

### Cheat Sheet based on:

**Swing/GUI Cheat Sheet at Williams College**

<http://eventfuljava.cs.williams.edu/s04/handouts/SwingGUICheatSheet.html>

### Displaying a Swing component

Construct and initialize the component.

```
button = new JButton ("ButtonLabel");
```

Add it to the content pane of the window or to a JPanel that is added to the display.

```
getContentPane().add (button);
```

Import javax.swing. *and sometimes also java.awt.* at the beginning of the class creating the components.

```
import javax.swing.; import java.awt.
```

### Getting events from GUI component

Declare that the class handling the event implements the appropriate listener interface.

```
implements ActionListener
```

Define the method that the listener interface requires.

```
public void actionPerformed (ActionEvent event)
```

Add a listener appropriate for the component to the component.

```
button.addActionListener (this);
```

Import java.awt.event. (*and occasionally javax.swing.event.*) at the beginning of the class that is the listener.

```
import javax.swing.; import java.awt.
```

### Finding out which component sent the event

When the listener method is called, you can find out which component sent the event by calling getSource() on the event:

```
public void actionPerformed (ActionEvent event) {
    Object theButton = event.getSource();
    if (theButton == framedCircleButton) {
        // Create a framed circle
    }
}
```

If a method returns a String, remember to compare the result using the equals method, not ==:

```
aMenu.getSelectedItemAt().equals ("A value");
```

### Containers

JPanel constructor: `new JPanel ()`

Define the type of layout: `void setLayout (LayoutManager lm)`

Add an object to a container: `void add (Component c)`  
(FlowLayout or GridLayout)

Add an object to a container: `void add (Component c, int position)`  
(BorderLayout)

Both JPanel and the object obtained by sending getContentPane() to a WindowController object are containers (and have type Container). These methods are available for all containers.

For BorderLayouts, position may be either BorderLayout.NORTH, BorderLayout.SOUTH, BorderLayout.EAST, BorderLayout.WEST, or BorderLayout.CENTER.

### Layout Managers

BorderLayout constructor: `new BorderLayout ()`

FlowLayout constructor: `new FlowLayout ()`

GridLayout constructor: `new GridLayout (int rows, int cols)`  
`new GridLayout (int rows, int cols, int colSpacing, int rowSpacing)`

BorderLayout is the default layout for WindowController, whereas FlowLayout is default for JPanel.

### GUI Components - General

The following methods can be applied to any Component:

```
void setFont (Font f)
void setForeground (Color c)
void setBackground (Color c)
```

To construct a font use:

```
new Font (String name, int style, int size)
```

Style can be one of the following:

```
Font.BOLD
Font.ITALIC
Font.PLAIN
Font.BOLD+Font.ITALIC
```

### Positioning and Size

```
void setBounds (int x, int y, int w, int h)
```

# Java Swing/GUI Cheat Sheet

by NeonKnightOA via [cheatography.com/24399/cs/6049/](https://cheatography.com/24399/cs/6049/)

## GUI Components - JButton

Constructor:	'new JButton (String s)'
General Methods:	'String getText ( )'{'nl'}'void setText (String s)'
Listener Interface:	'ActionListener'
Adding the listener:	'void addActionListener (ActionListener al)'
Listening Method:	'void actionPerformed (ActionEvent e)'

## GUI Components - JComboBox

Constructor and Initialization:	'new JComboBox ( )'{'nl'}'void addItem (Object item)'
General Methods:	'Object getSelectedItem ( )'{'nl'}'String text=(String)menu.getSelectedItem();'{'nl'}'getSelectedIndex ( )'
Listener Interface:	'ItemListener'{'nl'}'ActionListener'
Adding the listener:	'void addItemListener (ItemListener il)'{'nl'}'void addActionListener (ActionListener al)'
Listening Method:	'void itemStateChanged (ItemEvent e)'{'nl'}'void actionPerformed (ActionEvent e)'

### About methods:

'getSelectedItem ( )' returns the selected item{'nl'}'(String) menu.getSelectedItem ( );' is a typecast which treats the above returned value as a String{'nl'}'int getSelectedIndex ( )' returns the index of the selected item.

### About the listeners:

This component can hear the user making a menu selection dependong on the chosen interface. Be consistent in your choice of listener interface, adding method, and listening method.

## GUI Components - JLabel

Constructors:	'new JLabel (String s)'{'nl'}'new JLabel (String s, int align)'
General Methods:	'void setText (String s)'{'nl'}'String getText ( )'
Listener Interface:	No listeners available.
align can be either 'JLabel.RIGHT', 'JLabel.LEFT' or 'JLabel.CENTER'.	

## GUI Components - JSlider

Constructor:	'new JSlider (int orientation, int minimum,'{'nl'}' int maximum, int initialValue)'
General Methods:	'void setValue (int newVal)'{'nl'}'int getValue ( )'
Listener Interface:	'ChangeListener'
Adding the Listener:	'addChangeListener (ChangeListener al)'
Listening Method:	'void stateChanged (ChangeEvent e)'
orientation can be either 'JSlider.HORIZONTAL' or 'JSlider.VERTICAL'.	

## GUI Components - JTextField

Constructors:	'new JTextField (String s)'
General Methods:	'void setText (String s)'{'nl'}'String getText ( )'
Listener Interface:	'ActionListener'
Adding the Listener:	'addActionListener (ActionListener al)'
Listening Method:	'void actionPerformed (ActionEvent e)'

## Cheatographer

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## Cheat Sheet

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