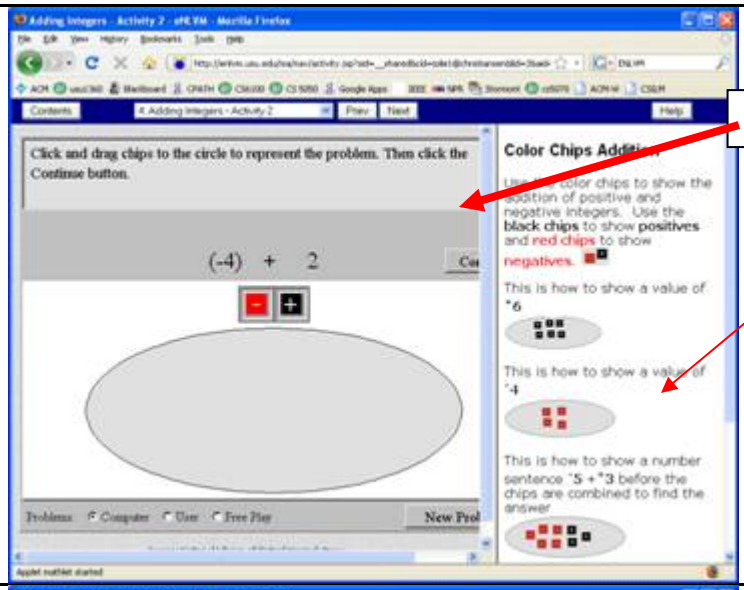
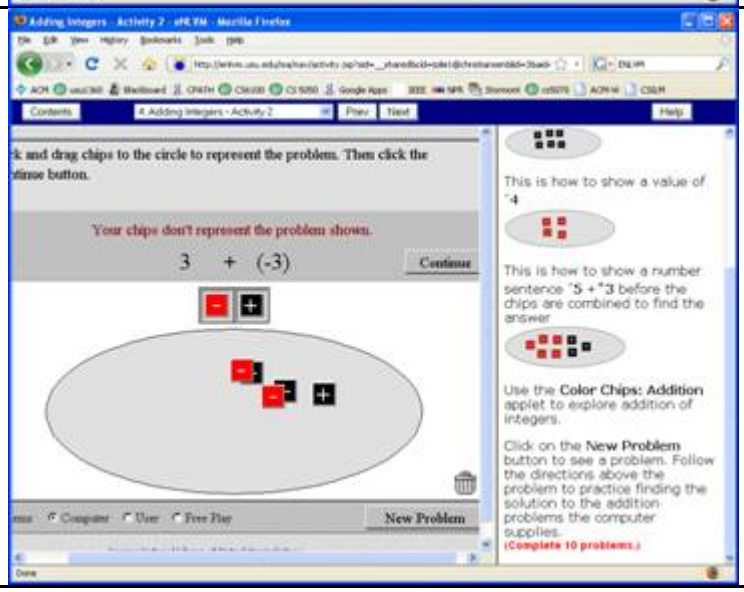
How to get the project working on CSILM

