

Section 1 – Exercise

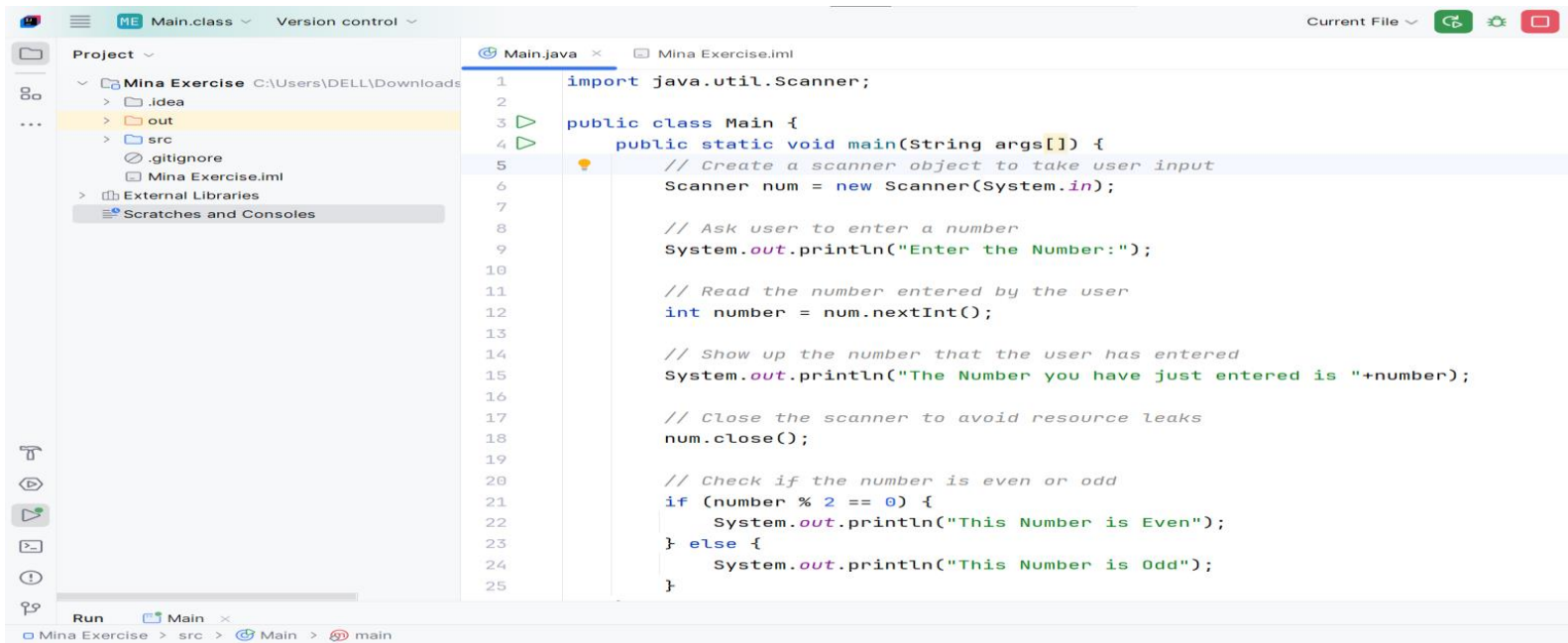
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Level : 2

Data : 16/10/2024

1. Demonstrate the method by calling it in a program that ask the user to enter number and output if the number is odd or even.



```
1 import java.util.Scanner;
2
3 public class Main {
4     public static void main(String args[]) {
5         // Create a scanner object to take user input
6         Scanner num = new Scanner(System.in);
7
8         // Ask user to enter a number
9         System.out.println("Enter the Number:");
10
11        // Read the number entered by the user
12        int number = num.nextInt();
13
14        // Show up the number that the user has entered
15        System.out.println("The Number you have just entered is "+number);
16
17        // Close the scanner to avoid resource leaks
18        num.close();
19
20        // Check if the number is even or odd
21        if (number % 2 == 0) {
22            System.out.println("This Number is Even");
23        } else {
24            System.out.println("This Number is Odd");
25        }
26    }
27 }
```



```
"C:\Program Files\OpenLogic\jre-21.0.4.7-hotspot\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.3\lib
Enter the Number:
4
The Number you have just entered is 4
This Number is Even

Process finished with exit code 0
```

