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C:\Users\abc\Desktop\quadratic.java - Notepad++ [Administrator]
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quadratic.java
1 import java.util.Scanner;
2 public class quadratic {
3     public static void main(String[] args) {
4         //Taking input
5         double a,b,c;
6         Scanner input = new Scanner(System.in);
7         System.out.println("Enter the value of coefficients : ");
8         System.out.print("a = ");
9         a = input.nextDouble();
10        System.out.print("b = ");
11        b = input.nextDouble();
12        System.out.print("c = ");
13        c = input.nextDouble();
14
15        //Declaring roots variables
16        double r1,r2;
17
18        //Calculating discriminant
19        double d = b*b - 4*a*c;
20
21        //Checking for roots
22        if(d>0) {
23            System.out.println("Real and Distinct roots.");
24            r1 = (-b + Math.sqrt(d)) / (2 * a);
25            r2 = (-b - Math.sqrt(d)) / (2 * a);
26            System.out.println("Roots are " +r1+ " and " +r2);
27        }
28
29        else if(d==0) {
30            System.out.println("Real and Equal roots.");
31            r1 = -b / (2.0 * a);
32            r2 = r1;
33            System.out.println("Roots are " +r1+ " and " +r2);
34        }
35
36        else
37            System.out.println("There are no real solutions.");
38    }
39 }
40
41
Java source file length: 986 lines: 41 Ln: 37 Col: 61 Sel: 0 | 0 Windows (CR LF) UTF-8 INS 3:06 PM 29/09/2020
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C:\ Administrator: Command Prompt
C:\Users\abc\Desktop>java quadratic
Enter the value of coefficients :
a = 1
b = 2
c = 1
Real and Equal roots.
Roots are -1.0 and -1.0

C:\Users\abc\Desktop>java quadratic
Enter the value of coefficients :
a = 1
b = 5
c = 3
Real and Distinct roots.
Roots are -0.6972243622680054 and -4.302775637731995

C:\Users\abc\Desktop>java quadratic
Enter the value of coefficients :
a = 1
b = 1
c = 1
There are no real solutions.

C:\Users\abc\Desktop>
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