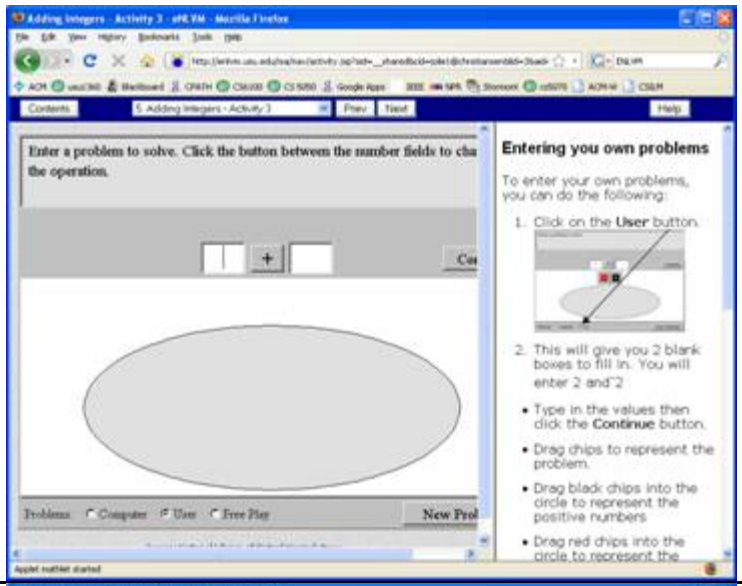
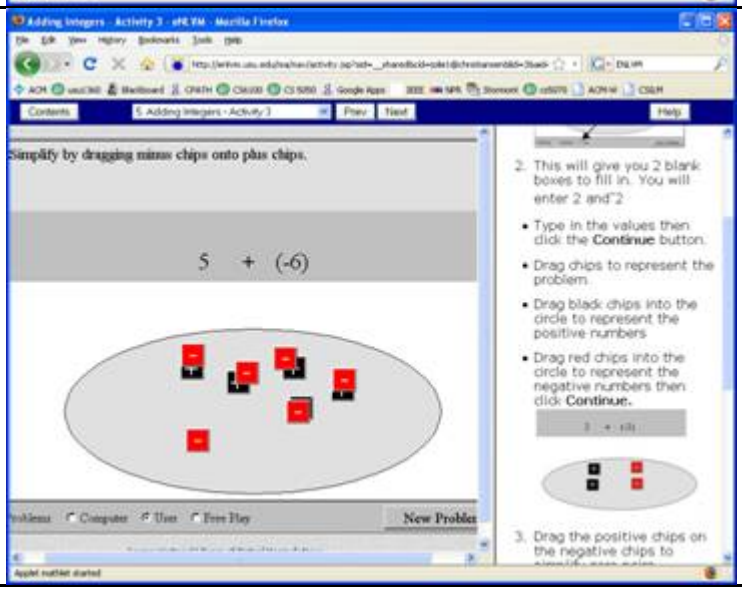
A. Before you get too far on your design, consider EXACTLY what you want your interaction to look like. A storyboard is a good way of doing this.

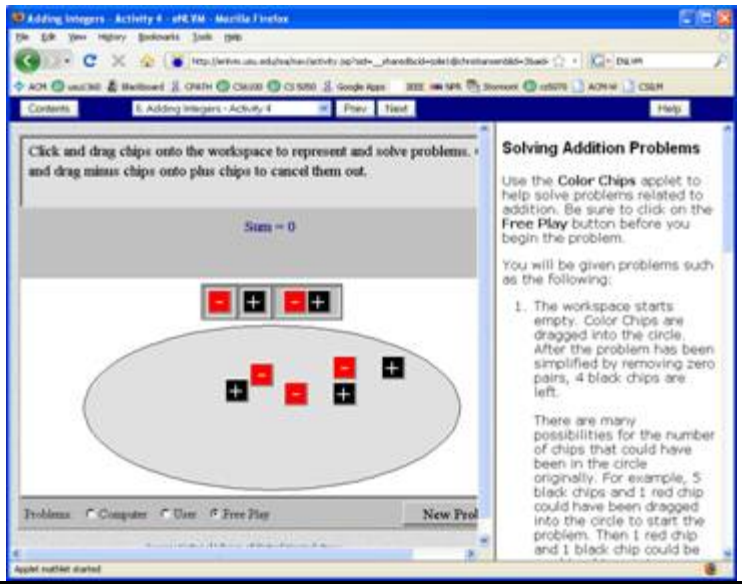
The applets you develop will be separate from the instructions on how to use the applet or introductory material that describes the problem. Note these two pieces in the example below.

A storyboard will show:

1. What the user interface looks like
2. What steps the user will go through. A math example of a storyboard follows:

1	
2	

3	 Enter a problem to solve. Click the button between the number fields to cha the operation. Entering you own problems To enter your own problems, you can do the following: 1. Click on the User button. 2. This will give you 2 blank boxes to fill in. You will enter 2 and^2 • Type in the values then click the Continue button. • Drag chips to represent the problem. • Drag black chips into the circle to represent the positive numbers • Drag red chips into the circle to represent the	
4	 Simplify by dragging minus chips onto plus chips. 5 + (-6) 2. This will give you 2 blank boxes to fill in. You will enter 2 and^2 • Type in the values then click the Continue button. • Drag chips to represent the problem. • Drag black chips into the circle to represent the positive numbers • Drag red chips into the circle to represent the negative numbers then click Continue. 3. Drag the positive chips on the negative chips to	

5	

B. We need your code to be run from a webpage. Applets work great for this, but there are other options. Flash code will also work. Alchemy is a bridge between C/C++ and Flash. You are welcome to explore those options.

See online tutorials for creating an applet. I use NetBeans as the drag and drop feature for creating the GUI is nice. **The rest of these instructions are from a NetBeans viewpoint.**

C. In order for your code to run on all machine types, you need to use an older version of Java. Mac's are usually behind in their inclusion of Java updates.

