

FIFO (FIRST IN FIRST OUT)

FIFO is a principle where the first element inserted is the first one removed.

Examples:

- Queue data structure
- Printer jobs
- Customer service systems

QUEUE DATA STRUCTURE

Queue is a linear data structure that follows FIFO principle.

Operations:

- Enqueue (Insertion)
- Dequeue (Deletion)

Insertion happens at Rear end

Deletion happens at Front end

QUEUE IMPLEMENTATION USING ARRAY

Queue can be implemented using an array.

Variables used:

- front
- rear

Condition:

- Overflow when $\text{rear} = \text{size} - 1$
- Underflow when $\text{front} = -1$ or $\text{front} > \text{rear}$

QUEUE OPERATIONS

Enqueue Operation:

- Insert element at rear

Deque Operation:

- Delete element from front

Queue always maintains FIFO order.