

Slide 1

Administrivia

- Reminder: Homework 4 code due today.
- Reminder: Quiz 4 Thursday. Likely topic is linked lists.
- Homework 5 due dates posted.

Slide 2

Stacks and Queues, Another Way

- We talked about stacks and queues as ADTs. We showed an array-based implementation.
- Could we do a different implementation — with linked lists? (Of course. Let's sketch some code.)

Slide 3

One More ADT — Priority Queue

- Value — list of elements, of some type we can put in order.
- Operations:
 - Add element.
 - Remove element with lowest (or highest) value.
 - “Is empty?”

(Look at game framework `PriorityQueue` interface for a slightly different, but equivalent, list. You will write one of these for Homework 5.)

- How to implement? (Unordered list? List kept in order by value? Compare order of magnitude of “add” and “remove” operations.)
- (Write code.)

Slide 4

Minute Essay

- We wrote code in class for an ordered list of `ints`. What would have to change to make it an ordered list of `Strings`?

Minute Essay Answer

- We'd need to change the Node inner class (replacing `int` with `String`, and everywhere we compare two data fields we'd need to use `compareTo` — e.g., replacing
`element < head.data`
with
`element.compareTo(head.data) < 0`

Slide 5