14: Mid-semester check-in

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Lecture 14: Mid-semester check-in

- The story so far
- Summarizing feedback and looking ahead
- Practice problems
Basic data structures

- Arrays,
- Resizing arrays or arraylists,
- Linked Lists,
- Queues, and
- Stacks.
- Runtime and memory analysis for each one.
Sorting

- Selection sort,
- Insertion sort,
- Mergesort, and
- Quicksort.

- Runtime (comparisons and exchanges), stability, in-place for each one.
- Comparators: How to sort a data structure with objects of any class.
- Iterators: How to traverse a data structure.
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Four classic SE interview questions that use data structures

- Work in groups
- Pick 2 problems (one from linked lists and one from queues & stacks)
- Write unit tests
- Work on both for the remaining time
- Continue with a new one if done before the allotted time
- ONLY if you feel confident about your proposed code, consult the code I provide you.
Code

- Lecture 14 code

Practice Problems:

- In-class worksheet