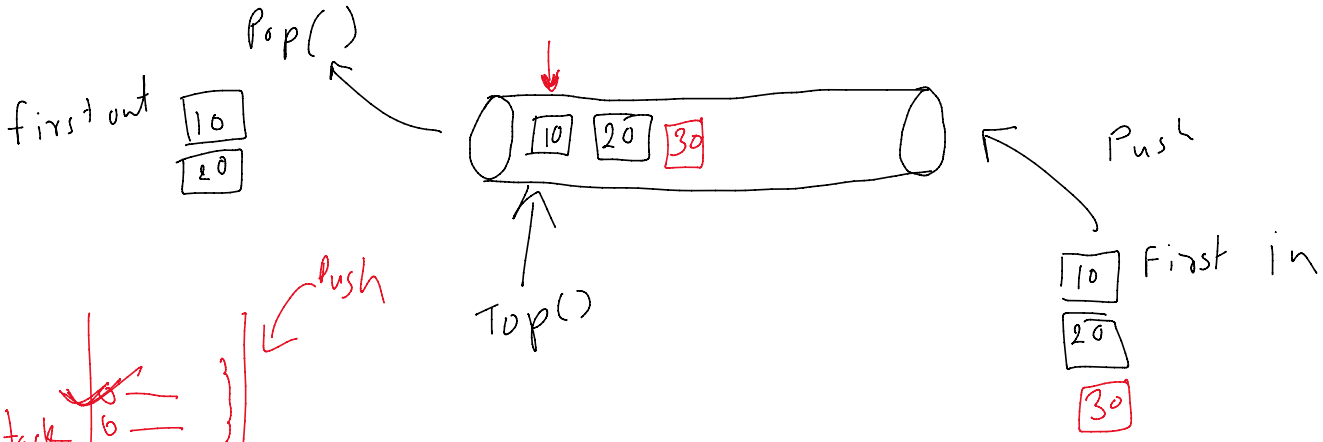
Day 22 - Queue

07 September 2022 22:52

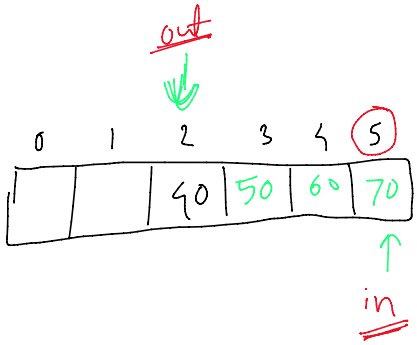
FIFO



Queue

Array Based

Linked list Based



size = 4

capacity = 6

Queue is full

0 → Push (10)

1 → Push (20)

2 → Push (40)

3 → Top() → 10

3 → Pop()

2 → Pop()

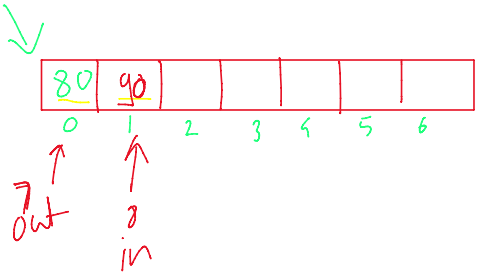
1 → Push(50)

2 → Push(60)

3 → Push (70)

3 → Push (70)
4 → Push (80)

capacity = 7
size = 5



mod = %

(6+1) % capacity =
7 % 7 = 0

Push (10)
Push_Back() → Push (20)
Pop_front() → Pop()
Top() → 20

Head → null

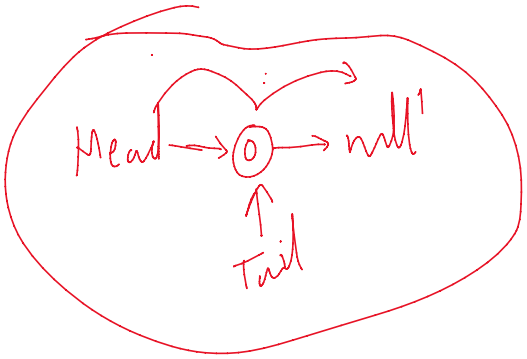
Head → 10 → null

Head → 10 → 20 → null
(delete 10)

Head → 20 → null

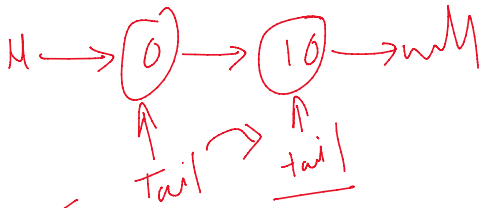
stack

queue



0 top

tail = tail->next = new Node(ele);



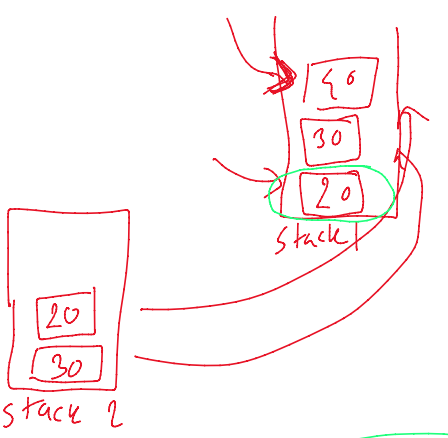
O(n)
O(1)
Push

O(n)
O(1)
Pop

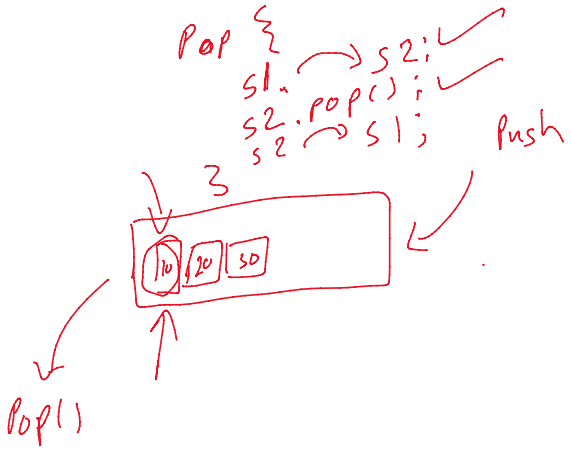
top()
O(1)
O(n)

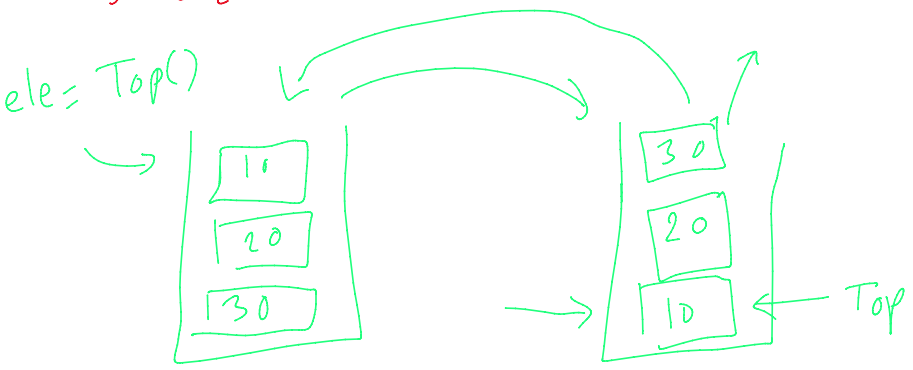
Push {
s.push();
}

Pop {
s1. → s2;
s2.pop();
s2 → s1;
}



O(n)





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