Pseudo-code Problems - Day 2

1. Java OOPs

🟢 **Easy**

1. **Traffic Signal Simulation**

    a. Use an enum for `TrafficLight` and a class that switches lights based on time intervals.

🟡 **Moderate**

1. **Smart Farming System**

    a. Abstract class `Crop` with implementations like `Rice`, `Wheat`. Add methods for water requirement and harvesting.

2. Data Structures & Algorithms

🟢 **Easy**

1. **Online Quiz Timer**

    a. Use a circular **Array** to track time slots per question and trigger warnings near the end.

🟡 **Moderate**

1. **Job Scheduler**

    a. Implement a **Priority Queue** for jobs based on deadlines and processing time.

3. Collections, Generics, Streams

🟢 **Easy**

1. **Online Store Cart System**

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    a. Maintain a shopping cart using `List<Item>` and calculate total price with a generic method.

🟡 Moderate

1. **Hospital Department Mapper**

    a. Map departments to lists of doctors using `Map<String, List<Doctor>>`, filter by specialization.