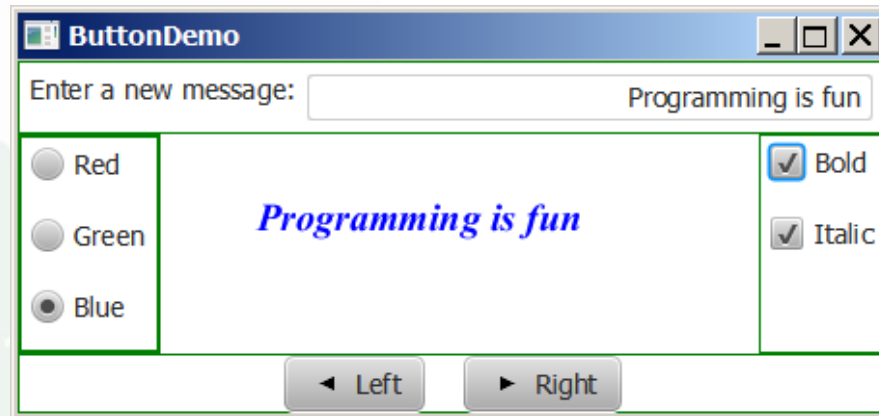


TextField Example

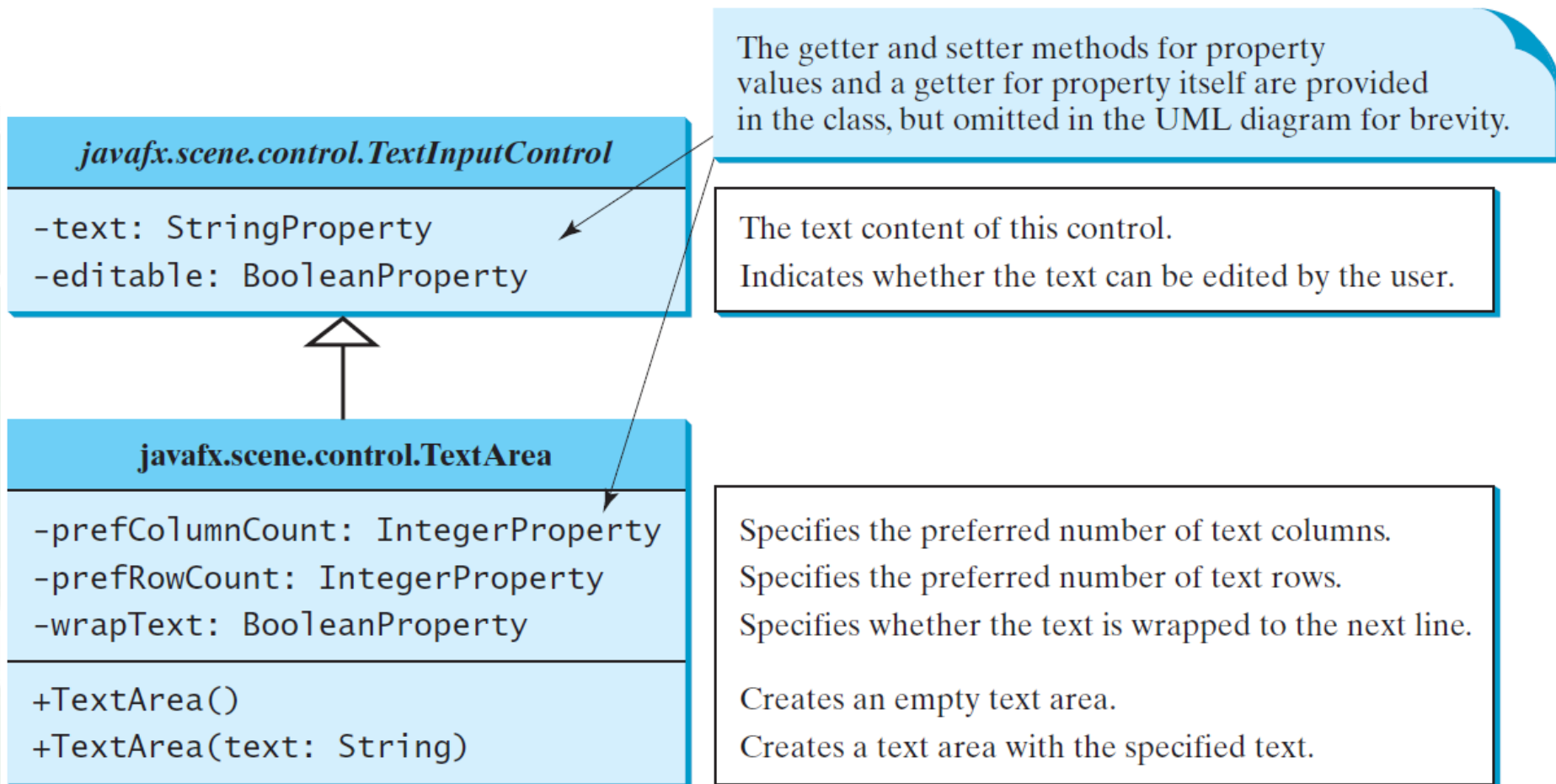


TextFieldDemo

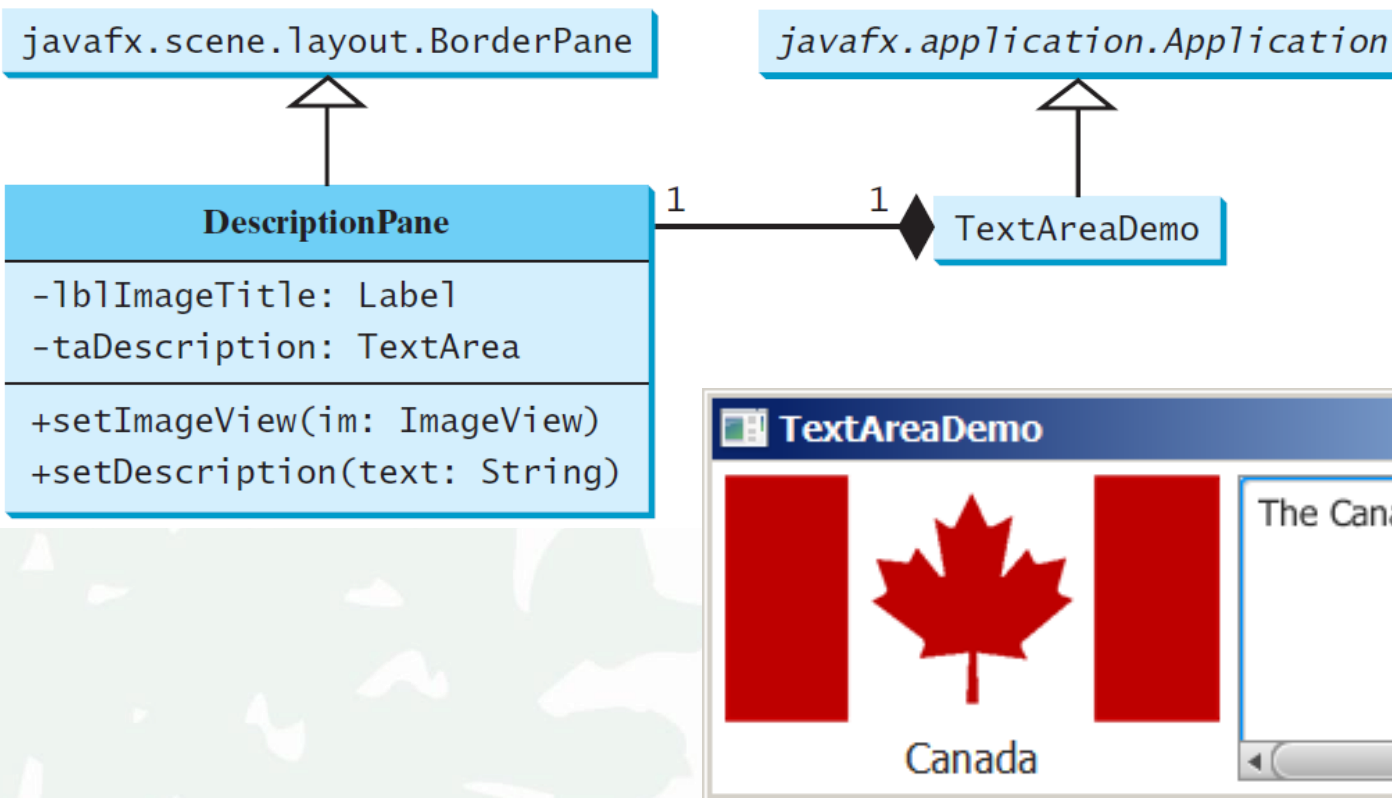
