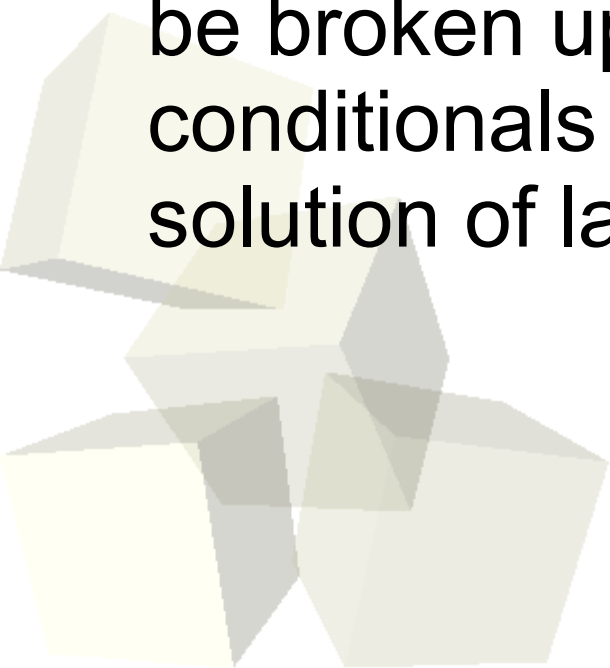# Moving to Java/Real Programming

2/25/2008

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- Did anyone get Eclipse running and get a Java program written?
- Minute essay responses were an interesting mix of fear and relief.
- Do you have any questions about the project?

- Alice is a nice educational environment, but it isn't how real programs are written.
- For the rest of the semester we will use Java to do our programming.
- The wonderful thing is that all the basic concepts will stay the same. You give commands that the program executes in order. Those commands can be broken up into methods and you will have conditionals and loops to help you structure the solution of large problems.

- Java, like most programming languages, is programmed simply by writing text files.
- These are straight text. You can write Java code with Notepad but that's a bit painful. Using Word only words if you save as text. That's even more painful though.
- We will use Eclipse. It is a text editor developed specifically for writing Java programs so it adds nice features like color coding the text and error highlighting.
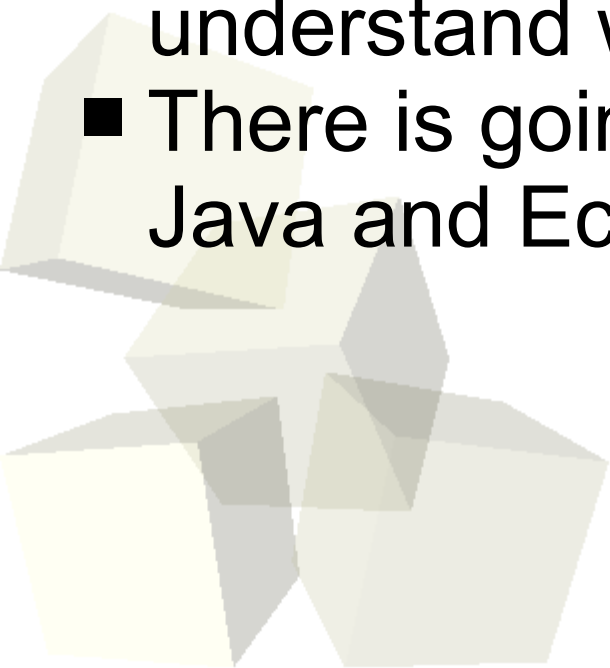
- Alice was nice in that you couldn't mess things up. If it let you drag and drop something, what you created was valid. However, there were inevitably times when you wanted to do something and couldn't figure out how to drag the right thing around.
- Text gives us a lot more freedom and is generally much faster than dragging things around. You still have to write text that follows the proper syntax rules of the language, but beyond that you have full flexibility.
- True creativity is when you can take complex thoughts and express them in code.

- The only problem with the full text model is that you can screw things up.
- Eclipse will help with this though because it gives you feedback on where things are wrong and can even suggest corrections.
- The correction features of Eclipse can be a double edged sword. What I care about is that you understand what you are doing.
- There is going to be a steeper learning curve with Java and Eclipse than there was with Alice.

- Just like you could run Alice on your machine you can run Eclipse as well.
- First we need to make sure you have Java. Installing the newest version of Java is probably a good idea.
- Once you have Java installed we can get Eclipse. You should be quite happy with the "Eclipse IDE for Java developers". The classic version is also acceptable.

- With the time that is left I'd like to walk you through Eclipse some. Feel free to follow along and stop me if I start going too fast. Eclipse is a real professional development environment. It has many features we won't use.

- What were some examples of things you "had a hard time saying" in Alice?
- Remember that I will need you get me your project code before 6pm on Wednesday.
- Interclass Problem – Take the Dollars to Euros converter from the book and make it Fahrenheit to Celsius. Bring in the working code. Do all your interclass problems in the default package to simplify things.