1.00 Lecture 22

Design Lab II

Reading for next time: Big Java 11.1, 19.1-19.2

Design Lab

• Focus is on design and building of GUI
• No solutions will be given in class
  – An example solution will be posted at 7pm tonight on the Web site
• Ask a lot of questions as you work through the lab
  – We encourage you to work with someone else
• You do not have to finish the entire program
  – The emphasis is on the design choices and learning to use Swing, not on the math.
Exercise

• Build an application to simulate the position of a ball in a box
• The GUI should allow the user to specify the height and width of the box. Use JTextFields.
  – The diameter of the ball is equal to the width of the box
  – Assume the user enters reasonable values
• The application should draw a visualization of the ball and box whenever the user changes one of these values
• If you use model-view-controller, the model is very simple.
  – You don’t have to use a model; you can have the view do any calculations required. This program is just drawing, really computing.
• Note the ambiguity in the problem, typical of real problems…
  – Optional: Start the ball at the top of the box and use a timer to let it settle to the bottom. (The compiler will ask you to make the Timer final, which is ok. See a TA if you’re doing this.)

You don’t have to handle this one