Run

TextArea

A **TextArea** enables the user to enter multiple lines of text.



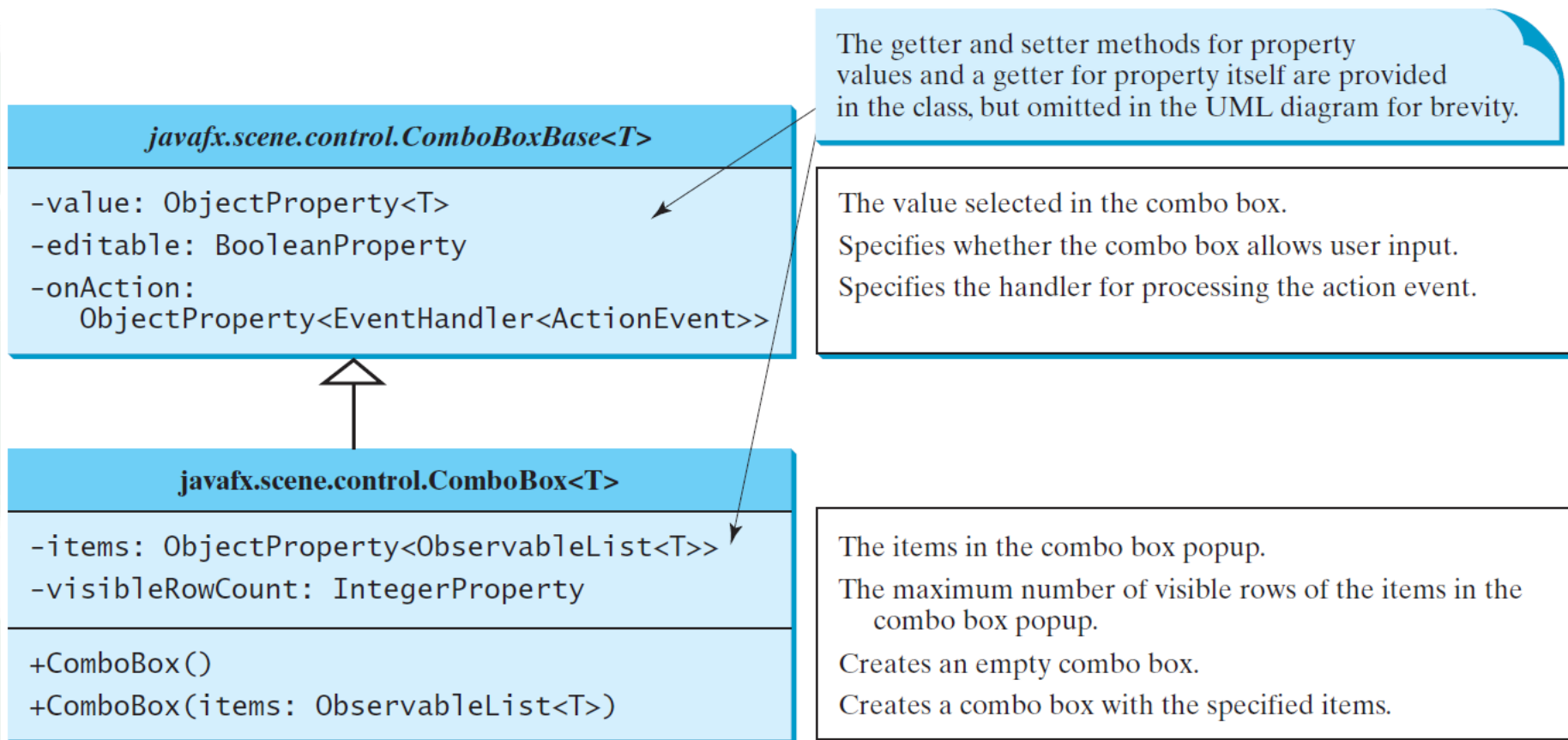
TextArea Example



DescriptionPane
TextAreaDemo
Run

ComboBox

A combo box, also known as a choice list or drop-down list, contains a list of items from which the user can choose.



