

1. Implement a Queue using Array

Implement a queue using arrays supporting:

- `enqueue(x)`
- `dequeue()`
- `front()`
- `isEmpty()` and `isFull()`

Handle **overflow** and **underflow** cases.

2. Implement a Queue using Linked List

Implement a queue using a linked list.

Each node contains `data` and `next`.

Maintain `front` and `rear` pointers for efficient enqueue/dequeue.

3. Implement a Priority Queue using Array

Implement a queue where each element has a priority.

The highest-priority element is dequeued first.

Hint:

Store elements with `(data, priority)` pairs.

On dequeue, find and remove the element with the highest priority.

4. Reverse First K Elements of a Queue

Reverse the first k elements of a queue while leaving the rest in the same order.

Example:

Input: Queue = [1, 2, 3, 4, 5], $k = 3$

Output: [3, 2, 1, 4, 5]

5. Check if a Queue is a Palindrome

Given a queue of integers, check if it reads the same forward and backward. You can use a stack or a temporary queue.

Example:

Input: [1, 2, 3, 2, 1]

Output: Palindrome