

DSA through C++

Queue



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Agenda

- ① what is Queue ?
- ② Operations on Queue
- ③ Ways to implement Queue

What is Queue?

- Queue is a linear data structure.
- Working principle of queue is First in First out.

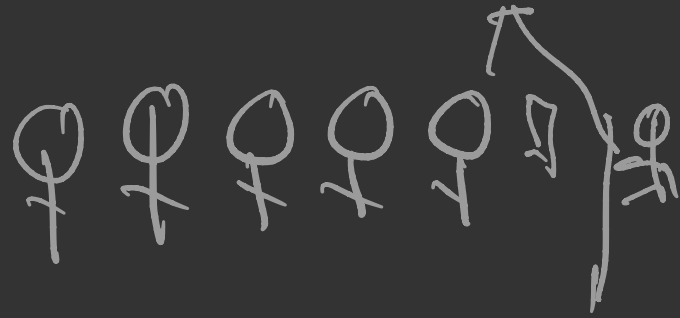


- In stack only one end is open for insertion and deletion
- In queue one end is for insertion and another end is for deletion



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

Real world examples

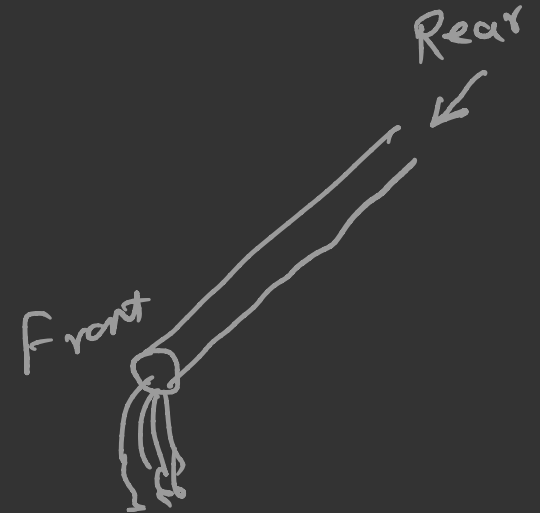


Batch

100 students

Exam for college or job

Ranking System = queue



Operations on Queue

Rear

Front



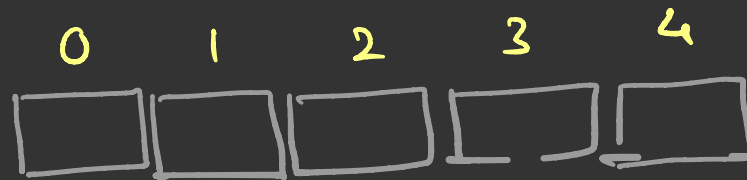
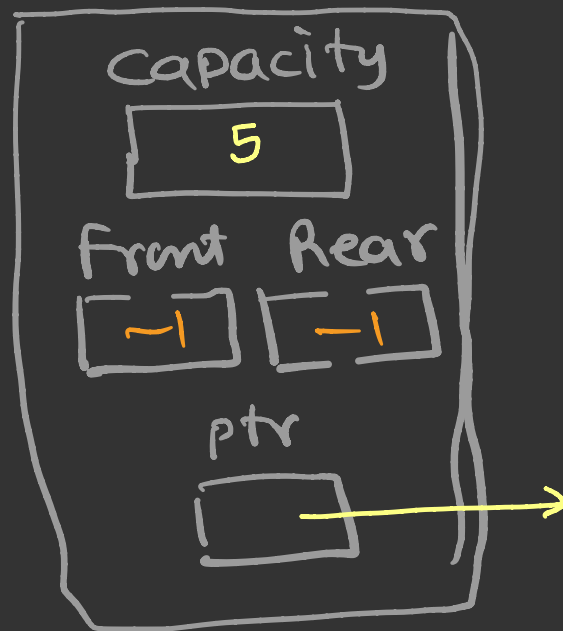
Operations

- | | | |
|---|-----------|---------|
| ① | Insertion | enqueue |
| ② | Deletion | dequeue |
| ③ | get Front | |
| ④ | get Back | |

Ways to implement Queue

- ① using Arrays
- ② using Dynamic Arrays
- ③ using Linked List

Implementing Queue using Arrays



③ Deletion