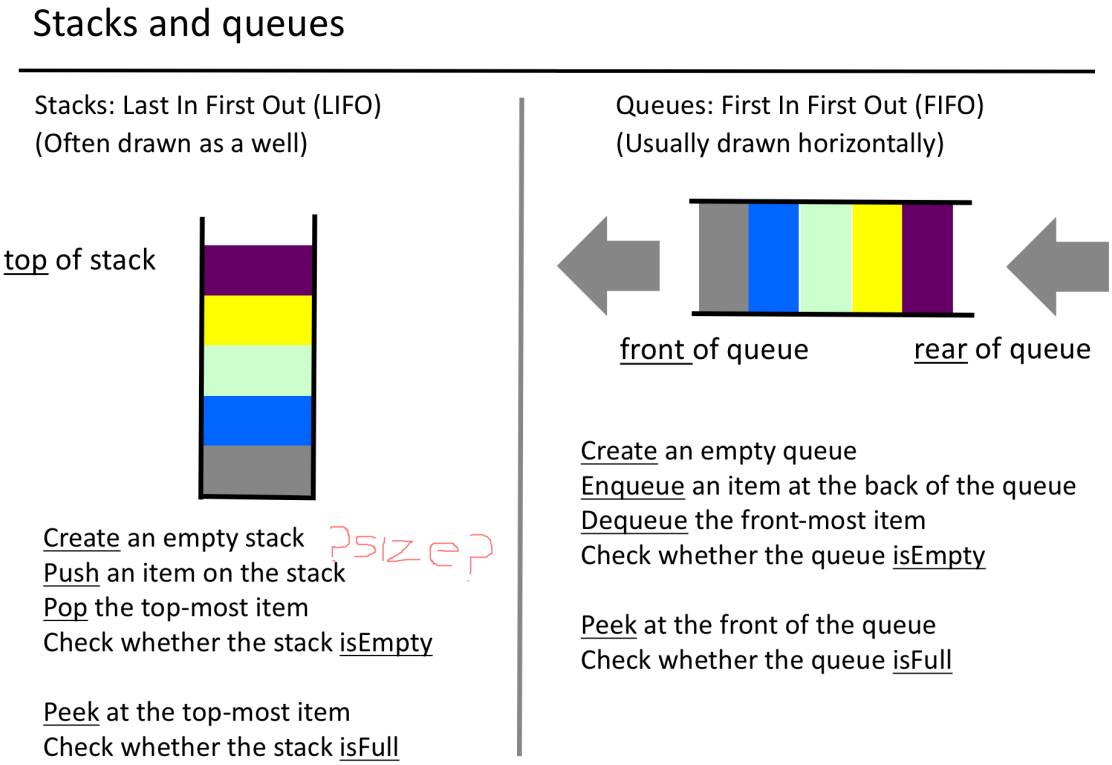
Outline of topics:

- Review. Abstraction: Complexity (Correctness?) versus Efficiency
  Illustrated last time for *Stack of doubles* – `java.util.Stack` versus "roll-my-own" versus in-line implementation
- Stacks and Queues



  - *Abstraction* – the size constraint should be respected in a LL implementation as well
  - What if we do a `pop()` on an empty Stack?
    Preconditions represent a contract between user and the ADT. (Implementation need not be **robust** beyond the preconditions.)

- Implementation: arrays and Linked Lists
  - Did in class: Stack in array; Queue in LL
  - **Generics** in Java; create an array of `Object` and then *cast*
  - Discuss efficiency issues:
    1) Top of stack in array should be to the right (otherwise, each push, pop, is $\Theta(n)$)
    2) Queue in linked list: having each element point to the one in front of it is inefficient (the queue `[a,b,c]` should be stored as `a-->b-->c` rather than `a<--b<--c`)
    3) Enqueue in array should wrap-around (otherwise, $\Theta(n)$ worst-case)