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### AWT vs. Swing vs. SWT

The **Abstract Windowing Toolkit** (**AWT**) is Java's original platform-independent windowing, graphics, and user-interface widget toolkit. The AWT is now part of the Java Foundation Classes (JFC) - the standard API for providing a graphical user interface (GUI) for a Java program. First released in Java 1.1 in 1995. Closely tied to the underlying platform's windowing system.

**Swing** (Java 1.2) widgets provide more sophisticated GUI components than AWT. Since they are written in pure Java, they run the same on all platforms. Swing supports pluggable look and feel – not by using the native platform's facilities, but by roughly emulating them. This means you can get any supported look and feel on any platform. The disadvantage of lightweight components is possibly slower execution. The advantage is uniform behavior on all platforms.

The **Standard Widget Toolkit** (**SWT**) is an open source framework for developing GUI in Java. It is developed by the Eclipse Foundation, and licensed under the Eclipse Public License. It represents an alternative to AWT & Swing for developers creating desktop Java applications.

### Basic Components of a Swing GUI

**JFrame** 

contentPane

JLabel

**JRadioButton** 

**JToggleButton** 

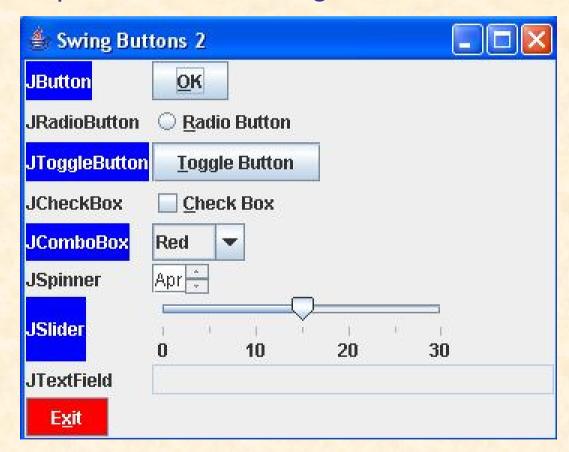
**JCheckBox** 

**JComboBox** 

**JSpinner** 

**JSlider** 

**JTextField** 



Basic Components of a Swing GUI



**JTabbedPane** 

**JPanel** 

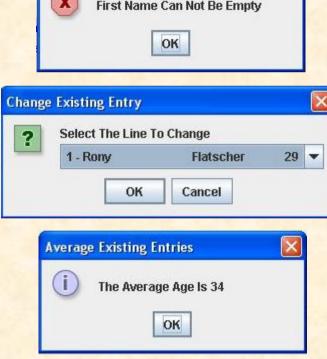
**JTextArea** 



Basic Components of a Swing GUI



Standard Message Dialogs



#### **GUI** Demonstrations

swing\_buttons1.rex

swing\_password.rex

swing\_xy.rex

swing\_menu.rex

swing\_jwindow.rex

elpShowSource.rex

swing\_buttons2.rex

swing\_progressbar.rex

swing\_multiinput4.rex

swing\_tabbedpane.rex

swt\_snippet133.rex

demomenu2.rex