DESIGN PATTERN LAB

OBJECTIVE

Design or implement a system using appropriate design patterns.

SCENARIO

The Starbucks coffee would like to establish an online café that sell digital drinks. You are the designer and constructor of the café. Here are your tasks:

1. They offer beverages listed in http://www.starbucks.com.hk/menu/beverage-list/. You can pick any 6 of them to your shop menu. For simplicity, you can omit building classes for drinks. The system should be able to take string inputs as orders, and is intelligent enough to handle typos within 3 edit distance given by the Wagner-Fischer algorithm. The code for the algorithm will be given. It must be intact and in its own class. You can only call its constructor and functions like a library. When there are multiple words having edit distance ≤ 3, pick the minimum.

   You are recommended to build an Adapter to bridge the use of the algorithm and the system requirement. You could reference:
   https://www.journaldev.com/1487/adapter-design-pattern-java

2. After ordering, the customers will be given an order id to check if their orders are ready. The id should be increasing and unique. Customers will rage quit if they wait too long. Their patience can last 7 orders. That is, if one's id is 1 but order id 8 is ready, the customer will exit the queue.

   You are recommended to use an observer pattern to simulate the queue where observer will react to subject's notification. You could reference:
   https://www.journaldev.com/1739/observer-design-pattern-in-java

The skeleton code can be found in the lab6 folder. You could use eclipse from *"l:\apps\eclipse-4.4\java"* to start the problem.

REFERENCE

More design patterns: https://www.journaldev.com/1827/java-design-patterns-example-tutorial

Wagner-Fischer algorithm: https://en.wikipedia.org/wiki/Wagner%E2%80%93Fischer_algorithm