

### **1. Singleton pattern**

Create a class Logger which is responsible for logging messages in a Java application. You want to ensure that there is only one instance of the Logger class throughout the application, to avoid creating multiple instances and consuming resources unnecessarily. Also, make the class thread-safe.

### **2. Factory pattern**

Design a pizza ordering system that allows customers to order different types of pizzas. Pizza class could have fields like name, dough, sauce, toppings. Use the Factory pattern to create a PizzaFactory class that is responsible for creating different types of pizzas based on user input. Use an enum to represent different types of pizzas.