EMERGENCY ROOM PATIENT QUEUE SYSTEM USING DOUBLY LINKED LIST

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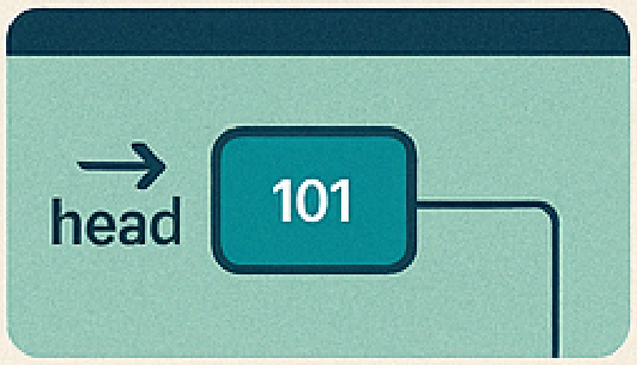
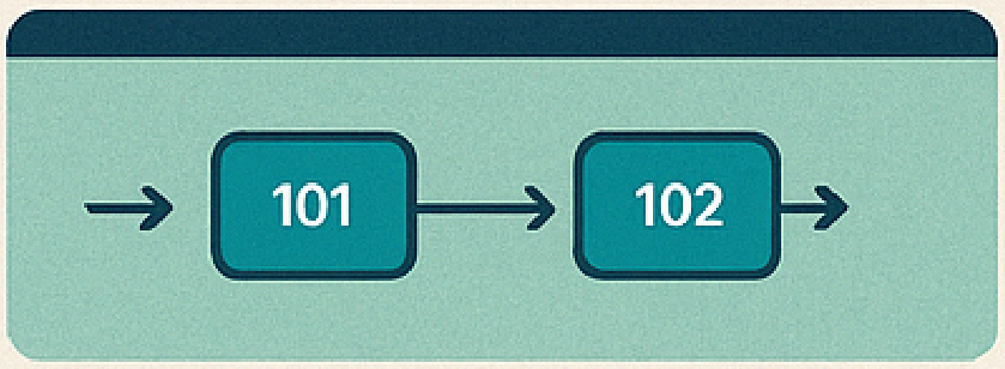
PROBLEM STATEMENT

In an emergency room, patients (mariz) arrive in different canditions → some are normal, while others are critical and need immediate attention.

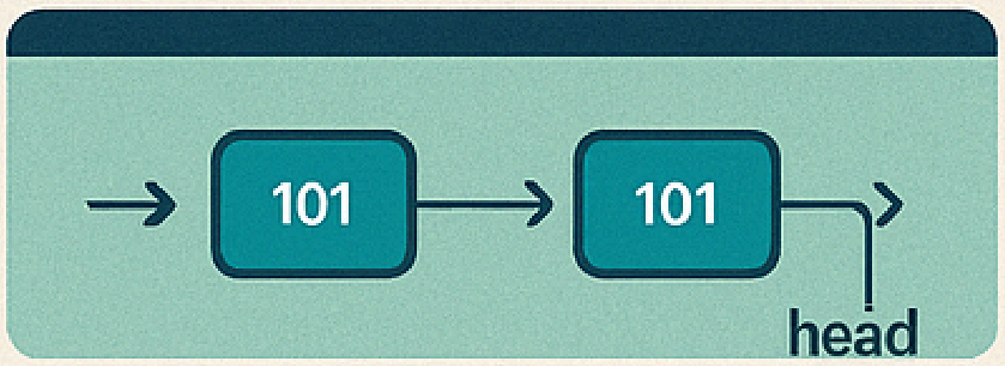
A simple queue cannot handle such priority cases efficiently. The goal is to create a flexible ER qusue system that allows adding and removing patients easity from any position in the queue.



Step 1: InsertAtEnd(101)



Step 2: insertAtEnd(102)



Step 3: insertAtBeginning(200)

PROPOSED SOLUTION

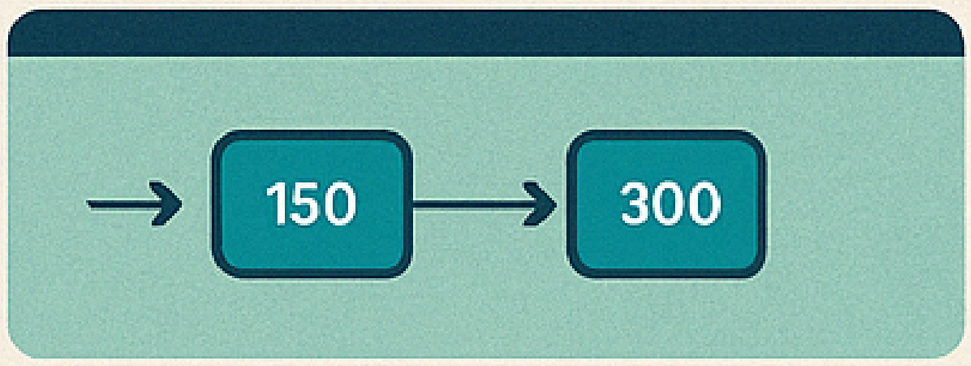
The system is implemented using a Doubly Linked List, where each node represents a patient with:

- marizI0
- next pointer → points to the next patient.
- prev pointer → points to the previous patient

Functions Used:

- insertAtEnd(id)
  → Adds a normal patient at the end
- insertAtBeginning(id)
  → Adds a critical patient at the beginning
- insertAtPosition(id. pos)
  → Inserts a patient at any desired position
- deleteFromBeginning()
  → Removes the treated (first 1 patient from the queue

Step 6: deleteFromBeginning()



Step 6: insertAtEnd(300)