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**WEEK 1: DESIGN PATTERNS AND PRINCIPLES**

**TASK 1: Implementing the Singleton Pattern**

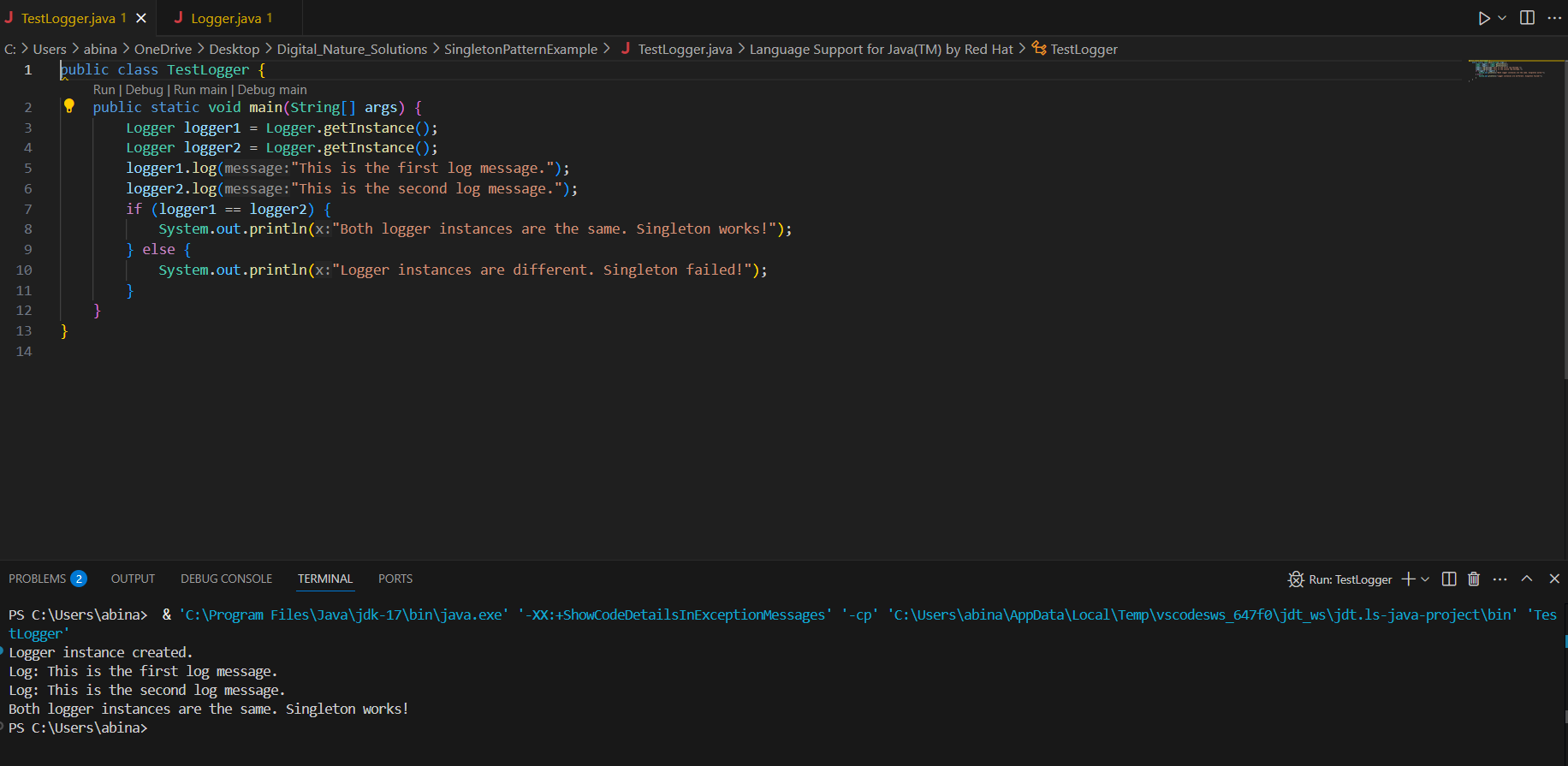
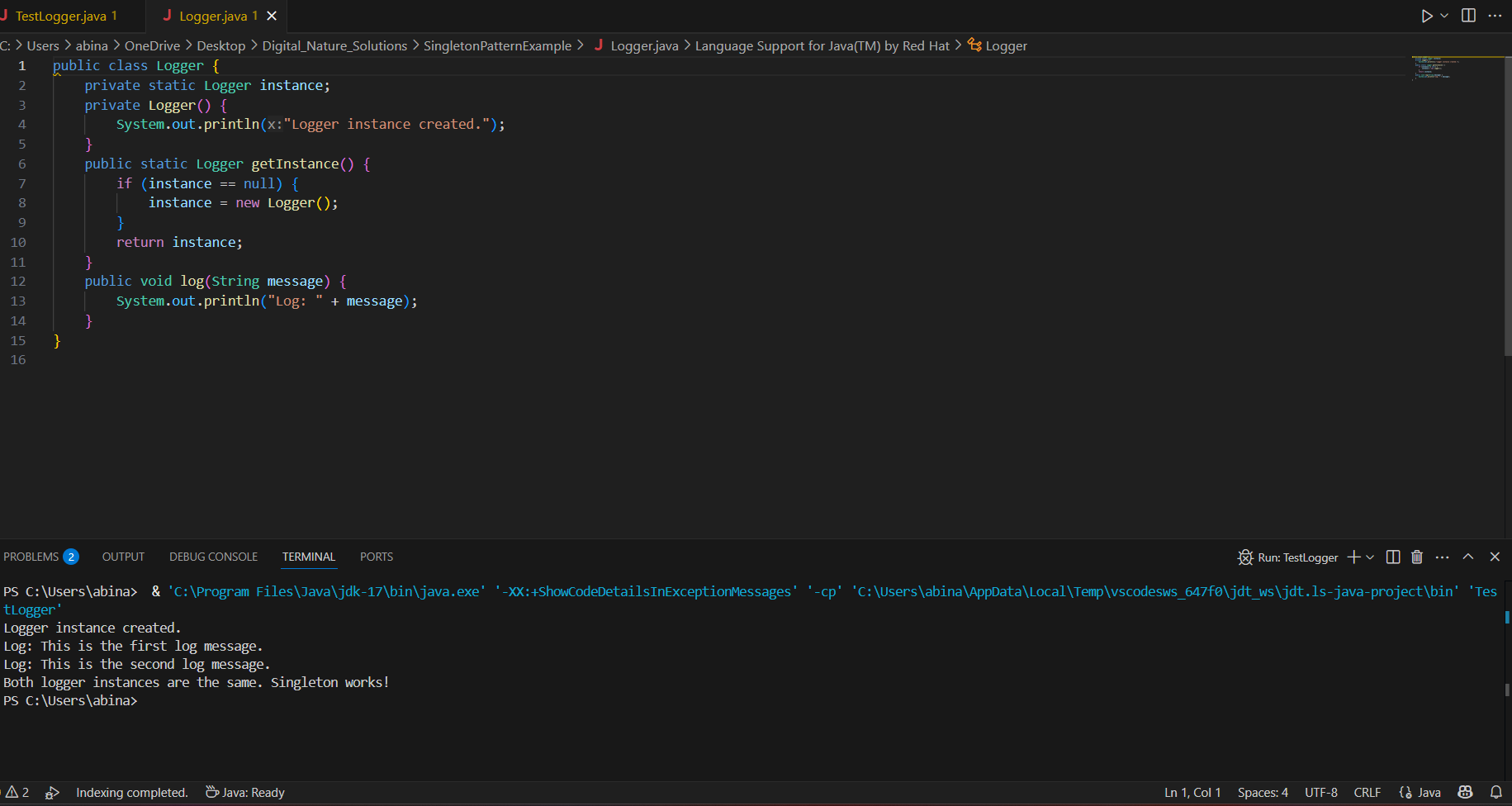
**Scenario:**

**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:**
   1. **Create a new Java project named SingletonPatternExample.**
2. **Define a Singleton Class:**
   1. **Create a class named Logger that has a private static instance of itself.**
   2. **Ensure the constructor of Logger is private.**
   3. **Provide a public static method to get the instance of the Logger class.**
3. **Implement the Singleton Pattern:**
   1. **Write code to ensure that the Logger class follows the Singleton design pattern.**
4. **Test the Singleton Implementation:**
   1. **Create a test class to verify that only one instance of Logger is created and used across the application.**

***Logger.java and LoggerTest.java with sample code and Output as follows:***

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