The Windows NetBeans to Mac problem (http://jimblackler.net/blog/?p=43)

Unfortunately GUI applications developed with the latest Windows NetBeans 5.5 (the free Java API from Sun) require some configuration to allow applications to be developed that run on out-of-the-box Macs. This is not just because of the OSX Java 1.6 problem, but also some glitches with the "backport" targeting in NetBeans. This affects GUI applications developed with NetBeans GUI editor which uses Swing, a cross-platform GUI layer for Java.
It is not enough to set the source level to 1.5 in the project properties, but to continue to use the 1.6 JDK. This will not run on OSX with 1.5 JRE. The error in the Console will be:
java.lang.NoClassDefFoundError: javax/swing/GroupLayout$Group
The problem is that when using NetBeans' Swing editor with the 1.6 JDK will create code that won't run on machines that have Java 1.5. This is because it inserts references to javax.swing.GroupLayout, which only exists in 1.6 onwards. Misleadingly, it does this even if 'source level' is set to 1.5.

The solution

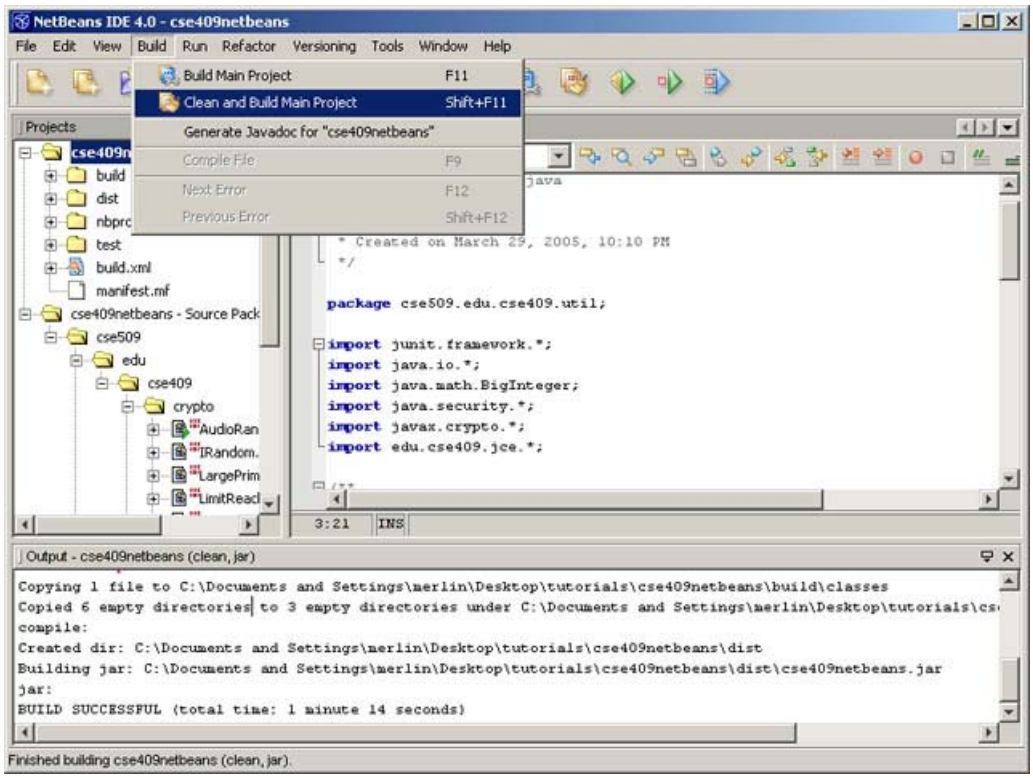
This can be fixed by downloading the 1.5 JDK (aka the Java Development Kit 5.0 Update 14) and set your NetBeans project to use it. When new Swing GUI elements are created with this JDK set, the IDE uses the org.jdesktop.layout.GroupLayout class instead. This is not built into the JRE but the additional files can be bundled in your .jar. More about this in a second.

