

Lecture 4: Standard Java Graphics

CS 62
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Quiz Friday!!

Lab Stuff

- Don't use assert to check preconditions for public methods
 - Might be turned off
 - Fine for preconditions for private methods
- Do use assert for postconditions
- toString returns String
 - Does not print anything!
- See definition of interface List<E> on-line

PostItStdApplication

- Sophisticated
 - JFrame contains two JPanels
 - JFrame uses BorderLayout, so add controls to JPanel in SOUTH, canvas in CENTER of contentPane of JFrame
 - See GUI cheat sheet for details
 - DrawingCanvas extends JPanel -- contains paint method

Event-Driven Programming

Handling Mouse Events

- If want program to react to mouse press, click, or release on a component
 - send addMouseListener(mlo) to component (usually in the constructor of the component)
 - See PostItApplication.java
 - For motion or drag, send addMouseMotionListener(mlo)
- When user presses mouse on a component
 - Computer looks for registered "MouseListener" for component or its containers.
 - If found, sends mousePressed(evt) to listener

Listener

- object designated as mouse listener must
 - implement MouseListener (& implement mousePressed, mouseReleased, & mouseClicked) *or*
 - extend MouseAdapter (which has default implementations of all 3)
- Second is easier unless class already extends another.
- Similarly, for mouse motion listener
 - implement MouseMotionListener *or*
 - extend MouseMotionAdapter

GUI Objects & Events

- Similar to handling mouse events, but must also install components in a container.
- See GUI cheat sheet in Documentation & Handouts.

List Operations

- Review list operations from library interface `List<E>`.
- Think about how implement with array.