ComboBox Example

This example lets users view an image and a description of a country's flag by selecting the country from a combo box.



ComboBoxDemo

Run

List View

A *list view* is a component that performs basically the same function as a combo box, but it enables the user to choose a single value or multiple values.

javafx.scene.control.ListView<T>

```

-items: ObjectProperty<ObservableList<T>>
-orientation: BooleanProperty
-selectionModel:
  ObjectProperty<MultipleSelectionModel<T>>

+ListView()
+ListView(items: ObservableList<T>)
  
```

The getter and setter methods for property values and a getter for property itself are provided in the class, but omitted in the UML diagram for brevity.

The items in the list view.

Indicates whether the items are displayed horizontally or vertically in the list view.

Specifies how items are selected. The `SelectionModel` is also used to obtain the selected items.

Creates an empty list view.

Creates a list view with the specified items.

Example: Using ListView

This example gives a program that lets users select countries in a list and display the flags of the selected countries in the labels.



ListViewDemo

Run

ScrollBar

A *scroll bar* is a control that enables the user to select from a range of values. The scrollbar appears in two styles: *horizontal* and *vertical*.

The getter and setter methods for property values and a getter for property itself are provided in the class, but omitted in the UML diagram for brevity.

javafx.scene.control.ScrollBar

```

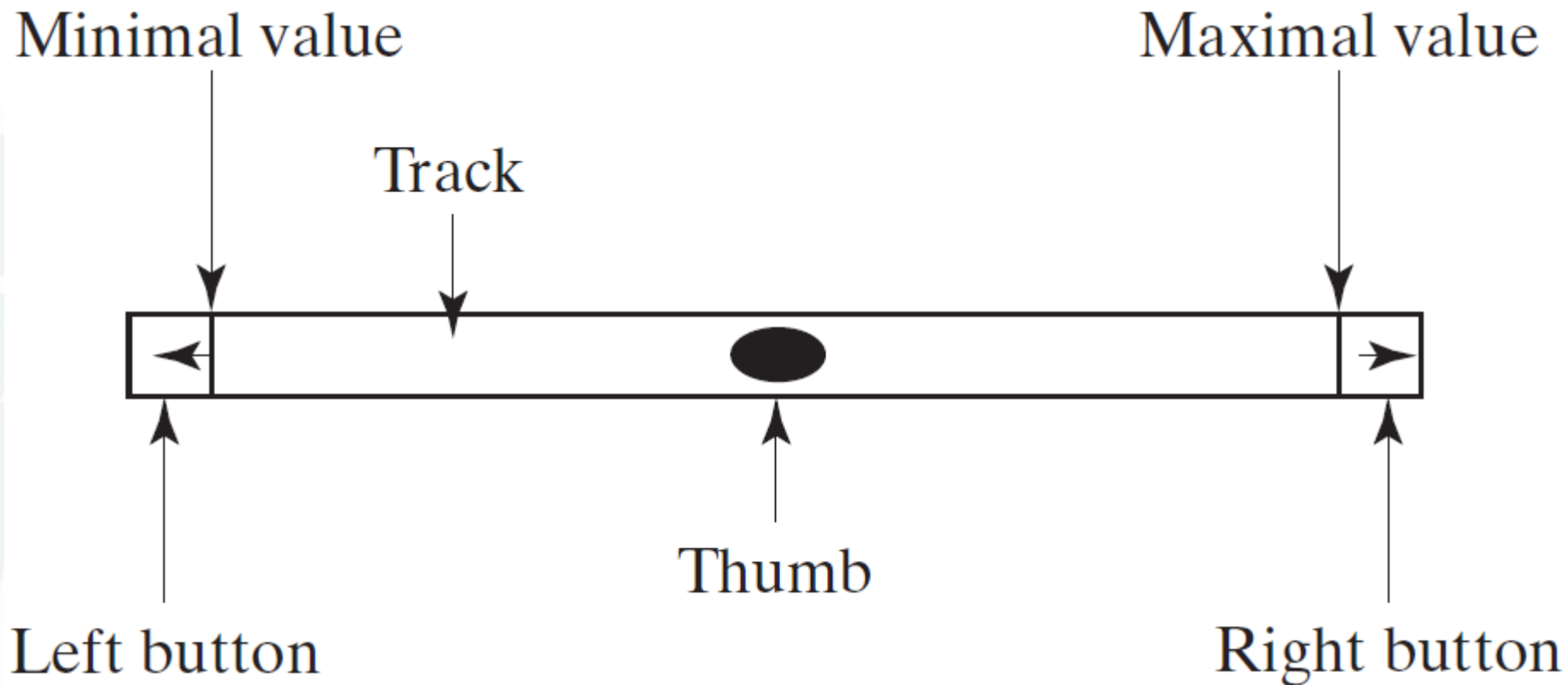
-blockIncrement: DoubleProperty
-max: DoubleProperty
-min: DoubleProperty
-unitIncrement: DoubleProperty

-value: DoubleProperty
-visibleAmount: DoubleProperty
-orientation: ObjectProperty<Orientation>

+ScrollBar()
+increment()
+decrement()
    
```

