

EXPLORER

JAVA DEVELOPMENT

- > Assingment-1
- > Assingment-2
- > Assingment-3
- > Homeworks
- lib
  - A.class
  - B.class
  - Box.class
  - Counter1.class
  - Counter2.class
  - Demo.class
  - Demo.java**
  - EvenOddCounter.class
  - FindLargestNumber.class
  - Student1.class

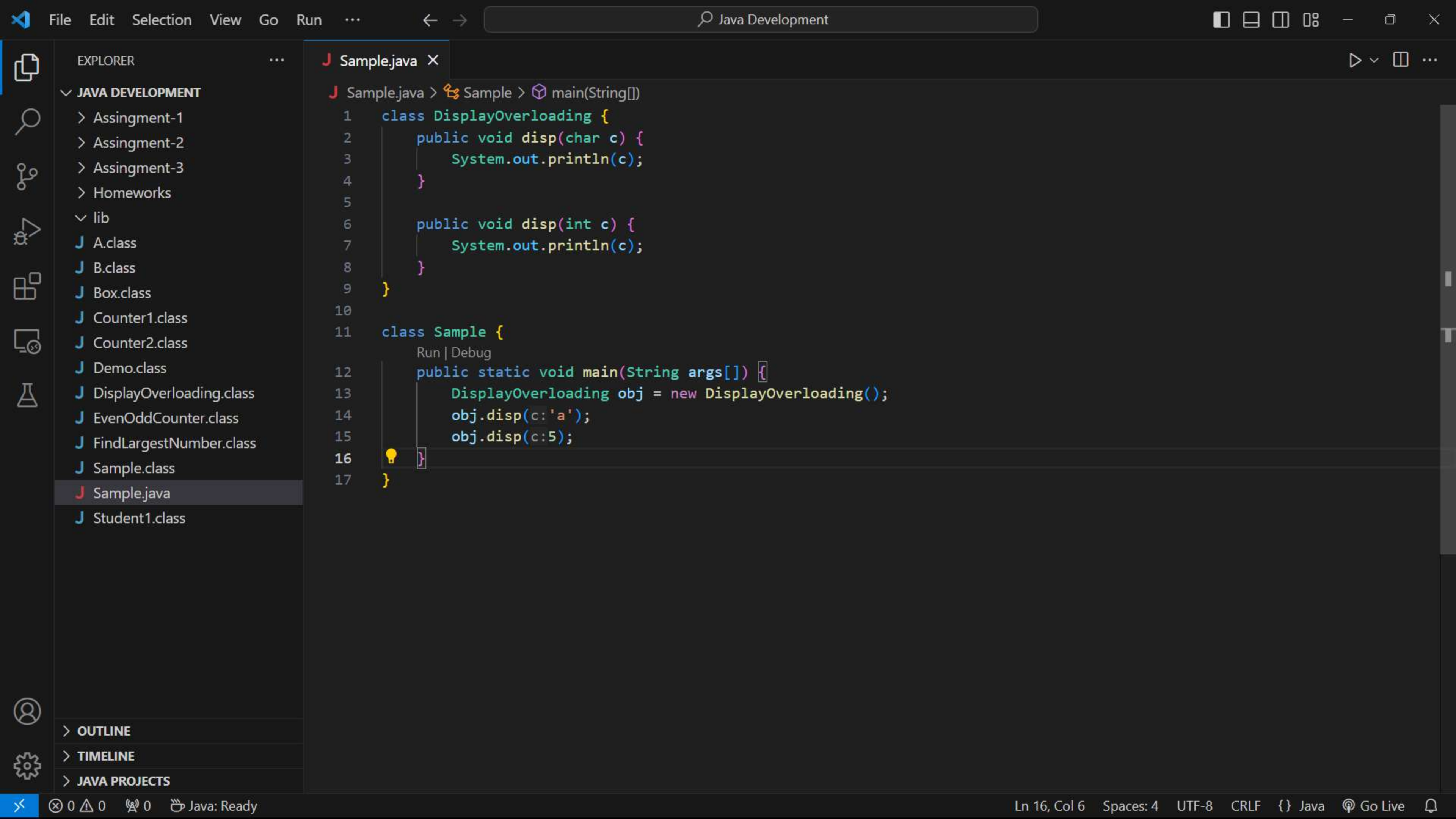
- > OUTLINE
- > TIMELINE
- > JAVA PROJECTS

PROBLEMS OUTPUT TEST RESULTS DEBUG CONSOLE PORTS TERMINAL

```
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> cd "c:\Users\KIIT\Pictures\Screenshots\Java Development\" ;  
if ($?) { javac Demo.java } ; if ($?) { java Demo }  
Enter length of the box: 23  
Enter width of the box: 45  
Enter height of the box: 67  
Volume of the box: 69345.0  
PS C:\Users\KIIT\Pictures\Screenshots\Java Development>
```

- + ▾ ... ▾ ×
- > Code
- > Code
- > Code
- > Code





```
File Edit Selection View Go Run ... Java Development
```

EXPLORER

JAVA DEVELOPMENT

> Assingment-1

> Assingment-2

> Assingment-3

> Homeworks

lib

A.class

B.class

Box.class

Counter1.class

Counter2.class

Demo.class

DisplayOverloading.class

EvenOddCounter.class

FindLargestNumber.class

Sample.class

Sample.java

Student1.class

OUTLINE

TIMELINE

JAVA PROJECTS

Sample.java X

Sample.java > Sample > main(String[])

1 class DisplayOverloading {

2 public void disp(char c) {

3 System.out.println(c);

4 }

5

6 public void disp(int c) {

7 System.out.println(c);

8 }

9 }

10

11 class Sample {

12 public static void main(String args[]) {

13 DisplayOverloading obj = new DisplayOverloading();

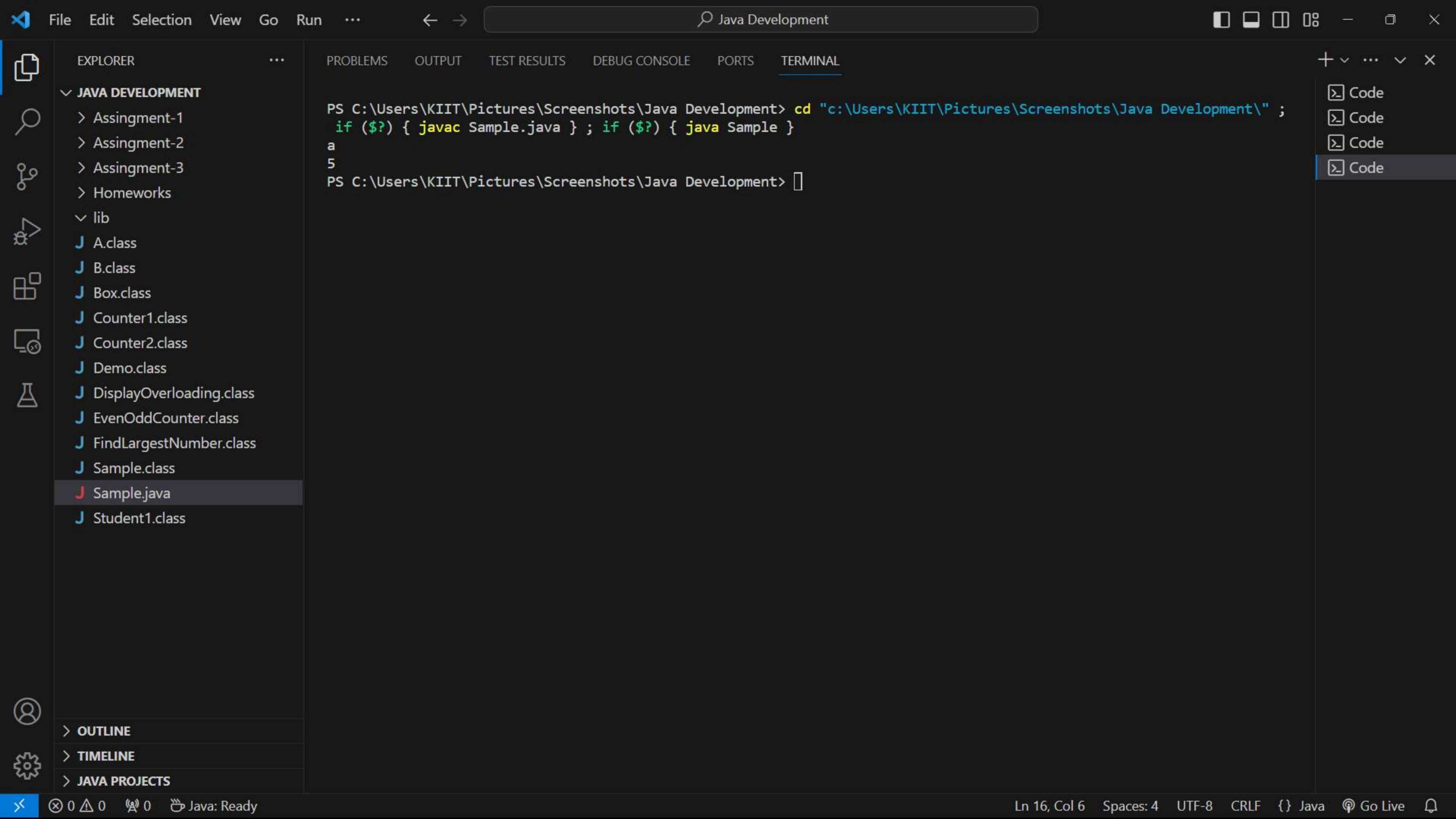
14 obj.disp(c: 'a');