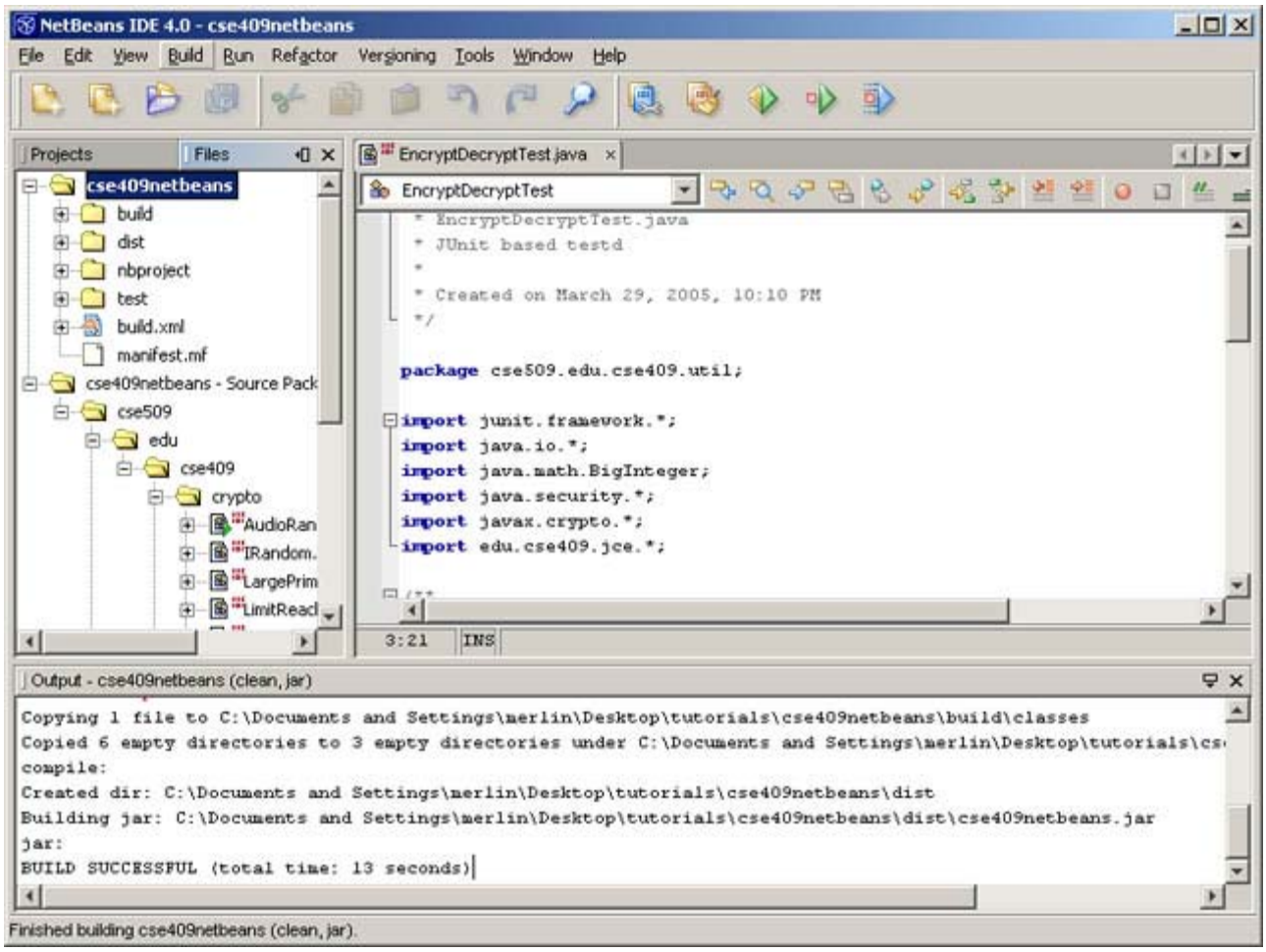
The file you require is jdk-1_5_0_14-windows-i586-p.exe and can be downloaded from Sun. Once installed, in NetBeans select Tools->Java Platform Manager. Click Add Platform and choose C:\Program Files\Java\jdk1.5.0_14.
In your applications, in the properties panel, select Libraries, then set the Java Platform to *Java Hotspot(TM) Client VM 1.5.0 14-b03* which should now be available. It is important that you do this *before* you add any Frames as the act of doing this generates the code that must use the correct version of GroupLayout.
The last step is to ensure that the files that 1.5 users (i.e. Mac users) will require are bundled into your .jar, follow the instructions here.

D. In order to enter it into our system, we need the jar file. I'll give you instructions for putting the jar file into the system.

Here are instructions for creating a jar file from NetBeans.

