**Exercise 1: Implementing the Singleton Pattern**

**Scenario:**

You need to ensure that a logging utility class in your application has only one instance throughout the application lifecycle to ensure consistent logging.

**Steps:**

1. **Create a New Java Project:**

* Create a new Java project named **SingletonPatternExample**.

1. **Define a Singleton Class:**

* Create a class named Logger that has a private static instance of itself.
* Ensure the constructor of Logger is private.
* Provide a public static method to get the instance of the Logger class.

1. **Implement the Singleton Pattern:**

* Write code to ensure that the Logger class follows the Singleton design pattern.

1. **Test the Singleton Implementation:**

* Create a test class to verify that only one instance of Logger is created and used across the application.