Lecture 4: Standard Java Graphics

CS 62
Spring 2012
Kim Bruce & Kevin Coogan

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!
- Questions from lab or on assignment?

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 “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.