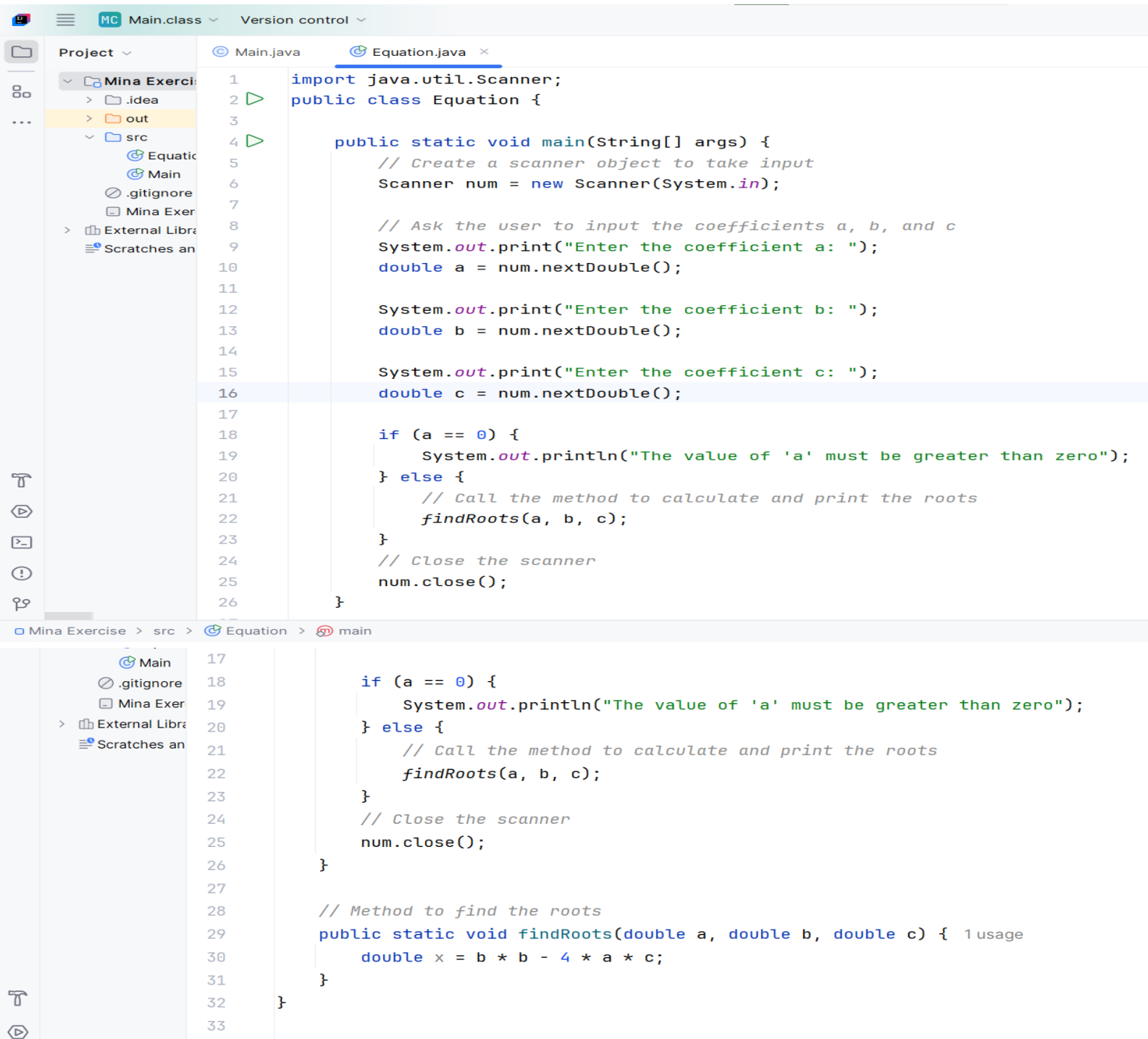


```
"C:\Program Files\OpenLogic\jre-21.0.4.7-hotspot\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2024.2.3\lib
Enter the Number:
9
The Number you have just entered is 9
This Number is Odd

Process finished with exit code 0
```

2. Demonstrate the method by calling it in a program that ask the user to enter a, b, c and print the roots of quadratic equation by using this formula :

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$



```
1 import java.util.Scanner;
2 public class Equation {
3
4     public static void main(String[] args) {
5         // Create a scanner object to take input
6         Scanner num = new Scanner(System.in);
7
8         // Ask the user to input the coefficients a, b, and c
9         System.out.print("Enter the coefficient a: ");
10        double a = num.nextDouble();
11
12        System.out.print("Enter the coefficient b: ");
13        double b = num.nextDouble();
14
15        System.out.print("Enter the coefficient c: ");
16        double c = num.nextDouble();
17
18        if (a == 0) {
19            System.out.println("The value of 'a' must be greater than zero");
20        } else {
21            // Call the method to calculate and print the roots
22            findRoots(a, b, c);
23        }
24        // Close the scanner
25        num.close();
26    }
27
28    // Method to find the roots
29    public static void findRoots(double a, double b, double c) { 1 usage
30        double x = b * b - 4 * a * c;
31    }
32 }
33
```