15 obj.disp(c: 5);

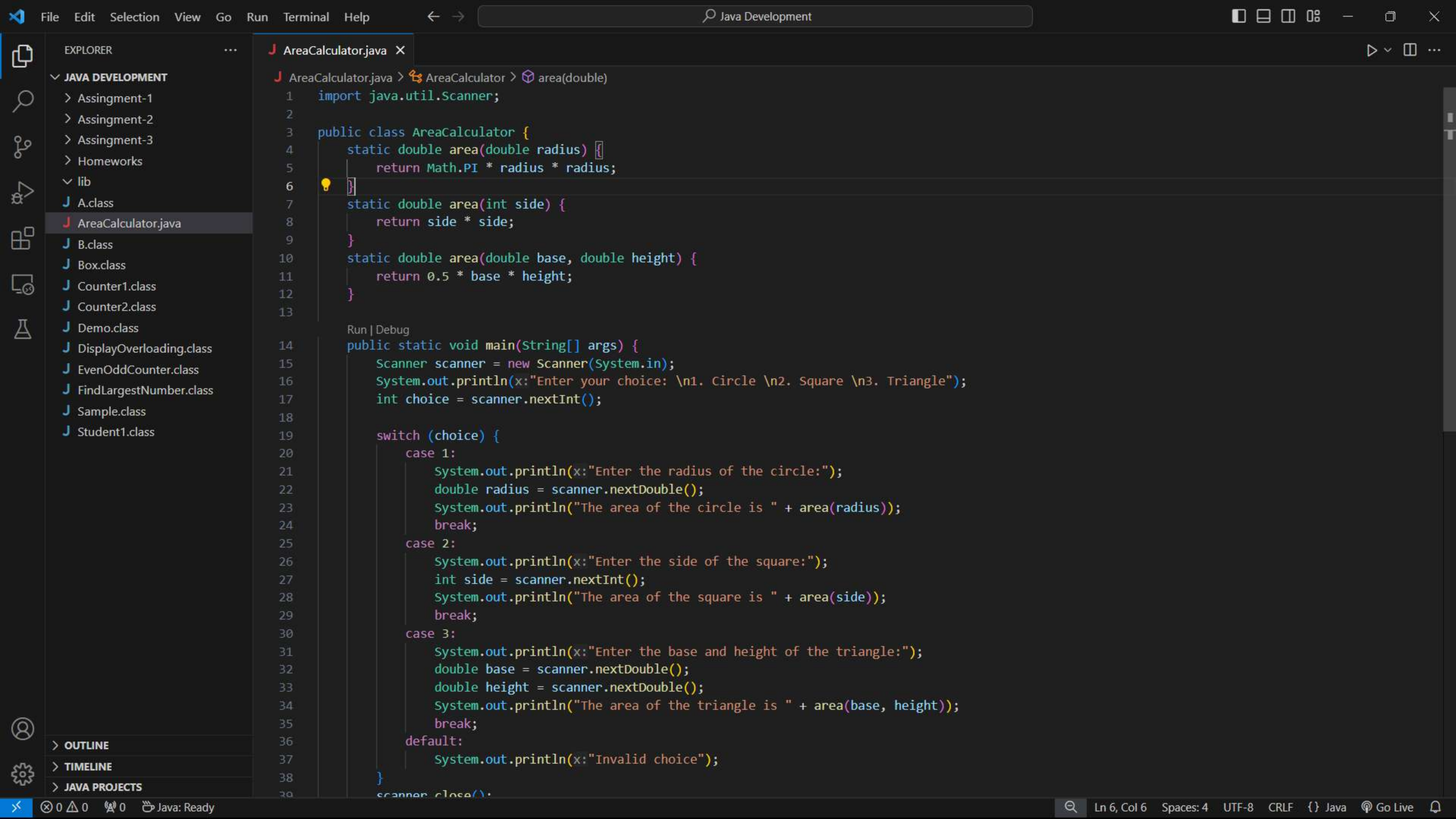
16 }

17 }

Ln 16, Col 6 Spaces: 4 UTF-8 CRLF { } Java Go Live



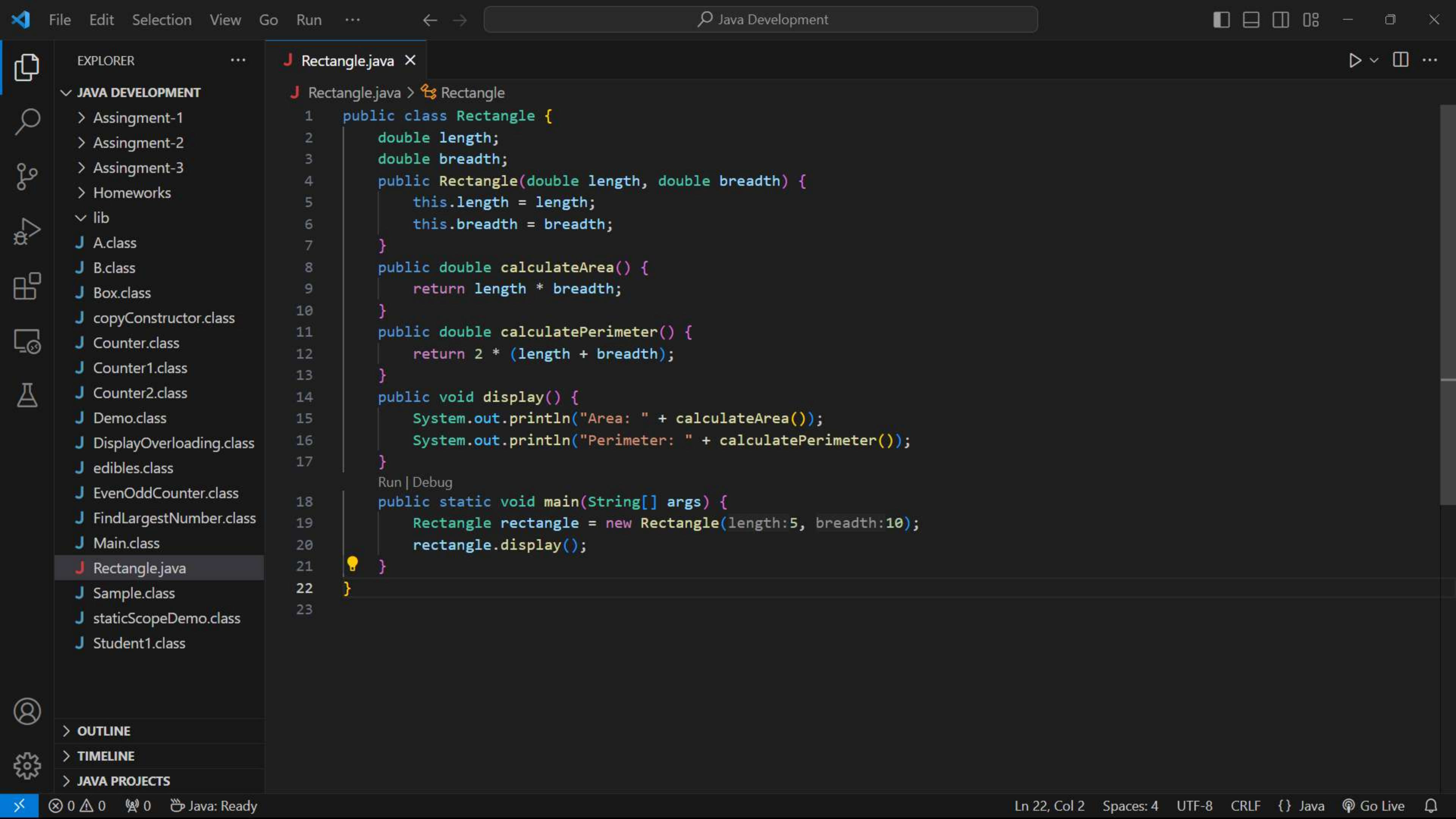






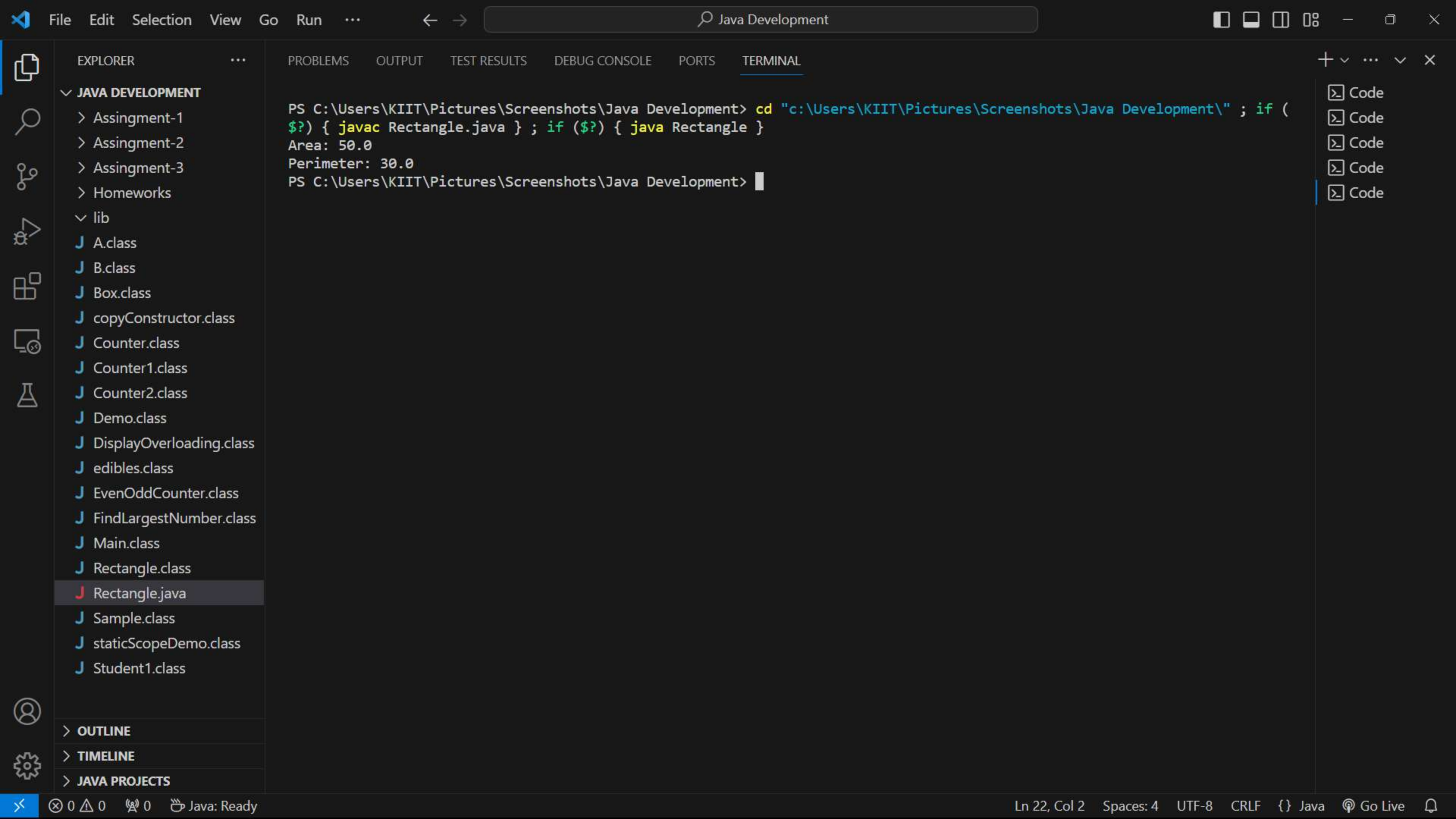
The image shows a screenshot of an IDE interface. On the left, the 'EXPLORER' pane displays a project named 'JAVA DEVELOPMENT'. It contains several folders: 'Assingment-1', 'Assingment-2', 'Assingment-3', 'Homeworks', and 'lib'. The 'lib' folder is expanded, showing a list of Java class files: 'A.class', 'B.class', 'Box.class', 'copyConstructor.class', 'Counter.class', 'Counter1.class', 'Counter2.class', 'Demo.class', 'DisplayOverloading.class', 'edibles.class', 'EvenOddCounter.class', 'FindLargestNumber.class', 'Main.class', 'Main.java' (highlighted), 'Sample.class', 'staticScopeDemo.class', and 'Student1.class'. Below the Explorer, there are sections for 'OUTLINE', 'TIMELINE', and 'JAVA PROJECTS'. The main area of the IDE is the 'TERMINAL' pane, which shows the output of a Java program. The terminal text is as follows:  
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> cd "c:\Users\KIIT\Pictures\Screenshots\Java Development\" ; if (\$?) { javac Main.java } ; if (\$?) { java Main }  
Enter your choice:  
1. Circle  
2. Square  
3. Triangle  
1  
Enter the radius of the circle:  
34  
The area of the circle is 3631.6811075498013  
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> cd "c:\Users\KIIT\Pictures\Screenshots\Java Development\" ; if (\$?) { javac Main.java } ; if (\$?) { java Main }  
Enter your choice:  
1. Circle  
2. Square  
3. Triangle  
2  
Enter the side of the square:  
34  
The area of the square is 1156.0  
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> cd "c:\Users\KIIT\Pictures\Screenshots\Java Development\" ; if (\$?) { javac Main.java } ; if (\$?) { java Main }  
