Administrivia

• HW#1 is out
• What did recitations cover?
  – We do need some basic OO concepts
  – Apologies for lack of synchronization between myself and the TAs
  – Apologies for the room mess-up yesterday

Agenda

• Again, try to finish up Java/OO introduction
• Segue into arrays & lists

Java refresher

• “this” keyword
• Where main can belong…
• Packages
  – What does it mean to import?
  – Java.util.* or java.io.*
• Exceptions
• BufferedReader example
• Javadoc, books – can’t guarantee board code

Java refresher II

• We’re going to wait on subclassing, polymorphism, and inner classes
• More complex example: employee database
  – Employee class
    • Constructors
    • Getters/setters
    • Print info
  – Runner program
    • Create a few employees, stick into array, and iterate through them
    • Array, eh? Iterate? What’s those?

Lists

• Chapter 2 deals with “arrays”; most common form of lists, but definitely not the only one
• Use the sample applet and play with it – supports:
  – New
  – Fill
  – Insert
  – Find
  – Delete
• These are abstract operations for a list – note how it doesn’t assume array
indices, etc. We’ll answer “why?” later

7 Lists II
• Implementing each of these operations
  – New: new type[];
    • Initialization – default and custom {}  
    • Access an element by index
  • Sample book program starts with these primitives and works with them manually
    – Need to divide this into multiple classes
    – Read the book for the iterative examples

8 Lists III
• We want to create an interface for a list: what the user has to deal with
  – Next refinement: setElem(i) and getElem(i)
  – Still too much work!
• Higher-level interface definitions: abstraction
  – Insert()
  – Delete()
  – Find()

9 Next time…
• Ordered lists – can we be more efficient with them?