## PROJECT-6

**Problem 1: Validate a Bank PIN**

**Overview**

Develop a java program to validate bank PIN of a customer. Use a while loop to repeat code until a valid PIN is entered

```
package project.pkg8;
public class Project8 {
    public static void main(String[] args) {
      // TODO code application logic here
      String correctPIN = "1234";
      String enteredPIN = "";
      while (!enteredPIN.equals(correctPIN)) {
         // Simulating PIN entry (without user input for demonstration purposes)
         enteredPIN = "1234"; // Assume the user entered PIN 123
         if (!enteredPIN.equals(correctPIN)) {
            System.out.println("Invalid PIN. Please try again.");
         }
      }

      System.out.println("PIN validated. Access granted.");
   }
}
```


**Problem 2: Displaying Multiples of a Number**

**Overview**

Develop a java program to calculate the multiples of a given number using a for loop.

**Task**

Have the user enter a number, and then use a for loop to display all the multiples of that number from 1 to 12.

```
public class MultiplesCalculator {
   public static void main(String[] args) {
      int number = 5;
      int limit = 10;

      System.out.println("Multiples of " + number + " up to " + limit + ":");
      for (int i = 1; i <= limit; i++) {
         System.out.println(number + " x " + i + " = " + (number * i));
      }
   }
}
```


**Problem 3: Programmatic ASCII Art**

**Overview**

Using text to create a picture is known as ASCII art. In section 2, we made an ASCII art cat. This required us to type every character in the art we wanted to create. In this practice, you'll find a way to draw basic shapes programmatically in customizable sizes.

5x4 Rectangle

5x5 Isosceles Right Triangle

**Task**

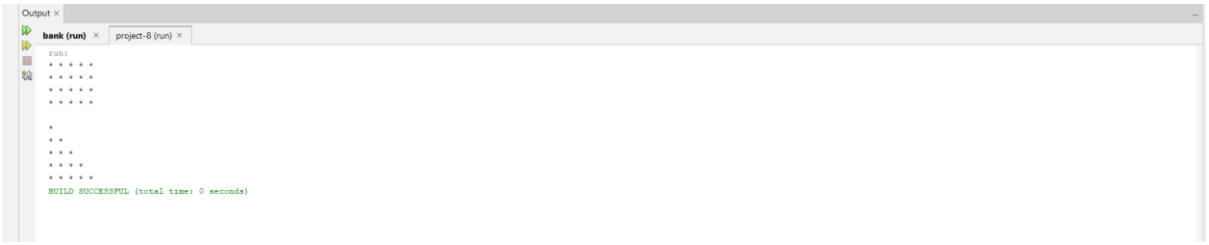
Complete the following two methods in LoopShape.java:

• **createRectangle()**: This method accepts two arguments for width and height which should be used to print a rectangle

• **createTriangle()**: This method accepts one argument for the size of a leg, which should be used to print an isosceles right triangle

**CODE:**

```
public class LoopShape {
public static void createRectangle(int width, int height) {
for (int i = 0; i < height; i++) {
for (int j = 0; j < width; j++) {
System.out.print("* ");
}
System.out.println();
}
}
public static void createTriangle(int size) {
for (int i = 0; i < size; i++) {
for (int j = 0; j <= i; j++) {
System.out.print("* ");
}
System.out.println();
}
}
public static void main(String[] args) {
createRectangle(5, 4);
System.out.println();
createTriangle(5);
}
}
```


Output
bank (run)
project-8 (run)
run:
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BUILD SUCCESSFUL (total time: 0 seconds)