Enter your choice:  
1. Circle  
2. Square  
3. Triangle  
3  
Enter the base and height of the triangle:  
34  
56  
The area of the triangle is 952.0  
PS C:\Users\KIIT\Pictures\Screenshots\Java Development>   
On the right side of the terminal, there is a vertical toolbar with five 'Code' icons, each with a small 'x' in the top right corner.



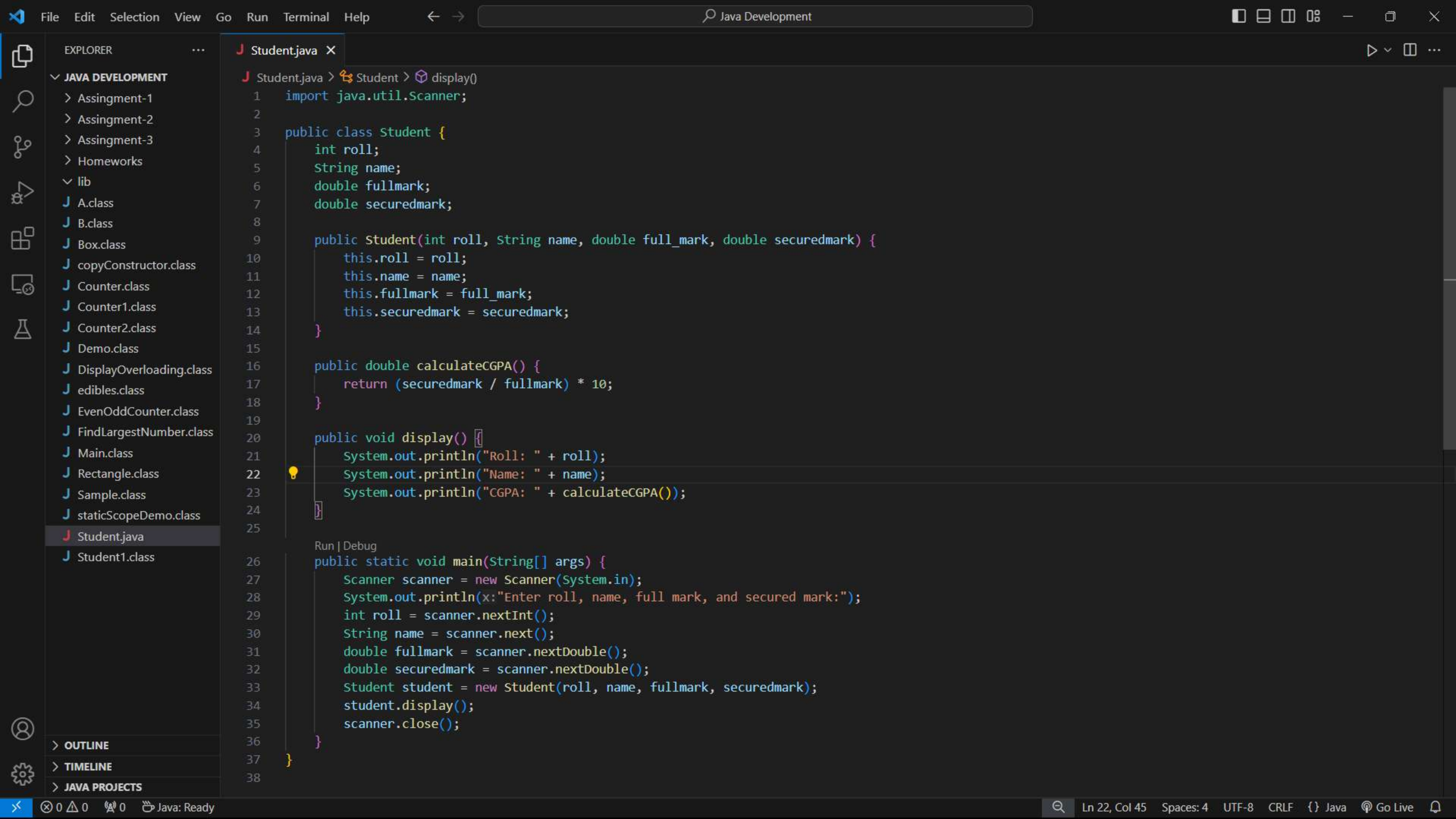


```
File Edit Selection View Go Run ... Java Development
EXPLORER
  JAVA DEVELOPMENT
    > Assingment-1
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    > Assingment-3
    > Homeworks
    > lib
    J A.class
    J B.class
    J Box.class
    J copyConstructor.class
    J Counter.class
    J Counter1.class
    J Counter2.class
    J Demo.class
    J DisplayOverloading.class
    J edibles.class
    J EvenOddCounter.class
    J FindLargestNumber.class
    J Main.class
    J Rectangle.java
    J Sample.class
    J staticScopeDemo.class
    J Student1.class
  OUTLINE
  TIMELINE
  JAVA PROJECTS

Rectangle.java
  Rectangle
    1 public class Rectangle {
    2     double length;
    3     double breadth;
    4     public Rectangle(double length, double breadth) {
    5         this.length = length;
    6         this.breadth = breadth;
    7     }
    8     public double calculateArea() {
    9         return length * breadth;
   10     }
   11     public double calculatePerimeter() {
   12         return 2 * (length + breadth);
   13     }
   14     public void display() {
   15         System.out.println("Area: " + calculateArea());
   16         System.out.println("Perimeter: " + calculatePerimeter());
   17     }
   18     Run | Debug
   19     public static void main(String[] args) {
   20         Rectangle rectangle = new Rectangle(length:5, breadth:10);
   21         rectangle.display();
   22     }
   23 }
```







