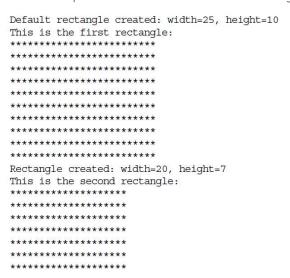
Exercise 11

Task 1 – Creating Constructors to Initialize Objects

In this task, you create a class and use constructors to initialize objects. Follow these steps to create your class.

- 1. Create a new Java project called Exercise11.
- 2. Add a new Java class and name it Rectangle.
- 3. Create two private member variables of type int and name them as width and height.
- 4. Add the following constructors in Rectangle class.
 - a. A constructor with no arguments that prints the message "Default rectangle created: width = 25, height = 10" and sets the width to 25 and the height to 10.
 - b. A constructor that takes two integer arguments w and h and sets the width to w and the height to h only if both the w and h are greater than 0 and less than 30. An appropriate error message is printed if w or h is out of range. In addition, a message is printed that a rectangle was created with width = w and height = h.
- 5. Create a getArea method that calculates and returns the area of the rectangle. The area is calculated as height * width.
- 6. Create a draw method and perform the following in the method.
 - a. Create a nested for loop to draw a rectangle using asterisks (*).
 - b. The number of asterisks used to represent a rectangle should match with the height and width of the rectangle.
- 7. Create a new Java class called RectangleTest.
- 8. In the RectangleTest class, create two instances of Rectangle called r1 and r2.
 - a. r1 is created with constructor with no arguments.
 - b. r1 is drawn immediately after it is created.
 - c. r2 is created by using the constructor with arguments.
 - d. r2 is drawn, and the area is printed.
- 9. Run the test program. The output should be similar to the following.



The area is 140.