

Static Method with Static Variable

Write a Java program to create a class called "IDGenerator" with a static variable 'nextID' and a static method "generateID()" that returns the next ID and increments 'nextID'. Demonstrate the usage of generateID in the main method.

Sample Solution:

Java Code:

IDGenerator.java

```
// Define the IDGenerator class
public class IDGenerator {
    // Declare a static variable nextID
    private static int nextID = 1;

    // Define a static method generateID to return the next ID and increment
    public static int generateID() {
        return nextID++;
    }

    // Main method to demonstrate the usage of generateID
    public static void main(String[] args) {
        // Generate and print IDs
        System.out.println("Generated ID: " + IDGenerator.generateID());
        System.out.println("Generated ID: " + IDGenerator.generateID());
        System.out.println("Generated ID: " + IDGenerator.generateID());
    }
}
```

Output:

```
Generated ID: 1
Generated ID: 2
Generated ID: 3
```

Explanation: