GUI Ex Sliders

CPSC 1181 – O.O.

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Langara.
THE COLLEGE OF HIGHER LEARNING.

Overview

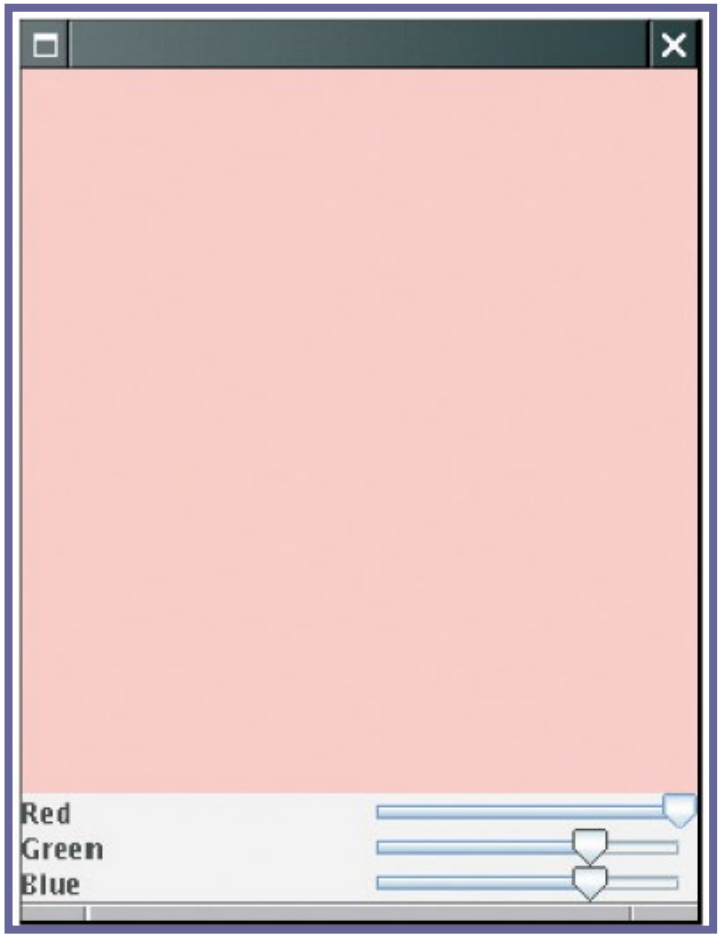
- Example with sliders

Example

- We're going to make a colour mixer.

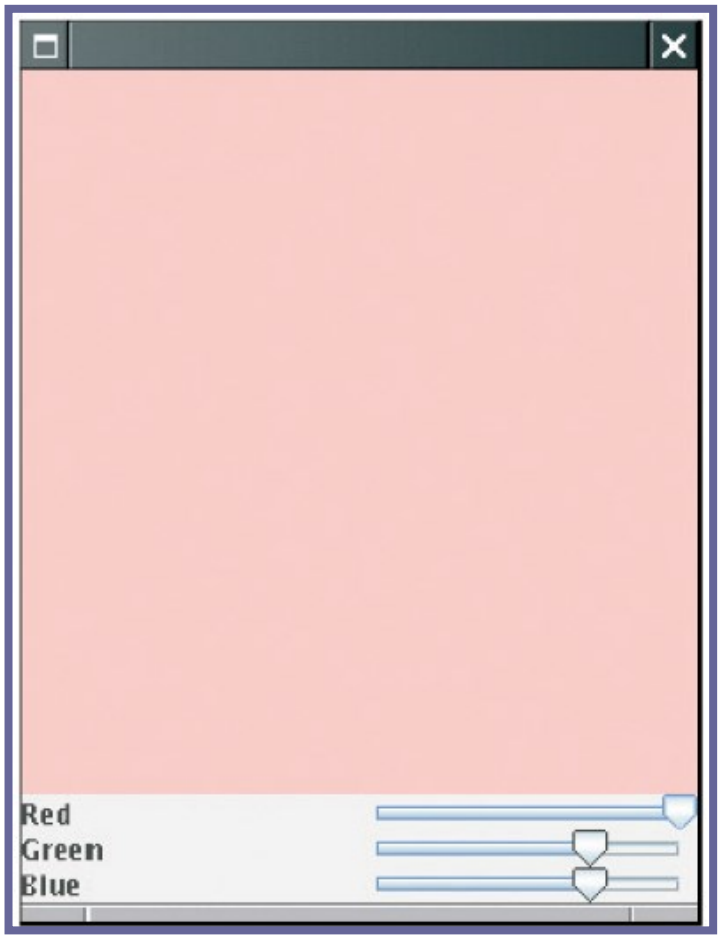
- A top part
- Bottom part

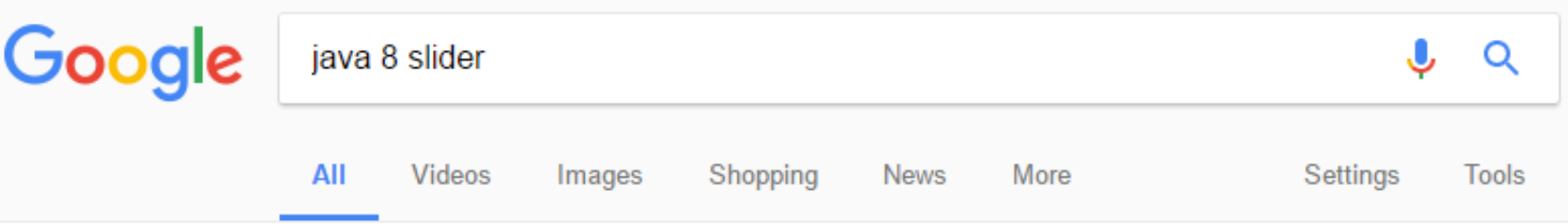
- Looks like a Border Layout
  - Top part is "centre"



Bottom Part

- Looks like a grid
  - Maybe not the best choice, but we'll go with it
- 3 labels beside 3 sliders
- Google: Java 8 slider




Google
java 8 slider
All
Videos
Images
Shopping
News
More
Settings
Tools
About 719,000 results (0.34 seconds)
Slider (JavaFX 8) - Oracle Help Center
https://docs.oracle.com/javase/8/javafx/api/javafx/scene/control/Slider.html
The three fundamental variables of the slider are min , max , and value . The value should .....
Methods inherited from class java.lang.Object · clone, equals ...
JSlider (Java Platform SE 8) - Oracle Help Center
https://docs.oracle.com/javase/8/docs/api/javax/swing/JSlider.html
A component that lets the user graphically select a value by sliding a knob within a bounded interval.
The knob is always positioned at the points that match ...
Using JavaFX UI Controls: Slider | JavaFX 2 Tutorials and ...
docs.oracle.com › JavaFX Documentation Home › Using JavaFX UI Controls
She lives in St. Petersburg, Russia, and develops tutorials and technical articles for Java and JavaFX
technologies. ... It can also include tick marks and tick labels that indicate numeric values of the range.
... You can assign the setSnapToTicks method to true to keep the slider's value ...
How to Use Sliders (The Java™ Tutorials > Creating a GUI With JFC ...
docs.oracle.com › ... › Creating a GUI With JFC/Swing › Using Swing Components
Click the Launch button to run SliderDemo using Java™ Web Start (download JDK 7 or later).
Alternatively, to compile and run the example yourself, consult the ...

What

- Looking for:
  - How to create
  - How to listen to events
  - How to get values

- Try the tutorial first
  - Then check the Javadoc if you need more

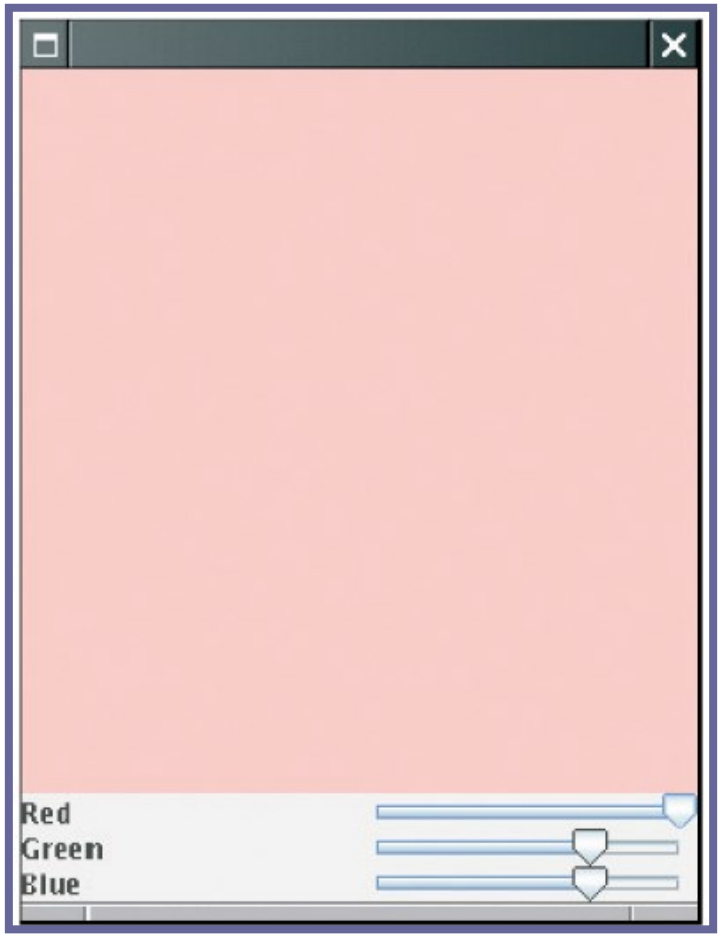
From tutorial:

```
JSlider framesPerSecond = new
JSlider(JSlider.HORIZONTAL,FPS_MIN,
FPS_MAX, FPS_INIT);
framesPerSecond.addChangeListener(this);

//Turn on labels at major tick marks.
framesPerSecond.setMajorTickSpacing(10);
framesPerSecond.setMinorTickSpacing(1);
framesPerSecond.setPaintTicks(true);
framesPerSecond.setPaintLabels(true);
```

