

CSC207H Lecture 4

Sadia Sharmin

Sep 26, 2016

Creating a GUI with Swing

- ▶ Swing is a collection of classes Java provides for creating Graphical User Interfaces (GUI)
- ▶ It contains classes to create windows, buttons, text fields, etc.

Basic Workflow

1. Create a window (JFrame) to hold entire GUI
2. Create UI components (e.g. textfields, buttons, etc.)
3. Add UI components to window (either add individual components, or group into containers and add the containers)
4. Attach handlers to UI components to handle events (e.g. clicks, key presses)
5. Pack UI components onto window and set window's visibility

Some UI Components

- ▶ JLabel - used to display text
- ▶ JTextField - allows for user text entry
- ▶ JButton - clickable buttons

Layout Managers

- ▶ To arrange these UI components onto the main window, you need to use a Layout Manager
- ▶ The default Layout Manager for a JFrame is BorderLayout
- ▶ You could also place the UI components onto JPanels
- ▶ The default Layout Manager for a JPanel is FlowLayout
- ▶ Guide to Layout Managers:
<https://docs.oracle.com/javase/tutorial/uiswing/layout/visual.html>

Action Listeners

- ▶ You can use the ActionListener interface to allow for even handling
- ▶ Every class that implements this interface must have an "actionPerformed" method that deals with what happens once an event occurs
- ▶ Use the method "addActionListener" to connect an ActionListener to UI components like JButtons
- ▶ Now, every time that JButton is clicked, the code in "actionPerformed" will run