

Algorithms and Data Structures for Data Science

lab_quacks

CS 277

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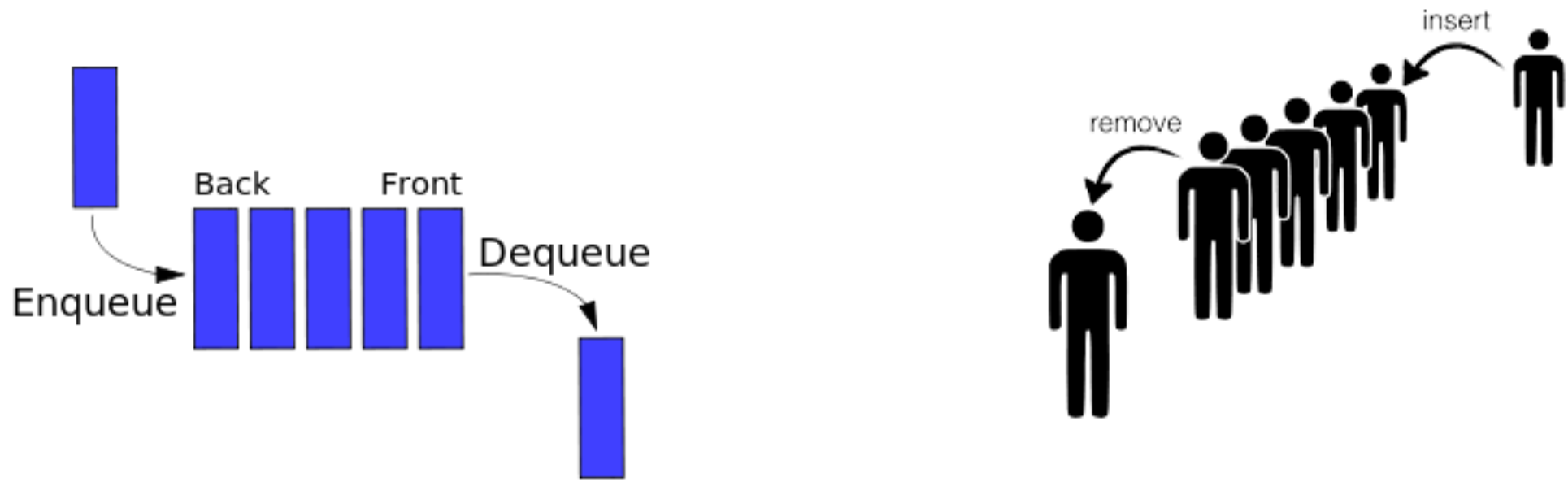


Learning Objectives

Practice stacks and queues

Queue

A **Queue** is a linear structure which follows a particular order in which the operations are performed. The order is **First In First Out (FIFO)**.

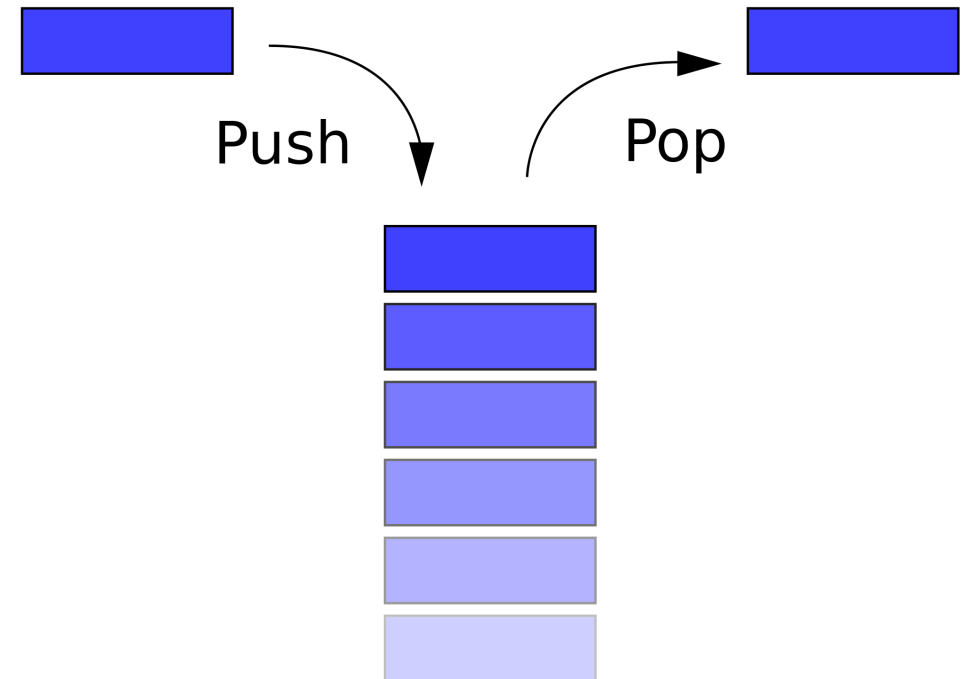


Queue is pronounced "Q" followed by four letters that are silently waiting their turn. [@codinghorror](#)

Stack

Stack is a linear data structure which follows a particular order in which the operations are performed.

Order: LIFO (Last In First Out)



Looping through quacks

```
1  
2 while not q.empty():  
3  
4     val = q.dequeue()  
5  
6
```

```
1  
2 while not s.empty():  
3  
4     val = s.pop()  
5  
6
```

```
1  
2 for i in range(15):  
3  
4     q.enqueue(i)  
5  
6
```

```
1  
2 for i in range(15):  
3  
4     s.push(i)  
5  
6
```