From tutorial

```
public void stateChanged(ChangeEvent e) {
    JSlider source = (JSlider)e.getSource();
    if (!source.getValueIsAdjusting()) {
        int fps = (int)source.getValue();
        if (fps == 0) {
            if (!frozen) stopAnimation();
        } else {
            delay = 1000 / fps;
            timer.setDelay(delay);
            timer.setInitialDelay(delay * 10);
            if (frozen) startAnimation();
        }
    }
}
```

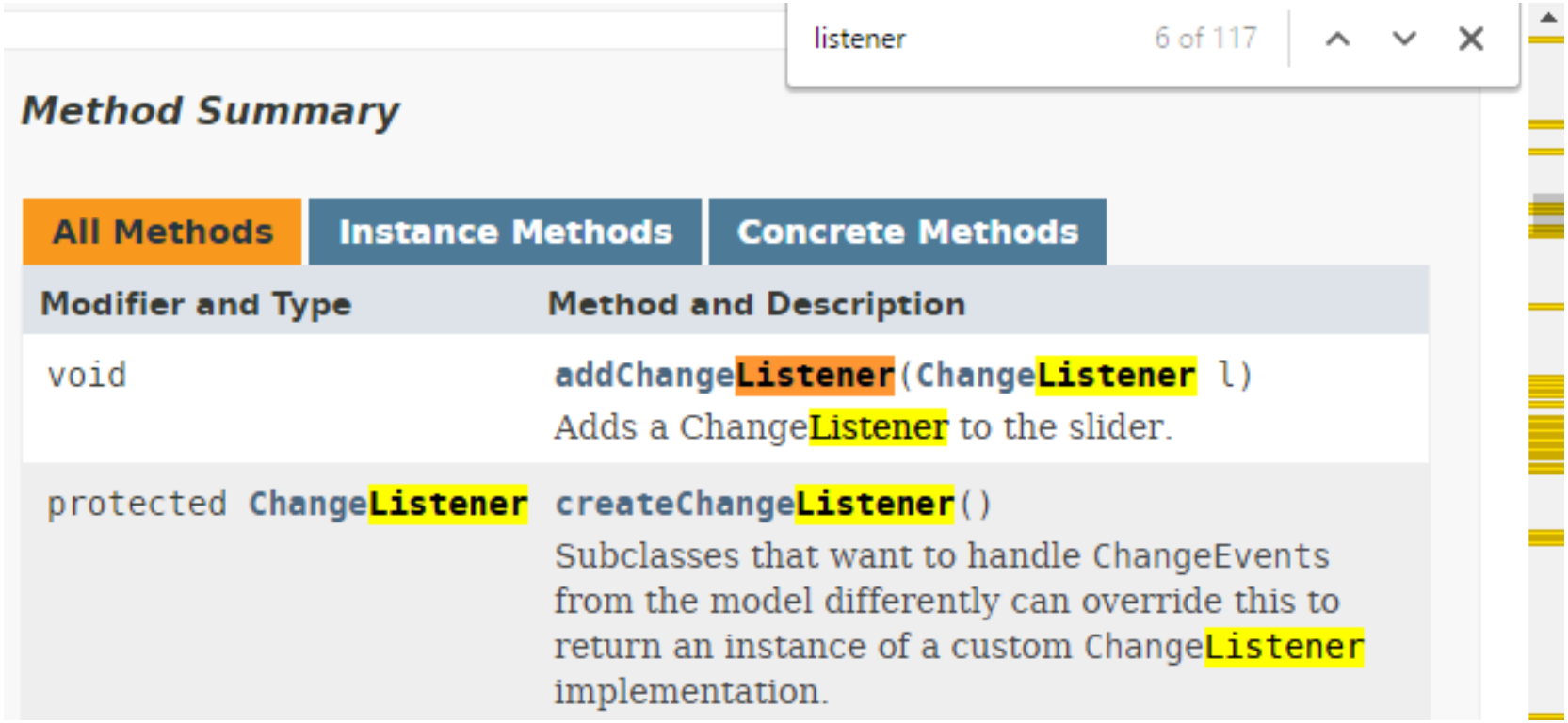

Red
Green
Blue

Skill

- Learn how to efficiently read documentation
  - ~50 methods
  - ~250 inherited
- Learn to skim
- Learn to filter things that aren't relevant
  - If you don't understand it, its probably not what you want; move on
- Look for keywords
- Search for what you want