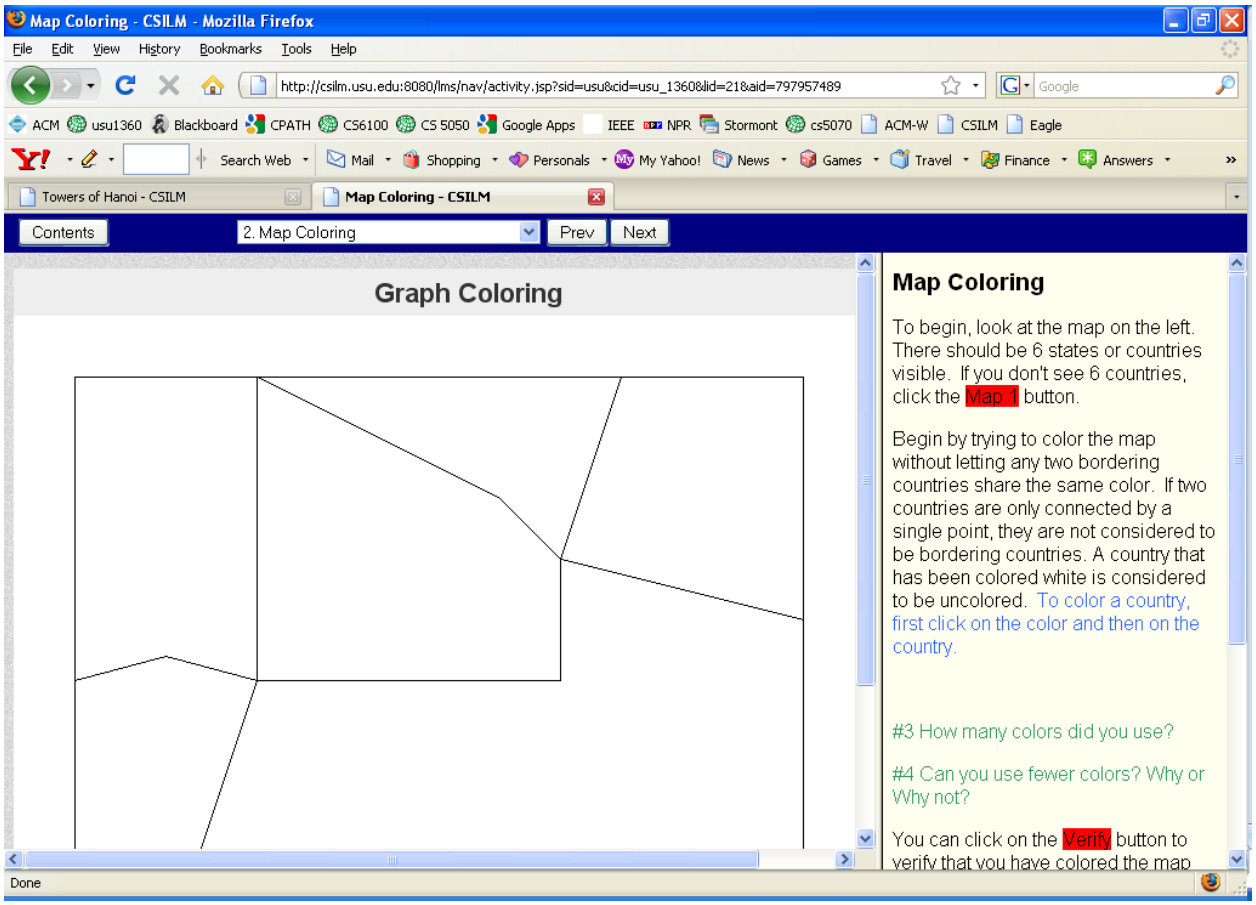
1. First, create the jar file. It is normally under the "dist" directory. But you can force its creation as follows:





E. Running it on a server. The CSILM interface has two parts. One is for your applet. The other is for documentation. The interface looks like the one that follows. The main thing to know is that the instructions are NOT part of the applet. We place those to the side.

You can experiment with it yourself if you want. It is at csilm.usu.edu. Select "Utah State University" and then Data Structures:CS2420 (or whatever class you want). Register as a new teacher so you can create lessons.


Map Coloring - CSILM - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://csilm.usu.edu:8080/lms/nav/activity.jsp?sid=usu&cid=usu_1360&lid=21&aid=797957489
Towers of Hanoi - CSILM
Map Coloring - CSILM
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2. Map Coloring
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Map Coloring
To begin, look at the map on the left. There should be 6 states or countries visible. If you don't see 6 countries, click the Map 1 button.
Begin by trying to color the map without letting any two bordering countries share the same color. If two countries are only connected by a single point, they are not considered to be bordering countries. A country that has been colored white is considered to be uncolored. To color a country, first click on the color and then on the country.
#3 How many colors did you use?
#4 Can you use fewer colors? Why or Why not?
You can click on the Verify button to verify that you have colored the map
Done