Announcements

• Start Java next time
  – We will use Eclipse with Java
  – See instructions on CompSci 4 Resources page to install Java on your computer

• Extended Office Hours.
  – Friday (no hours)
  – Monday, March 30 9:30-11:30am, 2-5pm,
Topics for the Exam

• No HTML
• Alice Chapters 1-2, 4-7, 8.1, 9-10
  – Focus on Chap 5-7, 8.1, 9-10
• Topics
  – Random numbers
  – Looping structures
  – Variables
  – If/else
  – Lists/Arrays
  – Recursion
Random Numbers

• Assume they work
  – Can use \( == \) to compare integers
  – Use “integer only” if you want an integer
  – Use “random number” to generate random numbers
    • Maximum is “up to but not including”
    • Default values
Looping Structures

• Loop
  – Simple and complicated
• While
• When to use “while” vs. “if”
• BDE
Conditionals – If/Else

• Format
  
  if (condition)
  
  do if true
  
  else
  
  do if false

• Nested ifs

• 3 Logical and 6 relational operators

• When do you use an “if” vs “while”
Variables

• Types
  – Local variable
  – Parameter
  – World variable
  – Class variable

• What do you do with a variable?
  – It stores a value
    • Initialize it
    • Use its value
    • Update it
Lists

• Create a list
• Process a list
  – For all in order
  – For all together
  – Item-in-list
  – Do something to a part of an object
• List search
Array

- Create an Array
- Process an array
  - Loop – complicated version
  - Use value from array
  - Set value in array
- Search for item in an array
Recursion

- Function or method call a “clone” of itself
- Must get closer to ending with each step
- Must be a way out
- Recursion is a loop, but you don’t use “loop” command
- You will need to know recursion at “reading level”
How to Study for the Exam

• Write methods from old classworks
• Lecture notes
• Reading quizzes – will make available
• Reading in book
• Understand the topics
• Work problems from old tests