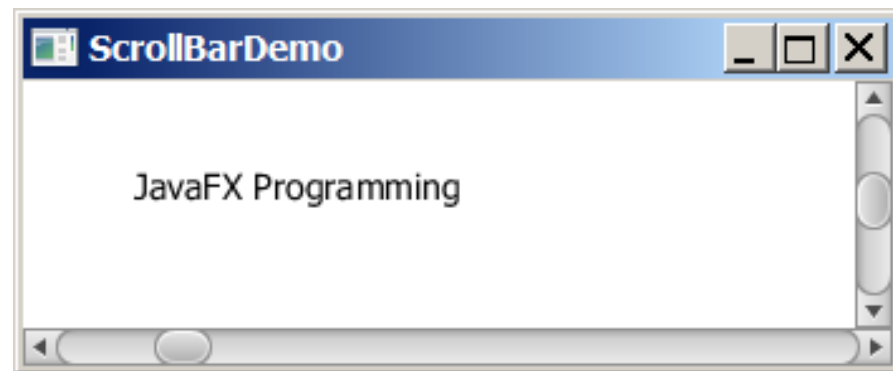
The amount to adjust the scroll bar if the track of the bar is clicked (default: 10).
 The maximum value represented by this scroll bar (default: 100).
 The minimum value represented by this scroll bar (default: 0).
 The amount to adjust the scroll bar when the `increment()` and `decrement()` methods are called (default: 1).
 Current value of the scroll bar (default: 0).
 The width of the scroll bar (default: 15).
 Specifies the orientation of the scroll bar (default: HORIZONTAL).
 Creates a default horizontal scroll bar.
 Increments the value of the scroll bar by `unitIncrement`.
 Decrements the value of the scroll bar by `unitIncrement`.

Scroll Bar Properties



Example: Using Scrollbars

This example uses horizontal and vertical scrollbars to control a message displayed on a panel. The horizontal scrollbar is used to move the message to the left or the right, and the vertical scrollbar to move it up and down.



ScrollBarDemo

Run

Slider

Slider is similar to ScrollBar, but Slider has more properties and can appear in many forms.

javafx.scene.control.Slider

-blockIncrement: DoubleProperty
 -max: DoubleProperty
 -min: DoubleProperty
 -value: DoubleProperty
 -orientation: ObjectProperty<Orientation>
 -majorTickUnit: DoubleProperty
 -minorTickCount: IntegerProperty
 -showTickLabels: BooleanProperty
 -showTickMarks: BooleanProperty

