

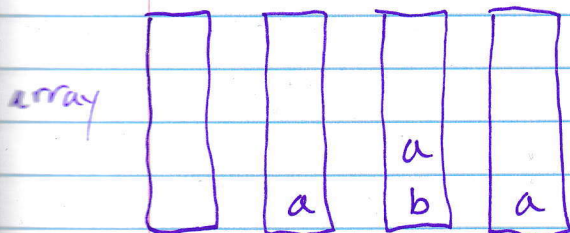
# Chapter 16: Stacks & Queues

Can implement

- Linked List
- Arrays

## Stacks

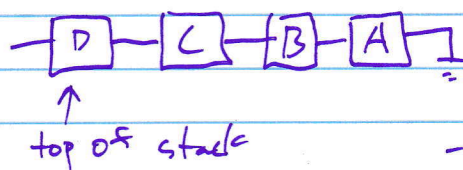
- $O(x)$
- Push : put on top
  - Pop : removes
  - Top : return top (not remove)
  - TopAndPop
  - isEmpty
  - make Empty



tos    -1    0    1    0

         push   push   pop

## Linked List

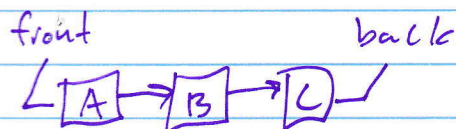


- no re-organization
- takes more memory →

## Queues

enqueue - add to end  
 getFront - get from front  
 dequeue - remove from front  
 isEmpty  
 make Empty

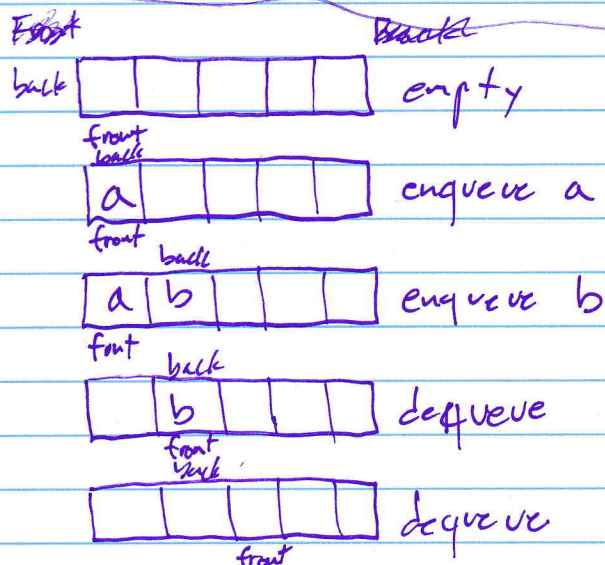
## Linked List



- Code is much simpler
- more memory →

## Double Ended

addFront    removeFront  
 addRear    removeRear



Will eventually run out of room