Constructors

Constructor and Description
`JSlider``()` Creates a horizontal slider with the range 0 to 100 and an initial value of 50.
`JSlider``(`**`BoundedRangeModel`**` brm)` Creates a horizontal slider using the specified BoundedRangeModel.
`JSlider``(int orientation)` Creates a slider using the specified orientation with the range 0 to 100 and an initial value of 50.
`JSlider``(int min, int max)` Creates a horizontal slider using the specified min and max with an initial value equal to the average of the min plus max.
`JSlider``(int min, int max, int value)` Creates a horizontal slider using the specified min, max and value.
`JSlider``(int orientation, int min, int max, int value)` Creates a slider with the specified orientation and the specified minimum, maximum, and initial values.


listener
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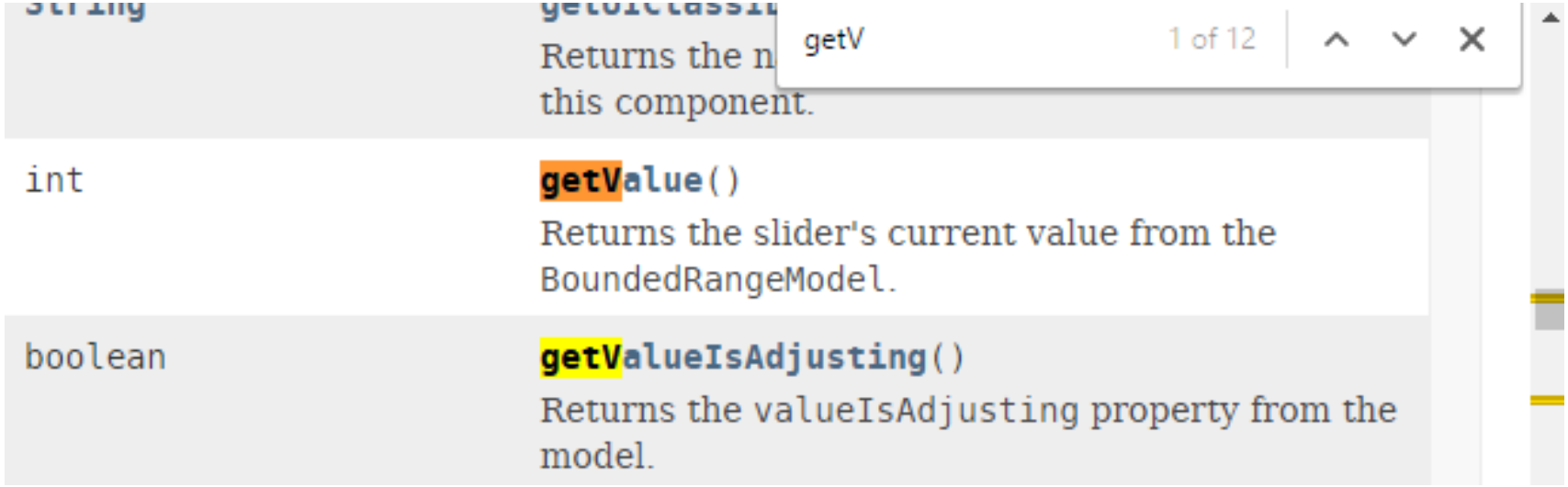
Method Summary
All Methods
Instance Methods
Concrete Methods
Modifier and Type
Method and Description
void
addChangeListener(ChangeListener l)
Adds a ChangeListener to the slider.
protected ChangeListener
createChangeListener()
Subclasses that want to handle ChangeEvents from the model differently can override this to return an instance of a custom ChangeListener implementation.


String
Returns the n
this component.
getV
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int
getValue()
Returns the slider's current value from the BoundedRangeModel.
boolean
getValueIsAdjusting()
Returns the valueIsAdjusting property from the model.

Algorithm

- Make the thing
  - Layout, etc
  - Attach listener(s)
  - On event, get values of sliders
  - Re-compute
  - Repaint