

## Ch 13 Advanced GUI

Here are the most important classes of Chapter 13.

The "official" descriptions come from: [docs.oracle.com/javase/7/docs/api/index.html](http://docs.oracle.com/javase/7/docs/api/index.html)

The root of all the tutorials is: [docs.oracle.com/javase/tutorial/uiswing/](http://docs.oracle.com/javase/tutorial/uiswing/)

Class	Description (page) / Tutorial
JTextField	A lightweight component that allows the editing of a single line of text. (p 789) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/textfield.html">docs.oracle.com/javase/tutorial/uiswing/components/textfield.html</a>
JList	A component that displays a list of objects and allows the user to select one or more items. (p 790) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/list.html">docs.oracle.com/javase/tutorial/uiswing/components/list.html</a>
JScrollPane	Provides a scrollable view of a lightweight component. (p 797) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/scrollpane.html">docs.oracle.com/javase/tutorial/uiswing/components/scrollpane.html</a>
JComboBox	A component that combines a button or editable field and a drop-down list. (p 806) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/combobox.html">docs.oracle.com/javase/tutorial/uiswing/components/combobox.html</a>
ImageIcon	An implementation of the Icon interface that paints Icons from Images. Images that are created from a URL, filename or byte array are preloaded (p 813) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/icon.html">docs.oracle.com/javase/tutorial/uiswing/components/icon.html</a>
JLabel	A display area for a short text string or an image, or both. (p 813) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/label.html">docs.oracle.com/javase/tutorial/uiswing/components/label.html</a>
JButton	An implementation of a "push" button. (p 814) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/button.html">docs.oracle.com/javase/tutorial/uiswing/components/button.html</a>
JFileChooser	Provides a simple mechanism for the user to choose a file. (p 821) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/filechooser.html">docs.oracle.com/javase/tutorial/uiswing/components/filechooser.html</a>
JColorChooser	Provides a pane of controls designed to allow a user to manipulate and select a color. (p 823) <a href="http://docs.oracle.com/javase/tutorial/uiswing/components/colorchooser.html">docs.oracle.com/javase/tutorial/uiswing/components/colorchooser.html</a>
JSlider	A component that lets the user graphically select a value by sliding a knob within a bounded interval. (p 837)

<a href="https://docs.oracle.com/javase/tutorial/uiswing/components/slider.html">docs.oracle.com/javase/tutorial/uiswing/components/slider.html</a>
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### Menus

These classes are listed in hierarchical order. The top class is a menu bar (JMenuBar) that resides at the top of your window (JFrame).

A tutorial for menus is here: [docs.oracle.com/javase/tutorial/uiswing/components/menu.html](https://docs.oracle.com/javase/tutorial/uiswing/components/menu.html)

Class	Description (page)
JMenuBar	An implementation of a menu bar. (p 824)
JMenu	An implementation of a menu -- a popup window containing JMenuItem items that is displayed when the user selects an item on the JMenuBar. (p 824)
JMenuItem	An implementation of an item in a menu. (p 824)
JCheckBoxMenuItem	A menu item that can be selected or deselected. (p 825)
JRadioButtonMenuItem	A menu item that is part of a group of menu items in which only one item in the group can be selected. (p 825)

Menus are especially nice in Swing because of their hierarchy.

- JMenuBar has-a JMenu
- JMenu has-a (JMenuItem or JCheckBoxMenuItem or JRadioButtonMenuItem)

### Text Areas

The two constructors on page 833 are pretty self-explanatory:

```
JTextArea( int rows, int columns)    // empty
JTextArea( String text, int rows, int columns)
```

Class	Description (page) / Tutorial
JTextArea	A JTextArea is a multi-line area that displays plain text. (p 833) <a href="https://docs.oracle.com/javase/tutorial/uiswing/components/textarea.html">docs.oracle.com/javase/tutorial/uiswing/components/textarea.html</a>
Font	Represents fonts, which are used to render text in a visible way. (p 836) <a href="https://docs.oracle.com/javase/tutorial/2d/text/fonts.html">docs.oracle.com/javase/tutorial/2d/text/fonts.html</a>

Look and feel can be altered by a call to this method. (p 842)

```
UIManager.setLookAndFeel( String className)
```

## Code snippets

Let's say you want to create some of these fancy GUI objects. GO!

```
// create an un-editable text field
JTextField tf = new JTextField( 10);
tf.setEditable( false);
tg.setText( "Bill");

// create list of choices, add action listener to respond to choice
String[] critters = { "bee", "wombat", "orangutan"};
JList critterList = new JList( critters);
critterList.addActionListener( new CritterListener());

// create combo box of choices
String[] companies = {"Google", "Apple", "Samsung", "IBM"};
JComboBox companyBox = new JComboBox( companies);

// read a jpg; put it in a JLabel to show it
ImageIcon image = new ImageIcon( "test.jpg");
JLabel label = new JLabel( image);

// set the font of the text in a label
Font f = new Font( "Arial", Font.PLAIN, 12);
JLabel label = new JLabel( "Prof Bill");
label.setFont( f);
```

## EZ choosers

These choosers are highly specialized and easy to use.

- p 821 - JFileChooser example
- p 823 - JColorChooser example