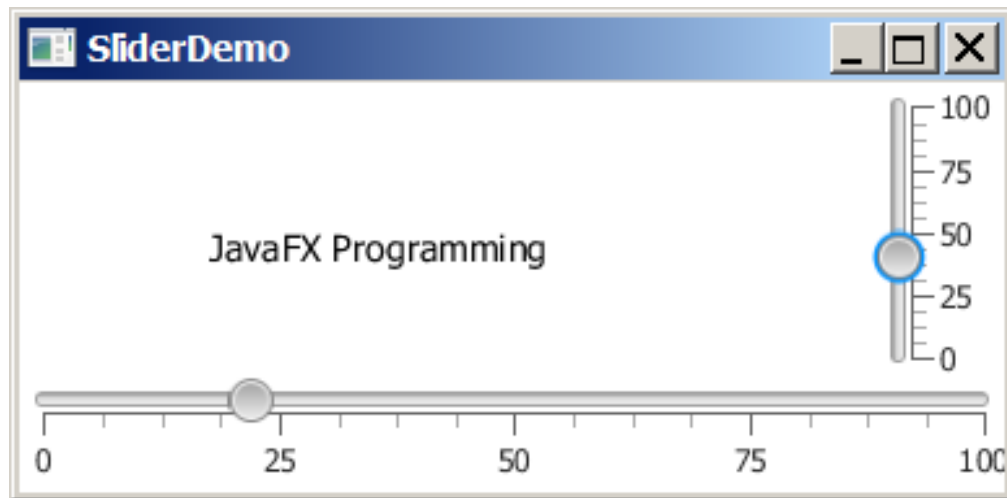
+Slider()
 +Slider(min: double, max: double, value: double)

The getter and setter methods for property values and a getter for property itself are provided in the class, but omitted in the UML diagram for brevity.

The amount to adjust the slider if the track of the bar is clicked (default: 10).
 The maximum value represented by this slider (default: 100).
 The minimum value represented by this slider (default: 0).
 Current value of the slider (default: 0).
 Specifies the orientation of the slider (default: HORIZONTAL).
 The unit distance between major tick marks.
 The number of minor ticks to place between two major ticks.
 Specifies whether the labels for tick marks are shown.
 Specifies whether the tick marks are shown.
 Creates a default horizontal slider.
 Creates a slider with the specified min, max, and value.

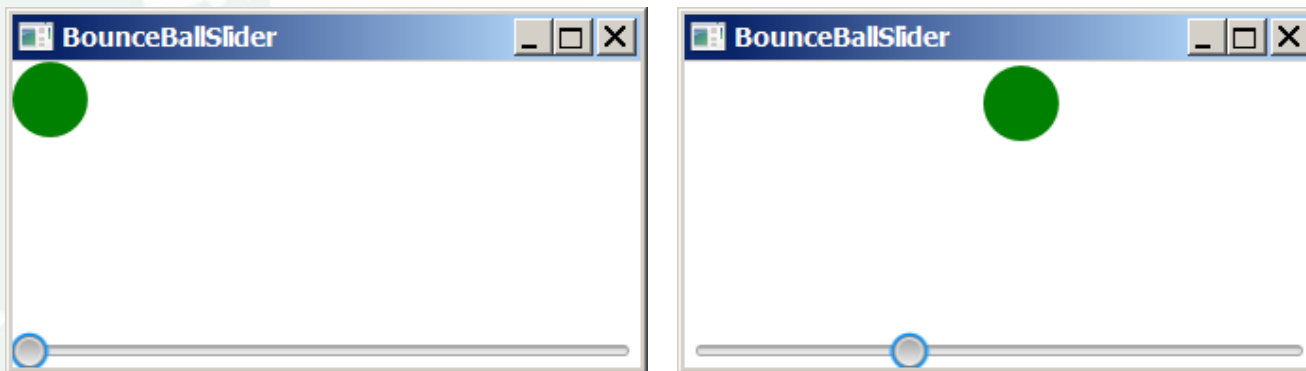
Example: Using Sliders

Rewrite the preceding program using the sliders to control a message displayed on a panel instead of using scroll bars.



Case Study: Bounce Ball

Listing 15.17 gives a program that displays a bouncing ball. You can add a slider to control the speed of the ball movement.



SliderDemo

Run