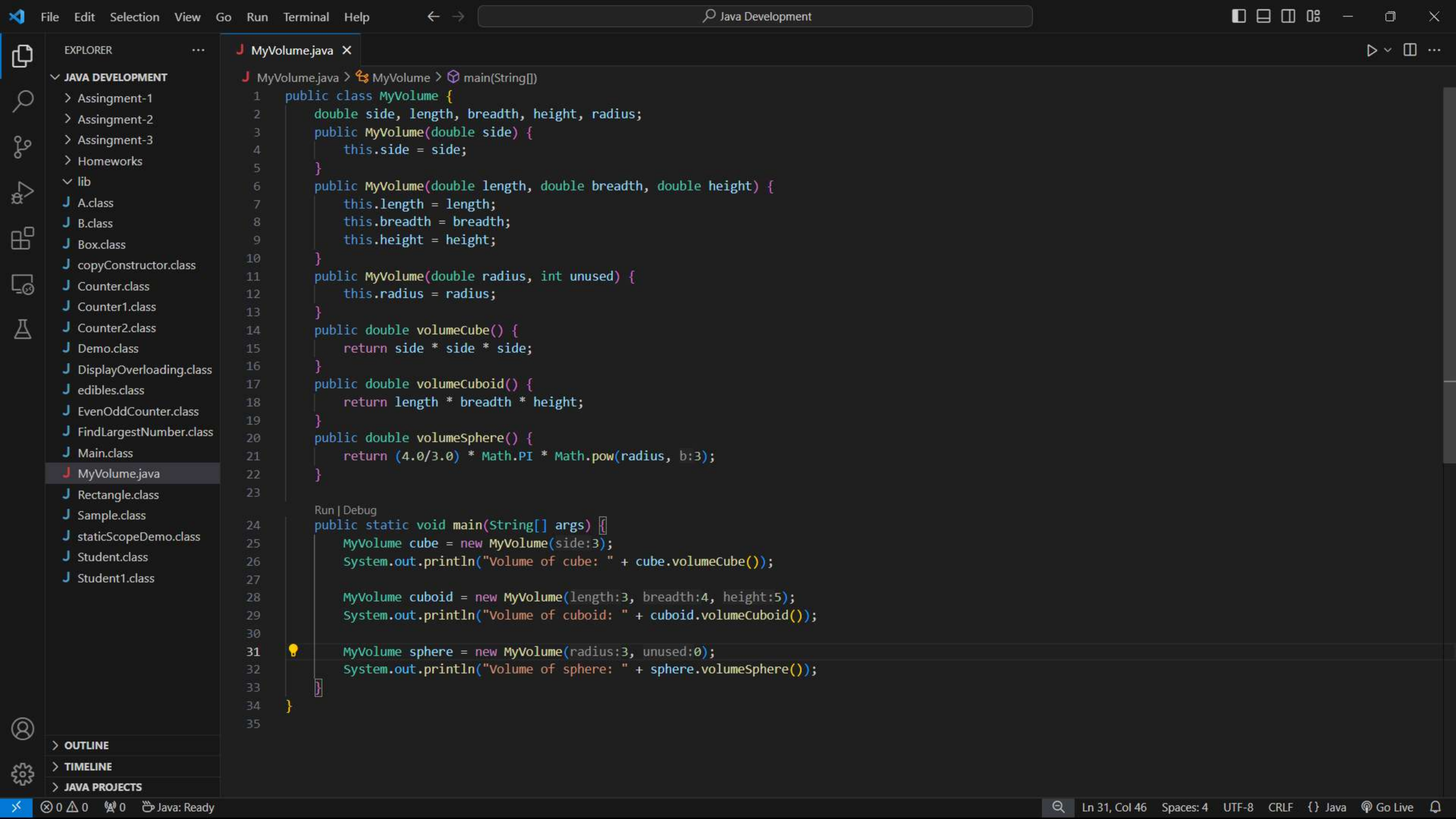
```
File Edit Selection View Go Run Terminal Help
Java Development

EXPLORER
  JAVA DEVELOPMENT
    > Assingment-1
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    > lib
    J A.class
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    J FindLargestNumber.class
    J Main.class
    J Rectangle.class
    J Sample.class
    J staticScopeDemo.class
    J Student.java
    J Student1.class
  > OUTLINE
  > TIMELINE
  > JAVA PROJECTS

Student.java X
  Student.java > Student > display()
  1 import java.util.Scanner;
  2
  3 public class Student {
  4     int roll;
  5     String name;
  6     double fullmark;
  7     double securedmark;
  8
  9     public Student(int roll, String name, double full_mark, double securedmark) {
 10         this.roll = roll;
 11         this.name = name;
 12         this.fullmark = full_mark;
 13         this.securedmark = securedmark;
 14     }
 15
 16     public double calculateCGPA() {
 17         return (securedmark / fullmark) * 10;
 18     }
 19
 20     public void display() {
 21         System.out.println("Roll: " + roll);
 22         System.out.println("Name: " + name);
 23         System.out.println("CGPA: " + calculateCGPA());
 24     }
 25
 26     Run | Debug
 27     public static void main(String[] args) {
 28         Scanner scanner = new Scanner(System.in);
 29         System.out.println(x:"Enter roll, name, full mark, and secured mark:");
 30         int roll = scanner.nextInt();
 31         String name = scanner.next();
 32         double fullmark = scanner.nextDouble();
 33         double securedmark = scanner.nextDouble();
 34         Student student = new Student(roll, name, fullmark, securedmark);
 35         student.display();
 36         scanner.close();
 37     }
 38 }
```

The screenshot displays an IDE interface with a dark theme. On the left, the Explorer panel shows a project named 'JAVA DEVELOPMENT' containing several folders and files. The 'lib' folder is expanded, listing various Java class files. The 'Student.java' file is highlighted. Below the Explorer panel, there are sections for 'OUTLINE', 'TIMELINE', and 'JAVA PROJECTS'. The main area of the IDE is occupied by the 'TERMINAL' panel, which shows the output of a Java program. The terminal text includes the directory path 'C:\Users\KIIT\Pictures\Screenshots\Java Development', the command to compile and run 'Rectangle.java', and the output showing 'Area: 50.0' and 'Perimeter: 30.0'. It then shows the compilation and execution of 'Student.java', which prompts for 'roll, name, full mark, and secured mark'. The user has entered '2205130', 'Kanishk', '100', and '80', resulting in the output 'Roll: 2205130', 'Name: Kanishk', and 'CGPA: 8.0'. The terminal window has a toolbar on the right with icons for 'Code' and 'Run'.





