**Video Name:** GUI1

**Topics:**
- Event-driven programming
- Layout managers
- JFrame
- Text fields and labels
- Buttons
- No action yet

**Java Class(es):** package gui, FirstGUI

Event-driven programming. GUIs are under control of the user. JVM responds to variety of user interface events, such as button pushes, mouse clicks, etc. Program installs event listeners which contain the code that should run when an event happens. The interface used for many listeners is ActionListener.

**Basic strategy:**
1. JFrame is the top-level container. It provides a window with title, min/max/close icons.
2. Components are defined as either instance or local variables.
3. Ctor allocates space for components, adds them to the JFrame. Ctor also typically sets the title, size, and default close operation.
4. Main is usually very short (remember program is controlled by user, so typically main calls a ctor, sets up GUI, sets visible true, then just waits for the user)

**Layout manager**
- Determines how components will be arranged (order and size)
- Enable programs to be more portable
- Default for JFrame is BorderLayout, which has NORTH/SOUTH/EAST/WEST/CENTER areas. Most important part is CENTER, it gets the most space.
- Default for JPanel (another video) is FlowLayout

Controlling the layout (i.e., size and spacing of components) is NOT a major topic for this course.

**Components:**
- JLabel. Static text or image that used as a label.
- JTextField. Single-line area for text input or display.
- JButton. Button that can be pressed.