Administrivia

- Reminder: Homework 4 design due today, code next Tuesday.

Slide 1

Lists — Recap

- List ADT (review):
  - "Values" are lists of elements.
  - Many operations possible — add element, remove element, search for element, etc., etc.
- More than one possible implementation, but a typical one is a "linked list". (We wrote some code last time.)

Slide 2

Iterators

- Something we often want to do with this and other "container classes" is do something to all elements — i.e., we want a way to visit all elements, in some (or any) order.

- An object-oriented way to address this is to have "iterator" objects with methods to support "visit every element, one at a time". In Java — `java.util.Iterator` interface. (Look at its methods.)

Slide 3

Iterators, Continued

- To see how this plays out in code, we could define a simple interface for lists, including an iterator, and implement it using `java.util.Vector` (something that more or less behaves like an array but can grow and shrink).

- Let's do that . . .

  (No, it's not a very sensible implementation of the list ADT, but it's one I'm willing to put on the Web as sample code. You'll write a linked-list class as part of Homework 4.)

Slide 4

Slide 5

Minute Essay

- None — quiz.