Today
- Lab 3 is up
- Prelab due before 9am tomorrow
- HW 3 is up
Last Time: Stacks
Ordering: Last in, first out
Operations:
- push
- pop
- top

Implementation:
- Linked List implementation
- Array version
Today:

Array-based version

\[ S: \]

0 1 2 \ldots \text{size-1}

Capacity

-site
Runtimes (for stacks)

Array stack
all $O(1)$ time

Linked Stack:
$O(1)$ except destructor: $O(n)$
A note on error handling & const funs:

I've been a bit lazy.

Let's rethink SLinked List, as well as stacks.

What operations might need to raise an error?
Queues

British for what? line

remove from here

front

add behind here

back
Behavior

push(5)
push(2)
push(11)
push(15)
pop()
pop()
pop()
push(3)
pop()
push(12)

front

back

5
5, 2
5, 2, 1
2, 11, 16
11, 16, 3
Setup & Structure
Also a simple structure - similar to stacks.
(Limited functionality, but fast.)
Operations: STL
push, pop, top, empty, size
Implementation

Same choice:

array based

linked

Need new structure