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Agenda

➢ Variations of Queue

➢ Deque
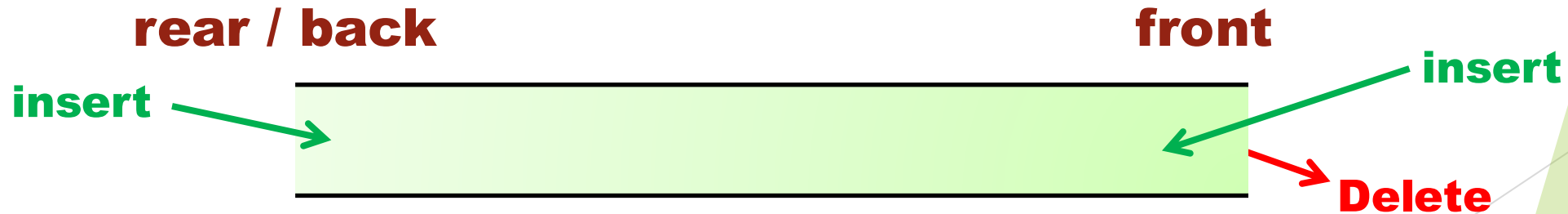
➢ Operations on deque

➢ Way to implement Deque

Queue

- A queue is an ordered list in which insertions are done at one end (rear or back) and deletions are done at other end (front)

- Working principle is First In First Out (FIFO)
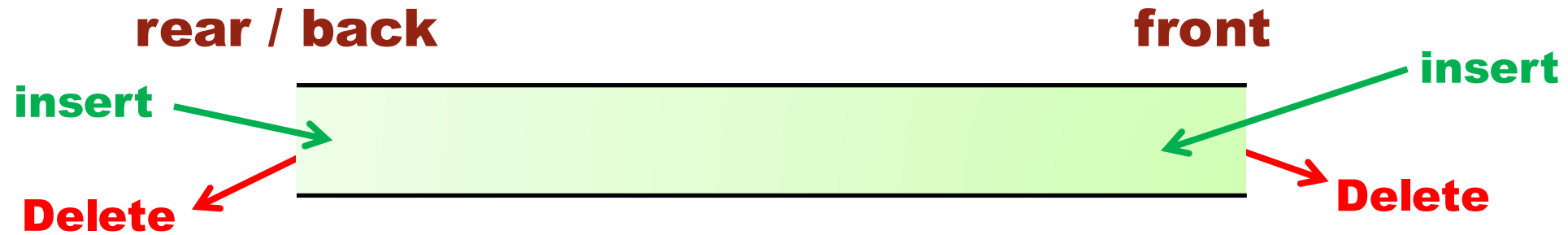
Variations of Queue

- **Insertion restricted**

rear / back   front

insert

Delete

Delete

- **Deletion restricted**

rear / back   front

insert

insert

Delete

Deque

▪ **Deque is another variation of queue**

▪ **Both ends can be used for insertion and deletion**

rear / back   front

insert

insert

Delete

Delete

Operations on deque

insert at front

insert at back

delete at front

delete at back

front

back

constructor

Destructor

copy constructor

Assignment operator

Ways to implement Deque

1. Using Array

2. Using Dynamic Array

3. Using Linked List