```
import java.util.Scanner:
public class lab1 {
   public static void main(String[] args) {
       try (Scanner scanner = new Scanner(System.in)) {
            System.out.print("Enter coefficient a: ");
            double a = scanner.nextDouble();
            System.out.print("Enter coefficient b: "):
            double b = scanner.nextDouble():
            System.out.print("Enter coefficient c: ");
            double c = scanner.nextDouble():
            if (a == 0) {
               System.out.println("Coefficient a cannot be zero for a quadratic equation.");
               return;
            double discriminant = b * b - 4 * a * c;
            if (discriminant > 0) {
               double sqrtDiscriminant = Math.sqrt(discriminant);
               double root1 = (-b + sqrtDiscriminant) / (2 * a);
               double root2 = (-b - sqrtDiscriminant) / (2 * a);
               System.out.println("The roots are real and different.");
               System.out.println("Root 1: " + root1);
               System.out.println("Root 2: " + root2);
            } else if (discriminant == 0) {
               double root = -b / (2 * a);
               System.out.println("The root is real and repeated.");
               System.out.println("Root: " + root);
            } else {
               System.out.println("There are no real solutions.");
```

```
(c) Microsoft Corporation. All rights reserved.
C:\Users\sanch>cd C:\Users\sanch\Desktop\java
C:\Users\sanch\Desktop\java>javac labl.java
C:\Users\sanch\Desktop\java>java lab1
Enter coefficient a: 12
Enter coefficient b: 13
Enter coefficient c: 14
There are no real solutions.
```

Microsoft Windows [Version 10.0.22631.4460]

C:\Users\sanch\Desktop\java>java lab1
Enter coefficient a: 2
Enter coefficient b: 1
Enter coefficient c: 0
The roots are real and different.
Root 1: 0.0
Root 2: -0.5
C:\Users\sanch\Desktop\java>java lab1

C:\Users\sanch\Desktop\java>java lab1
Enter coefficient a: 1
Enter coefficient b: 2
Enter coefficient c: 1
The root is real and repeated.
Root: -1.0

Develot a jour brogom that funts all lead solutions to the quadratic equation law + but c = 0. Read in a, 5, C and are quadratic formula : It discuminant is negative, display there are no 26/09/2024 head solutions guodiatic Equation import gava. Util , scanner, fublic class guadratic Solver S

fublic établic void main (String [] ays) { By system out i print ("Enter Coefficient a:"); Odouble a = Seanner, nout Double (); System. Dut. print ("Enter (10 efficient 6: "); double b = Scanner next Double), System. out. print ("Enthe (official"); double (= scanner, next Double (); double discument = 5*6-4+a * (; if (disciminant 70) 5 clouble root 1 = (-b + Marg. Squt (discimant))/(2*a); double root 2 = (-b+ Math. squt (chiscu--mant))/(2*a)) System. out: punt ("Roots are real and different"), else if (discriment ==0) f double 100t = -b/(2*a). System. But. faint ("Roots are real and same, 100t); g elses double real part = -b/(2*a), double imaginary part = math Sgot (-discimi-System. and. print ("Roots are complex and different on Root 1 = 1.2f + 1.2fin

Root 2 = 1.2f - 1.26in);

: Scanner · Close () Enter Coefficient 0:12 Enter Coefficient 6:13 Enter Coefficient C:19 Roots are complex and different Root 1 = -0.54 +0.930 Root 2 = -0.54 = 0.931 Enter coefficient a: 2 Enter Coefficient b 11 Exter Colfficient (10 Root 1= 0.00 and distinct Root 2 = -0.50 Enter coefficient ail Enter coefficient \$: 2 Enter coefficient (:1 Roots are seal and same