Hospital Emergency Queue System

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PROBLEM STATEMENT

The hospital needs a flexible ER management system using a Doubly Linked List.

Each patient node stores:

- patientID
- prev and next pointers

Operations:

- Add patient at beginning (critical)
- Add patient at end (normal)
- Add patient at position (by nurse)
- Remove patient from beginning (treated)

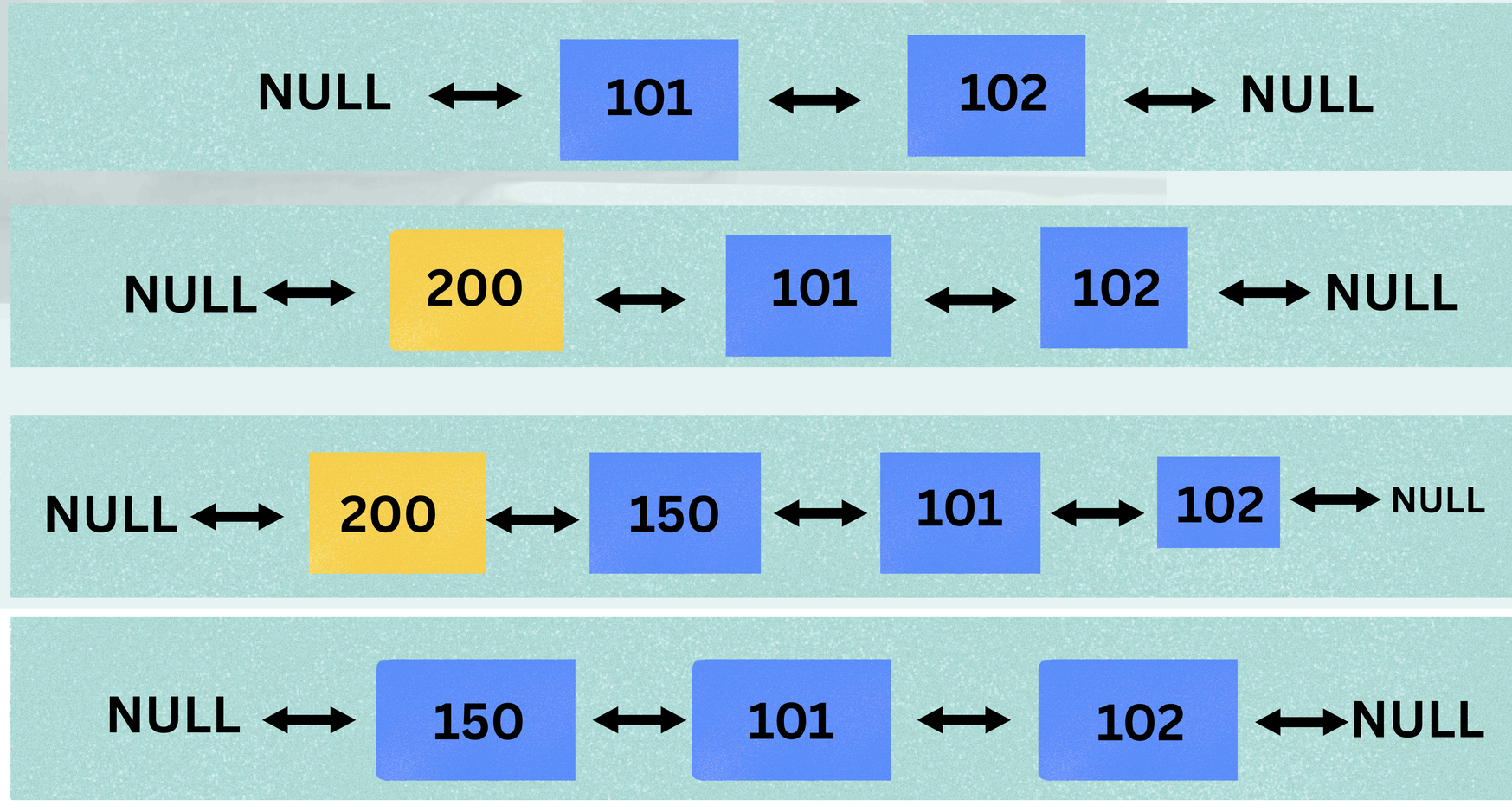
PROPOSED SOLUTION

The ER class manages patients using a Doubly Linked List.
It updates head, tail, next, and prev pointers after each operation.

Functions:

insertAtBeginning(id)
insertAtEnd(id)
insertAtPosition(id, pos)
deleteFromBeginning()

Edge Cases:

✅ Empty list
✅ Insert at position 1
✅ Delete last node
✅ Position > length → added at end

GRAPHICAL REPRESENTATION