EXPLORER

JAVA DEVELOPMENT

> Assingment-1

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> Homeworks

lib

J A.class

J B.class

J Box.class

J copyConstructor.class

J Counter.class

J Counter1.class

J Counter2.class

J Demo.class

J DisplayOverloading.class

J edibles.class

J EvenOddCounter.class

J FindLargestNumber.class

J Main.class

J MyVolume.java

J Rectangle.class

J Sample.class

J staticScopeDemo.class

J Student.class

J Student1.class

OUTLINE

TIMELINE

JAVA PROJECTS

MyVolume.java

MyVolume.java > MyVolume > main(String[])

1 public class MyVolume {

2 double side, length, breadth, height, radius;

3 public MyVolume(double side) {

4 this.side = side;

5 }

6 public MyVolume(double length, double breadth, double height) {

7 this.length = length;

8 this.breadth = breadth;

9 this.height = height;

10 }

11 public MyVolume(double radius, int unused) {

12 this.radius = radius;

13 }

14 public double volumeCube() {

15 return side \* side \* side;

16 }

17 public double volumeCuboid() {

18 return length \* breadth \* height;

19 }

20 public double volumeSphere() {

21 return (4.0/3.0) \* Math.PI \* Math.pow(radius, 3);

22 }

23

Run | Debug

24 public static void main(String[] args) {

25 MyVolume cube = new MyVolume(3);

26 System.out.println("Volume of cube: " + cube.volumeCube());

27

28 MyVolume cuboid = new MyVolume(length:3, breadth:4, height:5);

29 System.out.println("Volume of cuboid: " + cuboid.volumeCuboid());

30

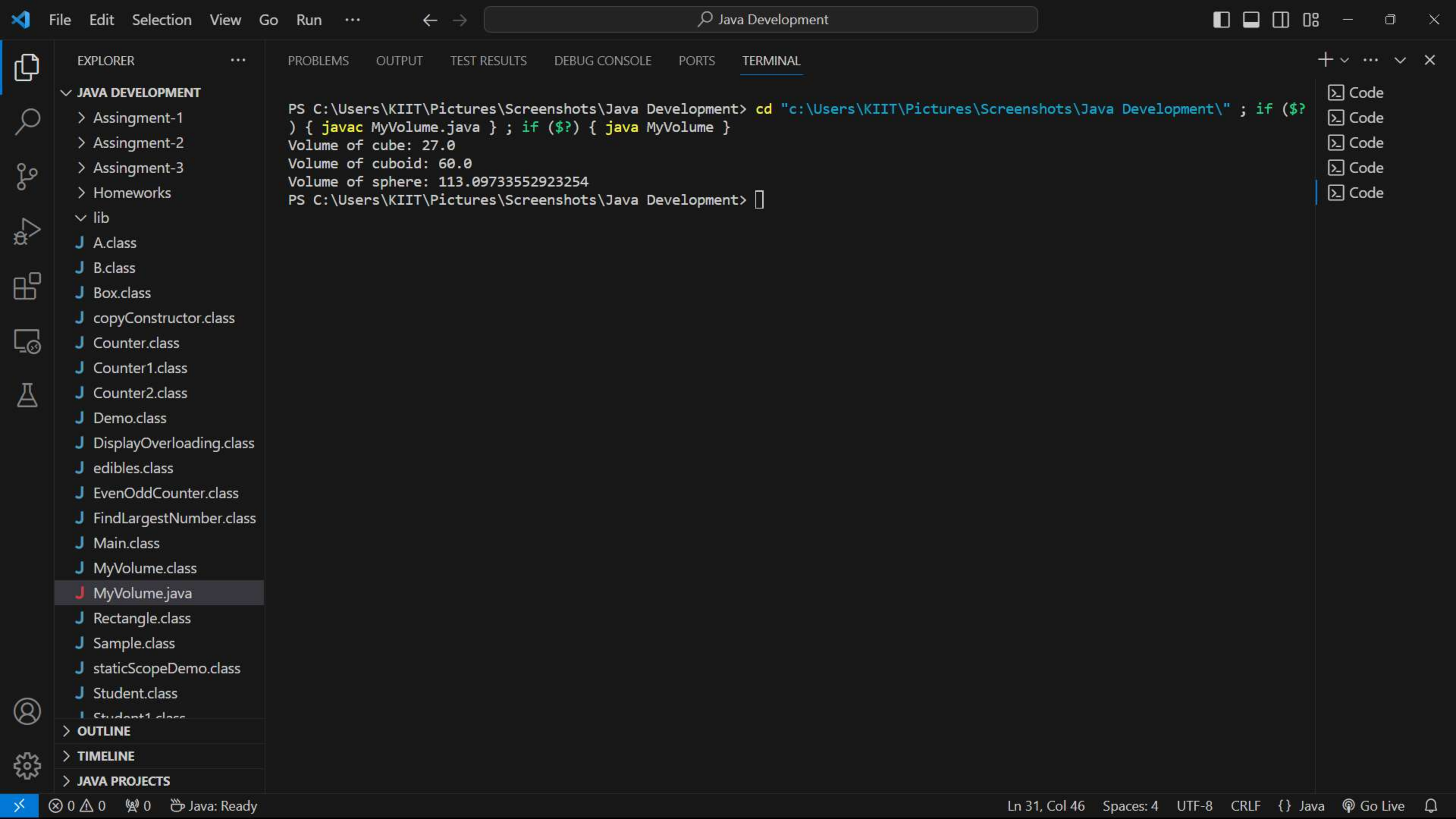
31 MyVolume sphere = new MyVolume(radius:3, unused:0);

32 System.out.println("Volume of sphere: " + sphere.volumeSphere());

33 }

34 }

35



## EXPLORER

## ▼ JAVA DEVELOPMENT

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  - J DisplayOverloading.class
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  - J FindLargestNumber.class
  - J Main.class
  - J MyVolume.class
  - J MyVolume.java
  - J Rectangle.class
  - J Sample.class
  - J staticScopeDemo.class
  - J Student.class
  - J Student1.class

