

DSA through C++

Queue_Data_Structure



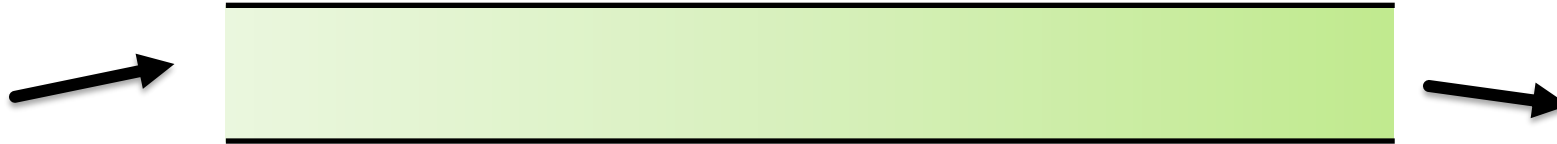
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Agenda

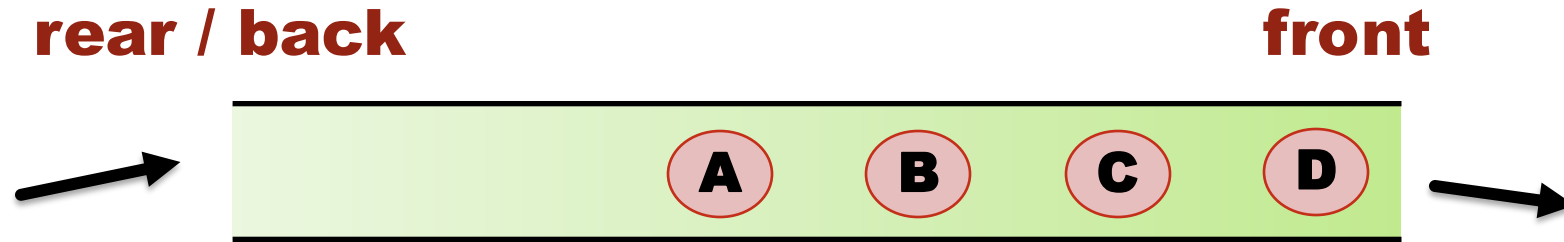
- **What is Queue ?**
- **Operations on Queue**
- **Ways to implement Queue**

What is Queue ?

- Queue is a linear Data structures
- Working principle of Queue is First in First Out (**FIFO**)



- In stack only one end is open for insertion and deletion
- In queue one end is open for insertion and another end is open for deletion



- **Insertion is done on one end known as rear or back**
- **Deletion is done on another end known as front**

- **Real world examples of Queue**

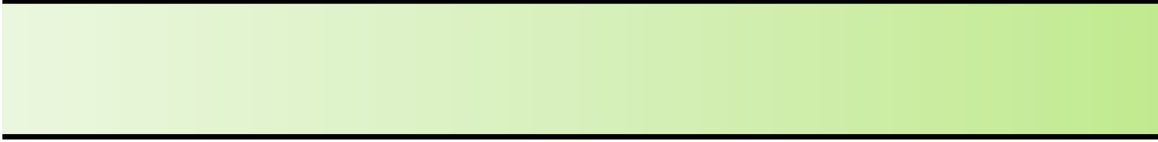
- **Ticket Counter**
- **Class Batches**
- **Pips of water**



Operations on Queue

back

front



1. Insert —————→ **enqueue**

2. Delete —————→ **dequeue**

3. getFront

4. getBack

Ways to implement Queue

- **Using Arrays**
- **Using Dyn Arrays**
- **Using Linked List**