Threads Lab I

CS 245

Oct. 10, 2008

1. Download `Bounce1.java` from the class Web page. Compile and run it. Notice that you can start the bouncing ball, but you can't stop the bouncing ball.

   Looking through the code, explain exactly why the applet doesn't respond to a click on the stop button.

   Notice how long it takes for the applet viewer to go away when you terminate it.

2. Download `Bounce2.java` from the class Web page. Compile and run it.

3. What happens if you comment-out the last call to `draw()` in `Ball`'s `run()` method? (You may need to go through several start/stop cycles before you notice any changes.)

4. Study `actionPerformed()` to learn how the animated ball is started and stopped.

5. Extend the applet so that it starts and stops three animated balls, each a different color.

6. Extend the applet by:

   (a) Add a *New Ball* button. During ball animation, each time this button is pressed another ball is added to the mix of bouncing balls, up to a maximum of 20 balls.
   You might find the following useful:

   ```
   Ball[] balls = new Ball[20];

   ...

   balls[i] = new Ball(display, Color.green);
   ```
   (b) The stop button should stop all the bouncing balls.
   (c) The start button should start a single bouncing ball.