## &gt; OUTLINE

## &gt; TIMELINE

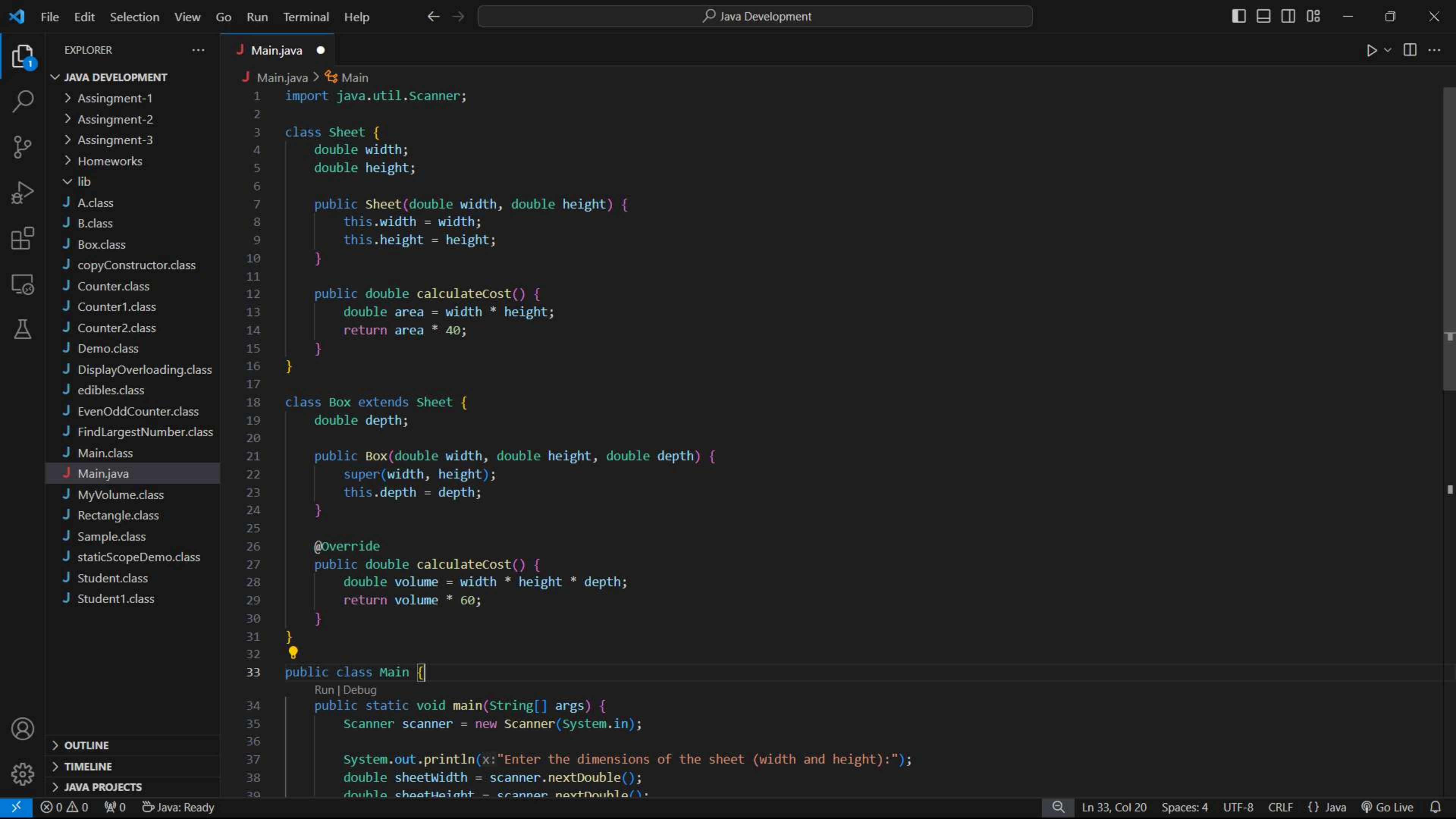
## &gt; JAVA PROJECTS

## PROBLEMS OUTPUT TEST RESULTS DEBUG CONSOLE PORTS TERMINAL

```
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> cd "c:\Users\KIIT\Pictures\Screenshots\Java Development\" ; if ($?) { javac MyVolume.java } ; if ($?) { java MyVolume }
Volume of cube: 27.0
Volume of cuboid: 60.0
Volume of sphere: 113.09733552923254
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> 
```

- Code
- Code
- Code
- Code
- Code





## EXPLORER

## JAVA DEVELOPMENT

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  - edibles.class
  - EvenOddCounter.class
  - FindLargestNumber.class
  - Main.class
  - Main.java
  - MyVolume.class
  - Rectangle.class
  - Sample.class
  - staticScopeDemo.class
  - Student.class
  - Student1.class

