**Week-1**

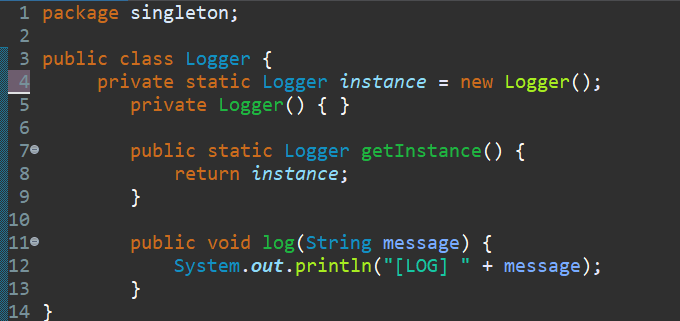
**Design Patterns and Principles**

**HandsOn**

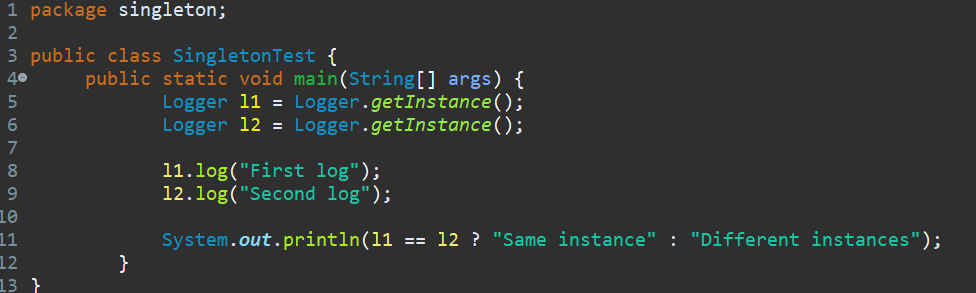
**Exercise 1: Implementing the Singleton Pattern**

**Scenario:**

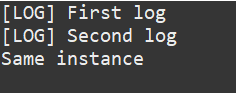
You need to ensure that a logging utility class in your application has only one instance throughout the application lifecycle to ensure consistent logging.

**class Logger:**

**class SingletonTest:**



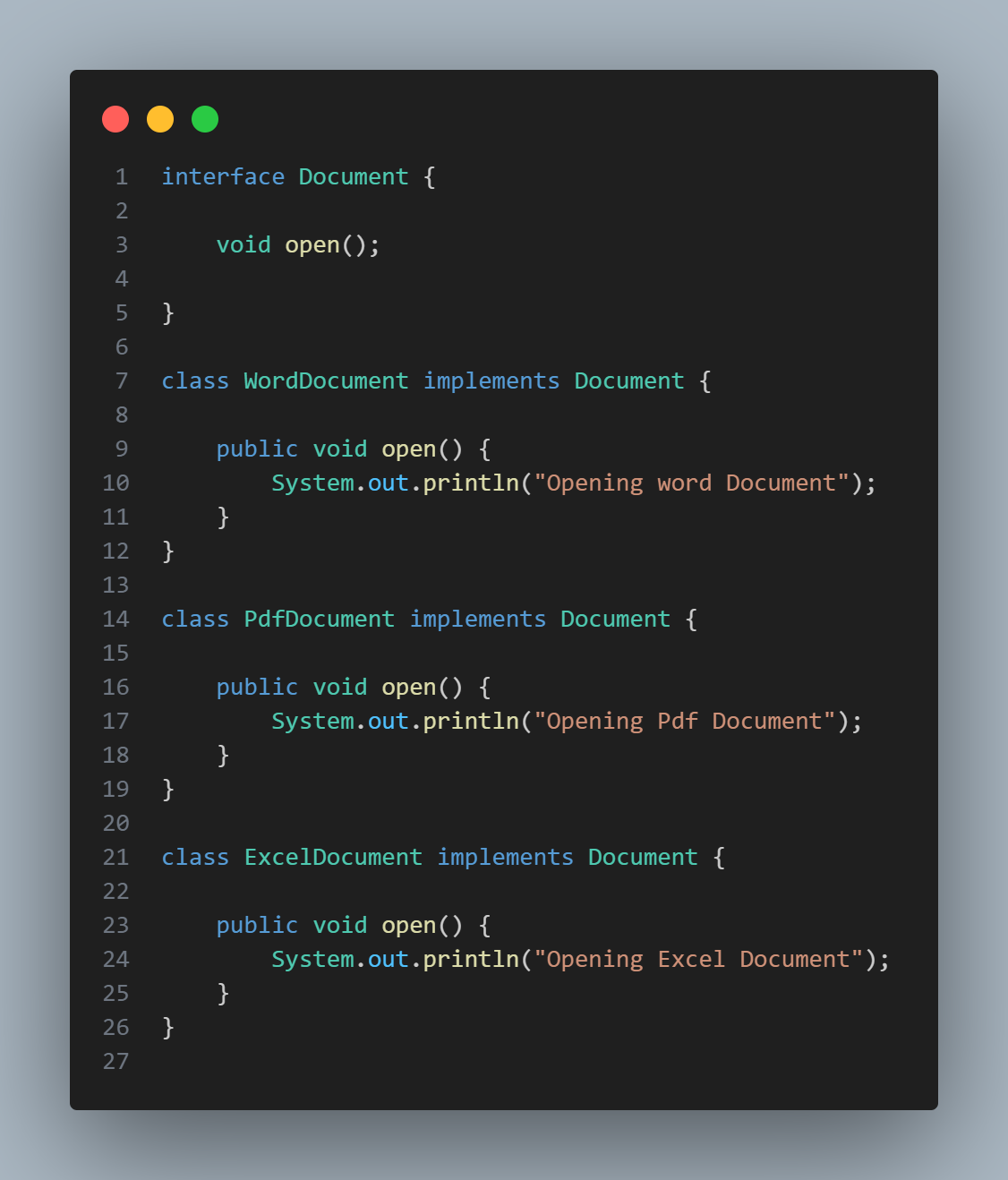
**Output:**

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**Exercise 2: Implementing the Factory Method Pattern**

**Scenario:**

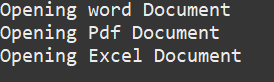
You are developing a document management system that needs to create different types of documents (e.g., Word, PDF, Excel). Use the Factory Method Pattern to achieve this.







**Output:**

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