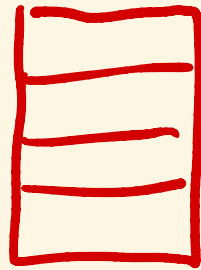
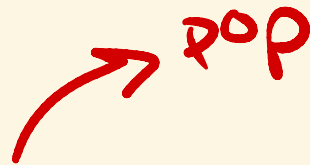
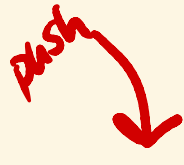
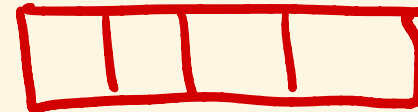
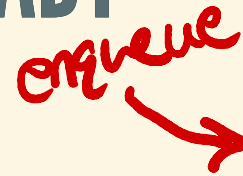


QUEUES

Stacks
LIFO



QUEUE ADT



dequeue



- Collection of elements
- First in - first out (FIFO)
- Primary operations:
 - enqueue (add to end)
 - ~~dequeue~~ (remove from front)
- Like stacks, linear/sequential - aka, have an ordering

dequeue

REAL LIFE EXAMPLES:

- Lines anywhere:
 - store
 - amusement park
 - sports arenas

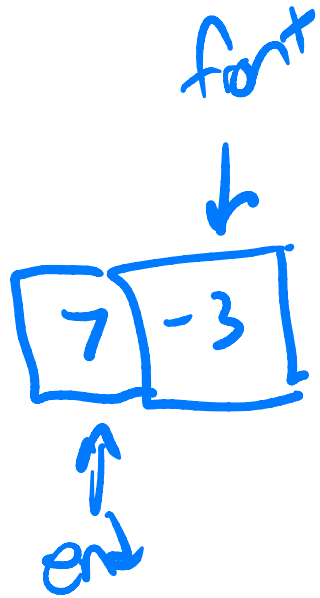
WHEN TO USE?

- Like stacks
- Depends on the problem
- Not useful for all problems
- Really useful for some problems, algorithms
- Again, think about problem/algorithm first

CODING APPLICATIONS - OTHERS

- Extremely useful for implementing graph/tree problems (BFS)
 - Shortest path
 - Island finding
- OS scheduling
- Network connections, routing

Example:



enq (5)
enq (8)
enq (6)
enq (-3)
deq ()
enq (7)
deq ()
deq ()