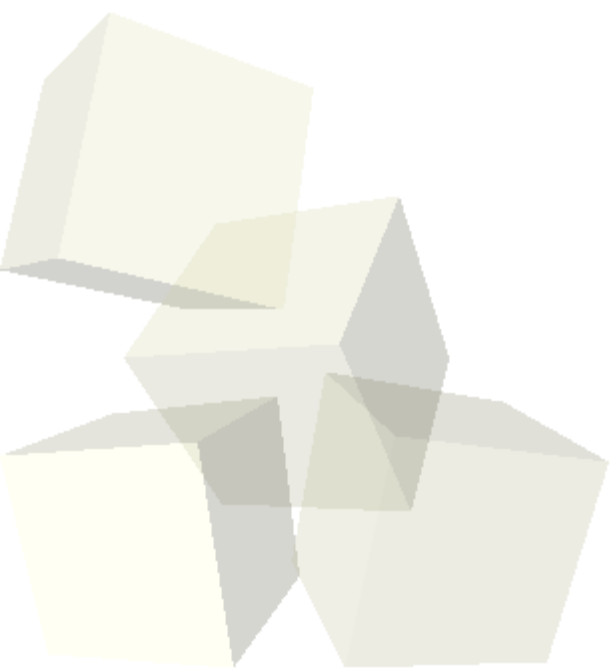




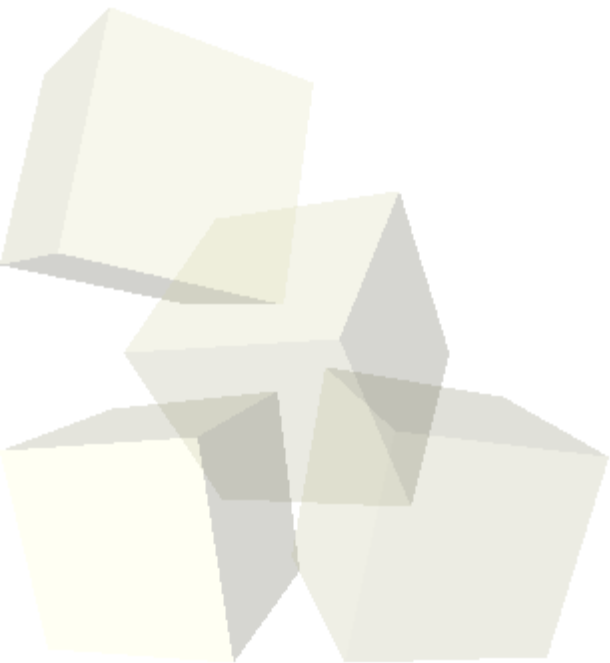
2-23-2006





Opening Discussion

- What did we talk about last class?
- Do you have any questions about the reading?
- Do you have any questions about the assignment?
- What is a GUI? What types of things do you do with GUIs? What do you build GUIs out of?





A Little History

- Java actually contains two GUI libraries in the standard distribution. Your reading was for the Swing library as that is what we will be using this semester in class. However, the original GUI library in Java was the AWT library. Swing is built on AWT and for that reason we will still be using aspects of AWT in this class.
- Swing is found in the `javax.swing` package and other packages beginning with that. AWT is found in `java.awt` and those descended from it.
- Swing is generally considered the main library you should use now for Java. Most of what you do in the two is that same so it won't matter.



Inheritance in the GUI Libraries

- The GUI libraries have some of the most prolific use of inheritance of anything in Java. One could argue that they use it too heavily as the inheritance hierarchies can be quite deep.
- Everything that you add into a GUI inherits from `java.awt.Component`. One of the things that inherits from it is `java.awt.Container`.
- Everything in Swing inherits from `javax.swing.JComponent` which happens to inherit from `java.awt.Container`.
- Let's look at the API at some of the things that are in there.



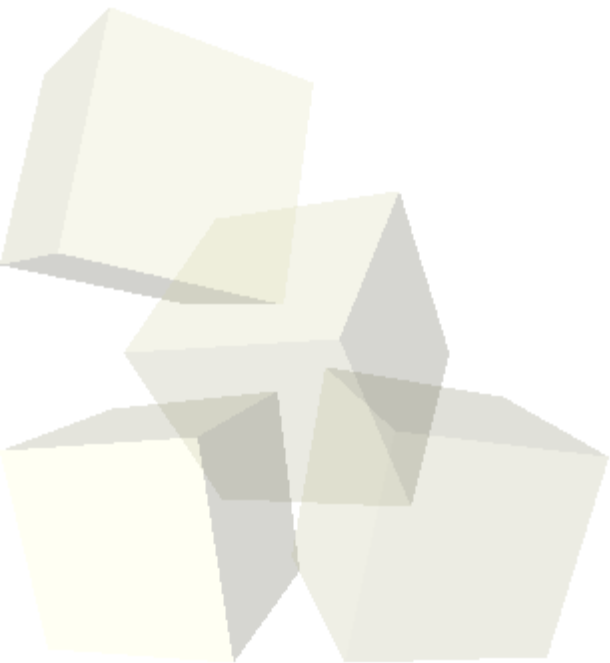
- How are you supposed to specify where things go in a Java GUI?
- I want you to write code that will bring up a window and allow a user to input the values specifying a rectangle (x, y, width, height). It should have a button labeled done. For today you won't have it actually do anything, just pop up and allow you to type in values.





Simple GUI Input/Output

- For extremely simple input tasks and notifying the user of significant events you can use the JOptionPane class. This has quite a few static methods in it that will pop up little dialog boxes.
- We will often use the showMessageDialog in order to notify the user of things. We'll use the input methods a lot less.





Semester Example

- At this point we are going to move away from doing code in small little programs when we code together and instead move to a larger project so that you can see some of the benefits of OO programming and design outside of your game project.
- The program that we are going to write is a drawing program. In some ways it is like Paint, but the functionality will be a bit different. Instead of drawing single objects we will have a scene graph of objects.
- We'll start coding the GUI for this today.



- Remember that assignment #3 is due today.
- One of the advantages of the fact that “From C to Java” is in text instead of just being me talking is that you can go back and reread sections. You should strongly consider doing that as there are details that you inevitably missed the first time through.