## &gt; OUTLINE

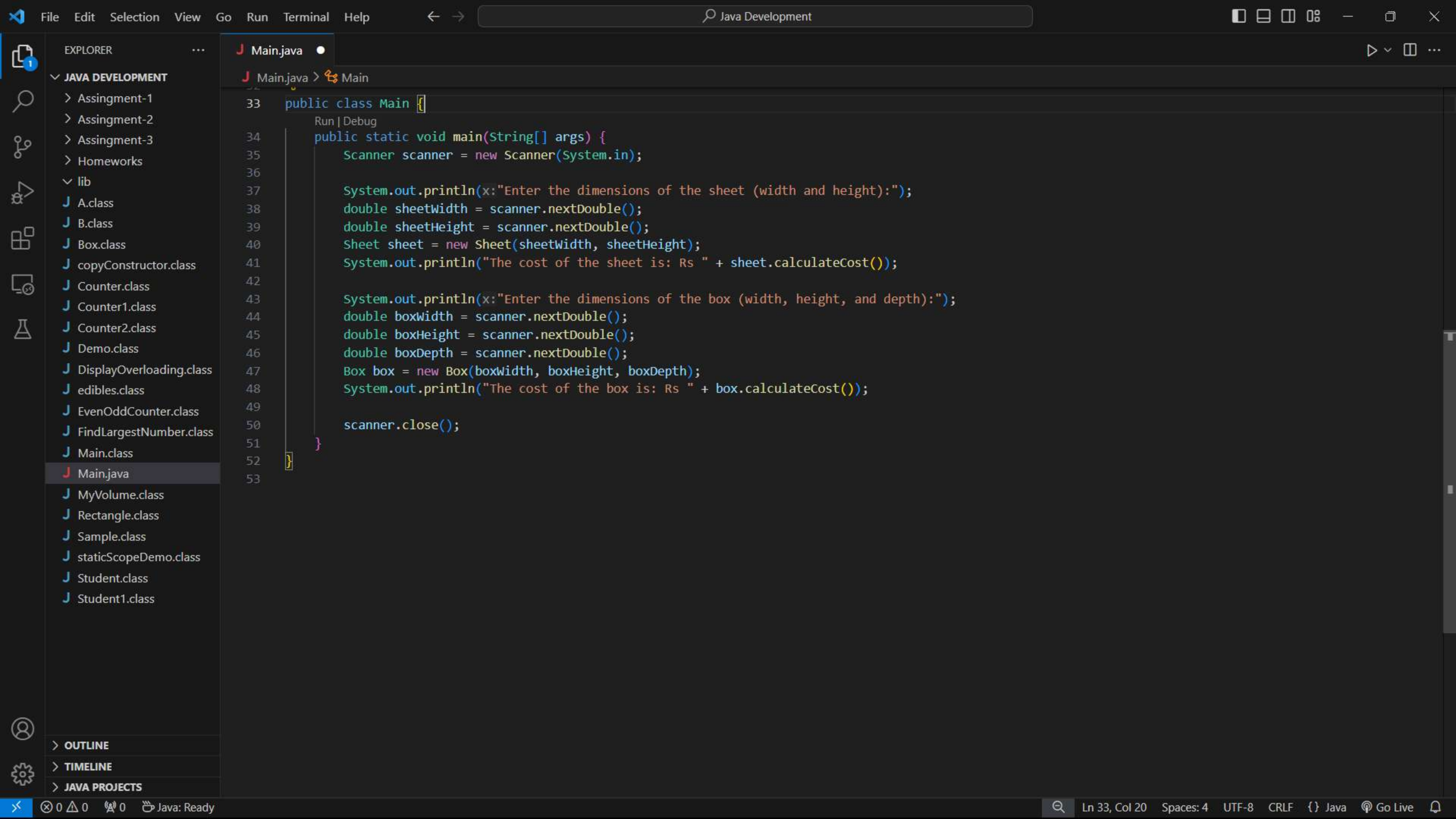
## &gt; TIMELINE

## &gt; JAVA PROJECTS

Main.java

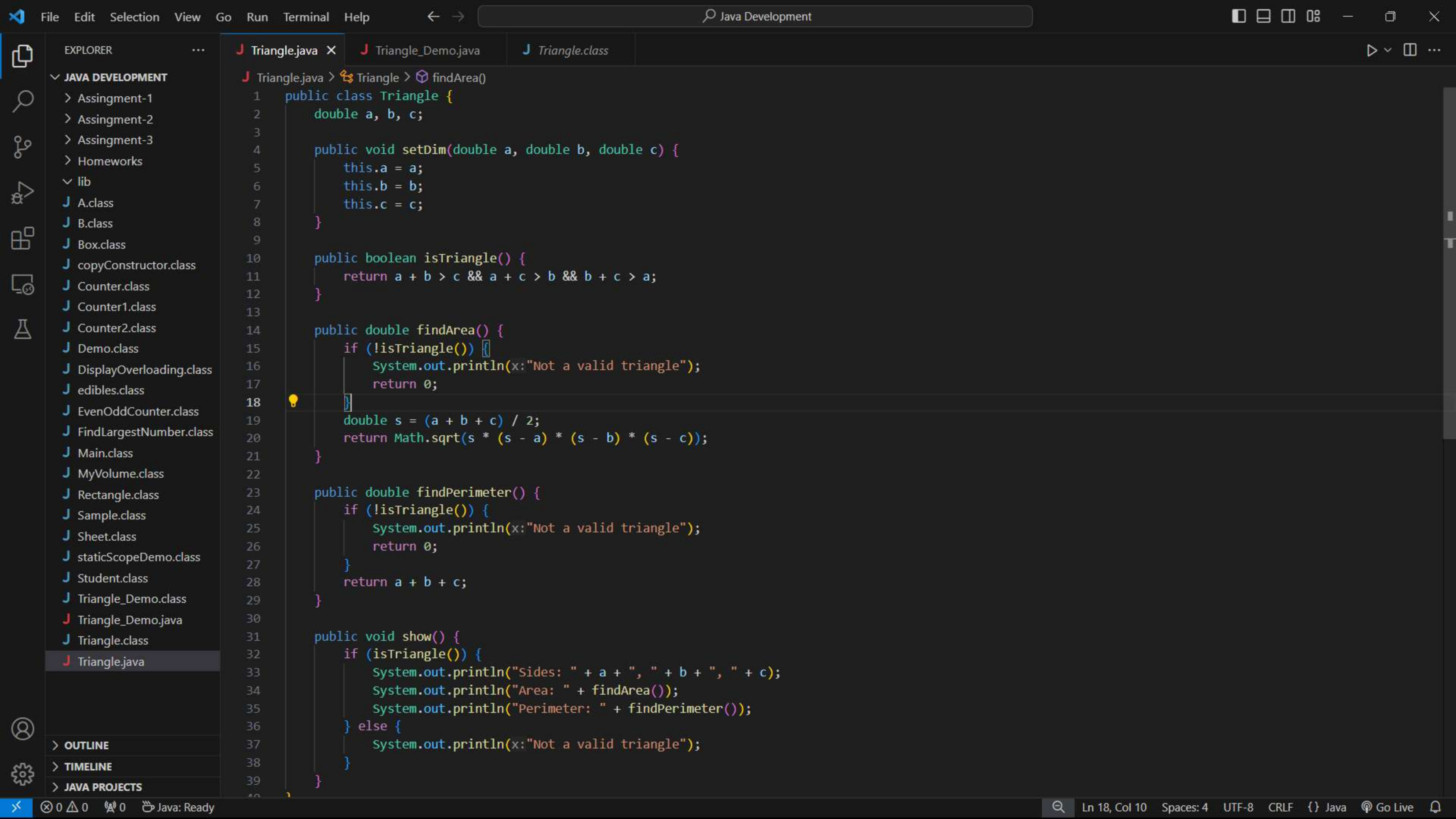
Main.java &gt; Main

```
1  import java.util.Scanner;
2
3  class Sheet {
4      double width;
5      double height;
6
7      public Sheet(double width, double height) {
8          this.width = width;
9          this.height = height;
10     }
11
12     public double calculateCost() {
13         double area = width * height;
14         return area * 40;
15     }
16 }
17
18 class Box extends Sheet {
19     double depth;
20
21     public Box(double width, double height, double depth) {
22         super(width, height);
23         this.depth = depth;
24     }
25
26     @Override
27     public double calculateCost() {
28         double volume = width * height * depth;
29         return volume * 60;
30     }
31 }
32
33 public class Main {
34     public static void main(String[] args) {
35         Scanner scanner = new Scanner(System.in);
36
37         System.out.println(x:"Enter the dimensions of the sheet (width and height):");
38         double sheetWidth = scanner.nextDouble();
39         double sheetHeight = scanner.nextDouble();
```

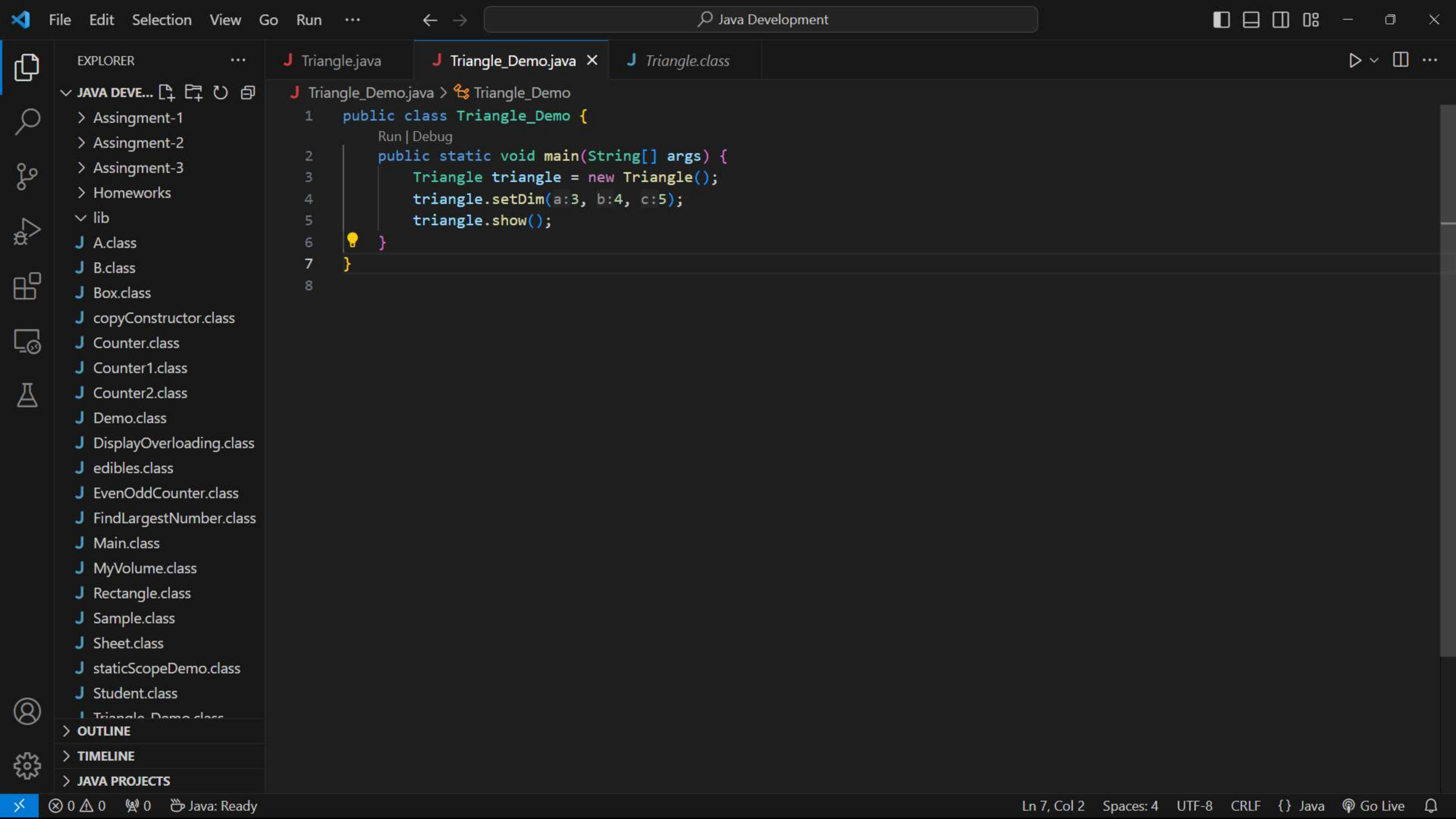
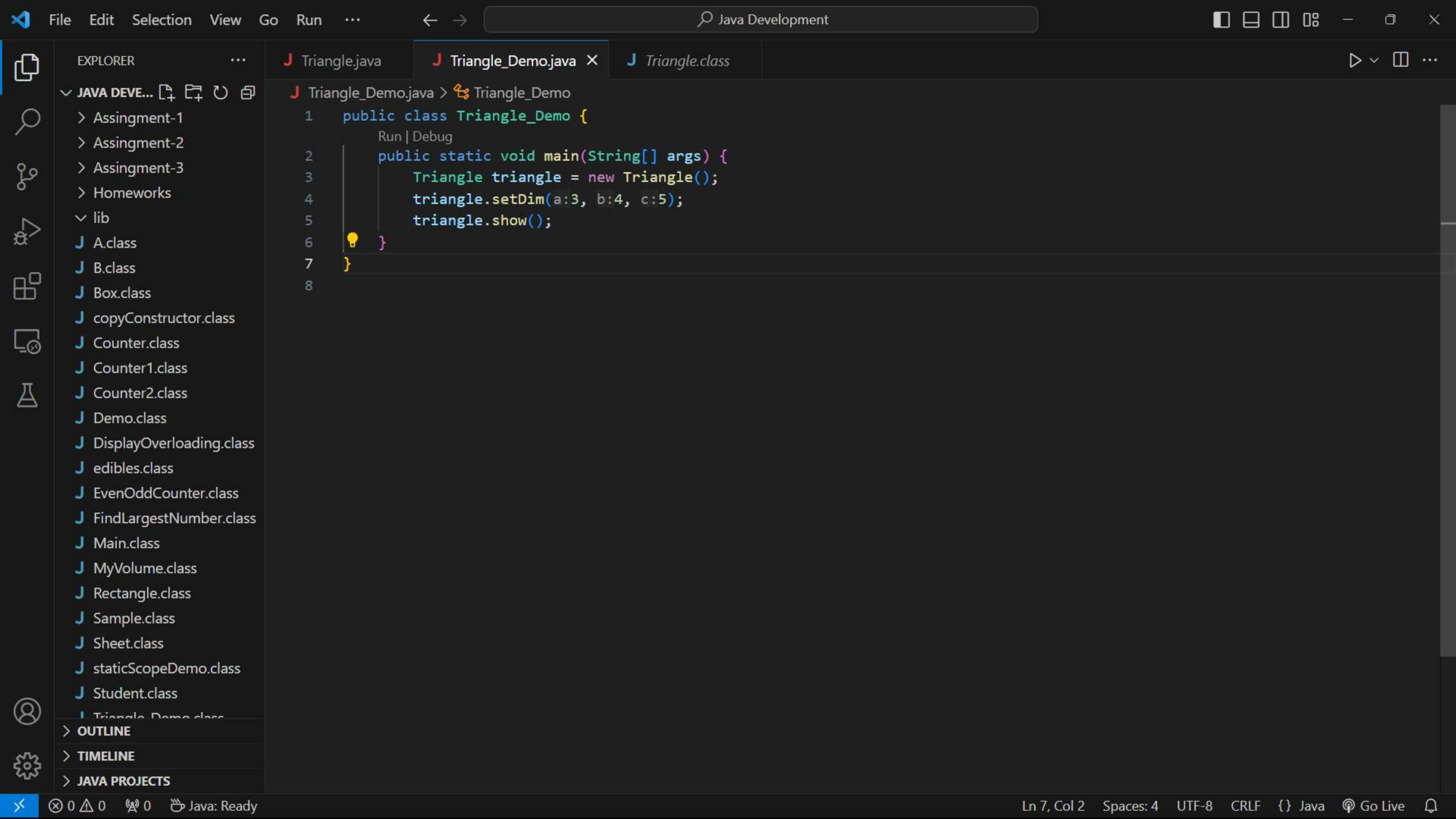










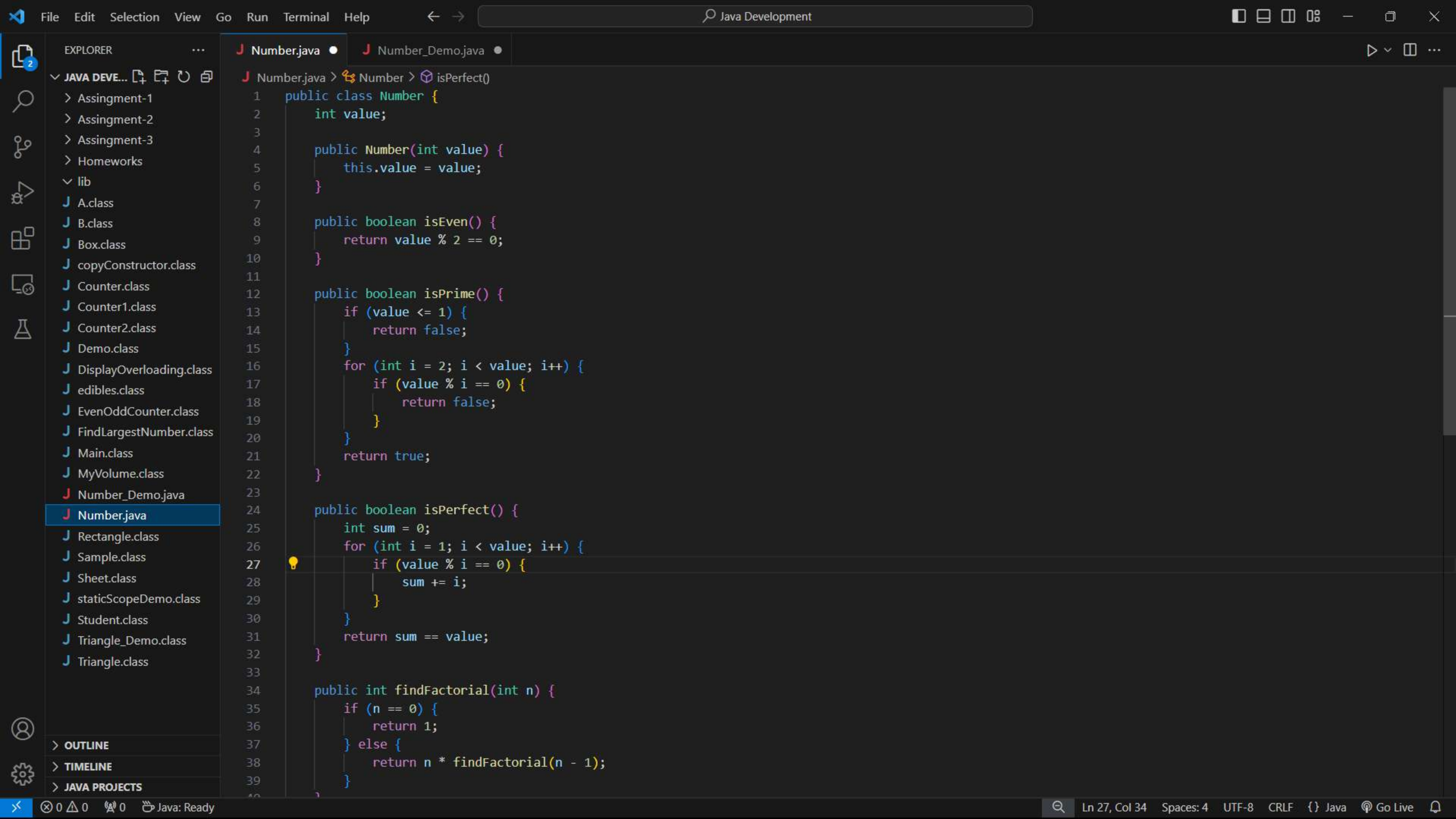


The image shows a screenshot of an IDE interface. On the left, the 'EXPLORER' pane displays a project named 'JAVA DEVELOPMENT' with a list of files including 'A.class', 'B.class', 'Box.class', 'copyConstructor.class', 'Counter.class', 'Counter1.class', 'Counter2.class', 'Demo.class', 'DisplayOverloading.class', 'edibles.class', 'EvenOddCounter.class', 'FindLargestNumber.class', 'Main.class', 'MyVolume.class', 'Rectangle.class', 'Sample.class', 'Sheet.class', 'staticScopeDemo.class', 'Student.class', 'Triangle\_Demo.class', 'Triangle\_Demo.java', 'Triangle.class', and 'Triangle.java'. The 'Triangle.java' file is selected. Below the file list are sections for 'OUTLINE', 'TIMELINE', and 'JAVA PROJECTS'. The main area of the IDE shows the 'TERMINAL' pane with the following commands and output:

```
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> javac Triangle_Demo.java
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> java Triangle_Demo
Sides: 3.0, 4.0, 5.0
Area: 6.0
Perimeter: 12.0
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> cd "c:\Users\KIIT\Pictures\Screenshots\Java Development\" ; if ($?) { javac Triangle.java } ; if ($?) { java Triangle }
Error: Main method not found in class Triangle, please define the main method as:
    public static void main(String[] args)
or a JavaFX application class must extend javafx.application.Application
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> javac Triangle.java
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> javac Triangle_Demo.java
PS C:\Users\KIIT\Pictures\Screenshots\Java Development> java Triangle_Demo
Sides: 3.0, 4.0, 5.0
Area: 6.0
Perimeter: 12.0
PS C:\Users\KIIT\Pictures\Screenshots\Java Development>
```

On the right side of the IDE, there is a vertical toolbar with icons for 'Code' and 'Run' (a play button). The 'Code' icon is highlighted.





```
File Edit Selection View Go Run Terminal Help
Java Development

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  JAVA DEVE...
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    J A.class
    J B.class
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    J Counter1.class
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    J Demo.class
    J DisplayOverloading.class
    J edibles.class
    J EvenOddCounter.class
    J FindLargestNumber.class
    J Main.class
    J MyVolume.class
    J Number_Demo.java
    J Number.java
    J Rectangle.class
    J Sample.class
    J Sheet.class
    J staticScopeDemo.class
    J Student.class
    J Triangle_Demo.class
    J Triangle.class

  OUTLINE
  TIMELINE
  JAVA PROJECTS

Number.java
Number_Demo.java

Number.java > Number > isPerfect()
1 public class Number {
2     int value;
3
4     public Number(int value) {
5         this.value = value;
6     }
7
8     public boolean isEven() {
9         return value % 2 == 0;
10    }
11
12    public boolean isPrime() {
13        if (value <= 1) {
14            return false;
15        }
16        for (int i = 2; i < value; i++) {
17            if (value % i == 0) {
18                return false;
19            }
20        }
21        return true;
22    }
23
24    public boolean isPerfect() {
25        int sum = 0;
26        for (int i = 1; i < value; i++) {
27            if (value % i == 0) {
28                sum += i;
29            }
30        }
31        return sum == value;
32    }
33
34    public int findFactorial(int n) {
35        if (n == 0) {
36            return 1;
37        } else {
38            return n * findFactorial(n - 1);
39        }
40    }
41 }
```

