

# Week 02 : Programming Assignment 3

Due on 2025-02-06, 23:59 IST

Write a program to demonstrate the use of `this` keyword. Create a class `Rectangle` with attributes `length` and `breadth`. Write a constructor to initialize these values. Also, define a method `area()` to return the area of the rectangle.

**Input:**  
Two integers: length and breadth of the rectangle.

**Output:**  
Print the area of the rectangle.

Private Test cases used for evaluation	Input	Expected Output	Actual Output	Status
Test Case 1	7 3	21	21	Passed

The due date for submitting this assignment has passed.  
1 out of 1 tests passed.  
You scored 100.0/100.

Assignment submitted on 2025-02-03, 19:06 IST

Your last recorded submission was :

```
1 import java.util.*;
2 public class W02_P3{
3     public static void main(String[] args) {
4         Scanner sc = new Scanner(System.in);
5         int length = sc.nextInt();
6         int breadth = sc.nextInt();
7         // Define the class Rectangle here
8         // Use the this keyword in the constructor
9         // Define the area method
10
11     class Rectangle {
12         int length, breadth;
13
14         // Constructor
15         Rectangle(int length, int breadth) {
16             this.length = length;
17             this.breadth = breadth;
18         }
19
20         // Method to calculate area
21         int area(){
22             return length * breadth; //write the correct formula
23         }
24     }
25
26     // Create an object of Rectangle and call the area method
27     Rectangle r = new Rectangle(length, breadth);
28     System.out.print(r.area());
29
30     sc.close();
31 }
32 }
33 }
```

Sample solutions (Provided by instructor)

```
1 import java.util.*;
2 public class W02_P3{
3     public static void main(String[] args) {
4         Scanner sc = new Scanner(System.in);
5         int length = sc.nextInt();
6         int breadth = sc.nextInt();
7     class Rectangle {
8         int length, breadth;
9
10        // Constructor
11        Rectangle(int length, int breadth) {
12            this.length = length;
13            this.breadth = breadth;
14        }
15
16        // Method to calculate area
17        int area() {
18            return length * breadth;
19        }
20    }
21    // Create an object of Rectangle and call the area method
22    Rectangle r = new Rectangle(length, breadth);
23    System.out.print(r.area());
24
25    sc.close();
26 }
27 }
```