

Week 1 - Patient Management System for a Multi-Specialty Hospital

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You are appointed as a software developer at a multi-specialty hospital that needs a system to manage its outpatient queue effectively. Patients arrive at different times and can be given high priority (emergency), regular checkups, or follow-up visits.

The hospital wants a system to dynamically maintain the list of patients based on these categories:

- Emergency patients should be inserted at the beginning.
- Walk-in patients are added at the end.
- Patients with appointments should be inserted at a specific position based on the time of appointment.

Additionally, the system must allow:

- Removing patients from the beginning (after checkup), a specific position (if they leave), or end (cancel last).
- Displaying the current queue at any time.

Your Task:

Implement a Patient Management List System using both:

- Array (Fixed-size)
- Singly Linked List (Dynamic-size)
