



Lists in Java

11/16/2007





Opening Discussion

- Do you have any questions about the quiz?
- Let's look at solutions to the interclass problem.
- What ideas did people come up with for their projects?
 - ◆ Text adventure game
 - ◆ Fractal generator
 - ◆ Graphing calculator





Array Initialization Shortcut

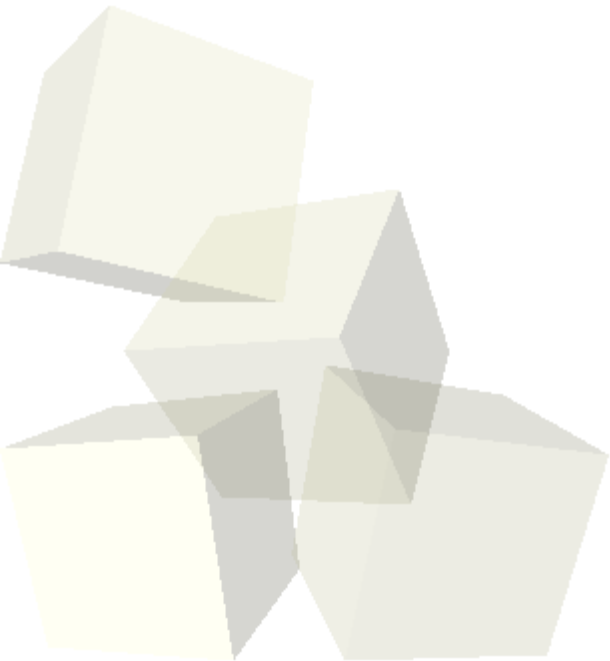
- For small arrays it is often handy to initialize them when we declare them. We can do this by putting the contents of the array in curly braces.
 - `int[] a={2,5,7};`
 - `String[] b={"This","is","a","test"};`
- We could actually use this to simplify the code for our T-shirt if we want. We'll definitely use it for the day of the week.





Finishing Off Arrays

- Let's go finish the T-shirt code that we started last class that uses arrays.





The for-each Loop

- There is a form of the for loop in Java built exclusively for looping through the contents of collections.
 - ◆ `for(Type varName:collection) { ... }`
- We call it a for-each loop though it still uses just a for.
- You can use it in any situation where you don't care about the index of the elements.





- You saw lists in Alice and got to see how handy they can be.
- A list is a general collection of things with a linear ordering to it.
- Java includes different types of lists.
 - ◆ LinkedList is good when you will do a lot of inserting and removing.
 - ◆ ArrayList is like an array that can grow or shrink.
- The only reason we don't use lists all the time in Java is because the syntax is more bulky than the arrays.
- You specify the type of things that go in the list in angle braces.

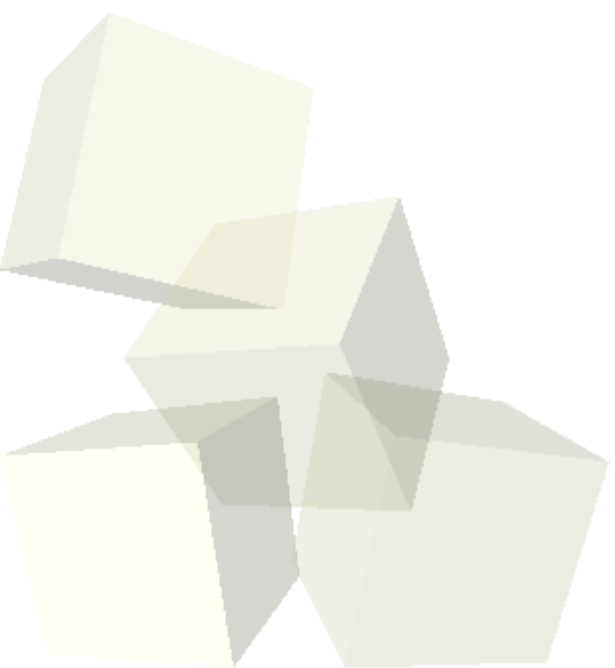


- The API can tell us all the capabilities of lists. Everything for lists is in `java.util`.
- There is a `List` interface gives us the general methods.
- The `LinkedList` and `ArrayList` classes add some additional functionality in certain situations.





- Let's keep working through the payroll example now.
- I want to have a file that for each day of the week lists employees and how many hours they worked. I want it to print a report listing how much money was paid out each day and how much total money each person should be paid for the week.





- Are you going to be here on the Wednesday before Thanksgiving?
- Interclass Problem – Do problem 12.3.

