic.java
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260> java Quadratic
Enter coefficient a:
0
Not a quadratic equation
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260> javac Quadratic.java
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260> java Quadratic
Enter coefficient a:
1
Enter coefficient b:
-3
Enter coefficient c:
2
Roots are real and distinct
Root 1 = 2.0
Root 2 = 1.0
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260> javac Quadratic.java
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260> java Quadratic
Enter coefficient a:
1
Enter coefficient b:
2
Enter coefficient c:
1
Roots are real and equal
Root = -1.0
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260> javac Quadratic.java
PS C:\Users\Saanvi\OneDrive\Desktop\oops_1BF424CS260> java Quadratic
Enter coefficient a:
1
Enter coefficient b:
2
Enter coefficient c:
5
Roots are imaginary
Root 1 = -1.0 + 2.0i
Root 2 = -1.0 - 2.0i

```

The terminal is running on PowerShell. The right side of the interface features an AI sidebar titled "Build with Agent". It includes a message about AI responses being inaccurate, a button to "Generate Agent Instructions", and a "SUGGESTED ACTIONS" section with a "Build Workspace" button. A tooltip for "Quadratic.java" is visible, along with a "Describe what to build next" input field and some agent configuration options.