CSD 402 Module 11 Assignment

Katie Hilliard

2/25/2025

JavaFX is the most modern GUI framework used in Java. There are several functions that it offers, but we’re going to focus on the ScrollPane and TitledPane.

The ScrollPane is pretty obvious. We use this to allow users to view more content on the page when the content exceeds the screen resolution. You’ve probably seen this before when viewing a large image or reading more context on a page. You can scroll up and down or side to side simply by clicking and dragging the scrollbar. The javafx.scene.control.ScrollPane class is used to represent the JavaFX ScrollPane.

To create a ScrollPane, a ScrollPane instance must be established first. An example of this would be:

ScrollPane scrollPane = new ScrollPane();

Then, set the content to display with its setContent() method.

The part of the ScrollPane we see is called the viewport. If the control you wish to display in the ScrollPane uses any effects or transformations, they should be wrapped in a JavaFX Group first to avoid a distorted display. There is also a pannable ScrollPane that allows users to scroll by holding down the left side of the mouse button and still move the mouse around. This is a shortcut that users can use instead of scrollbars. The only difference is you can’t pan all around the screen when panning, it can only be either up and down or left to right. To use pannable mode, the pannableProperty must be set to true, like this:

scrollPane.pannableProperty().set.(true);

You can fit to width and height in JavaFX to make the ScrollPane fit to width or height in the viewport. The fitToWidth and fitToHeight properties must be set to true like this:

scrollPane.fitToWidthProperty().set(true);

and

scrollPane.fitToHeightProperty().set(true);

Developers can choose to show or hide scrollbars using scrollbar policies. The values ALWAYS, AS\_NEEDED and NEVER are used to set the ScrollPane hbarPoliciyProperty and vbarPolicyProperty.

Here’s an example setting the properties to ScrollBarPolicy.ALWAYS:

scrollPane.hbarPolicyProperty().setValue(ScrollPane.ScrollBarPolicy.ALWAYS);

scrollPane.vbarPolicyProperty().setValue(ScrollPane.ScrollBarPolicy.ALWAYS);

This example always keeps the vertical and horizontal scrollbars in the ScrollPane.

The TitledPane is a control that displays the webpage in a box with a title at the top. The TitledPane is used in the JavaFX Accordion control and has the ability to expand or collapse.

To use TitledPane, a TitledPane instance should be created first. Here is an example:

Label label = new Label(“The content inside the TitledPane”);

TitledPane titledPane = new TitledPane(“The Title”, label);

The second line in the example is what creates TitledPane instance. The displayed title in the TitledPane is passed as a parameter to the constructor. Also, a JavaFX Node is passed as a parameter to the constructor as well.

There are other things you can do with the TitledPane, such as collapse, expand, or disable collapse. As I mentioned earlier, the TitledPane has the ability to expand or collapse. To do this, the user would click the small triangle next to the title in the bar of the TitledPane. When the pane is collapsed, the content disappears. When it’s expanded, the content is made visible again. To programmatically expand and collapse a TitledPane, you can call the setExpanded() method like this:

titledPane.setExpanded(true);

titledPane.setExpanded(false);

To disable the collapse function, you would call the setCollapsible() method and pass a false value as the parameter. An example of turning off the collapsible function of a TitledPane would be like this:

Label label = new Label(“The content inside the TitledPane”);

TitledPane titledPane = new TitledPane(‘The Title”, label);

titledPane.setCollapsible(false);

To conclude, ScrollPane and TitledPane are important components within JavaFX that contribute to the enhancement of user experience with its’ content accessibility and organization. The ScrollPane allows large content be viewed within the space provided along with the scrollbars so users can access the content in its’ entirety. The TitledPane provides structure for content using sections that can collapse or expand. This makes it easier for users to fill out lengthy forms.

These components help developers create applications that are user friendly and provide a seamless, organized page for users. Since they have been integrated in JavaFX, it has made it an even powerful framework that allows developers to customize interfaces that will satisfy users of any application.

References:

Jenkov, J. (n.d.). *JavaFX Scrollpane*. Jenkov.com Tech & Media Labs - Resources for Developers, IT Architects and Technopreneurs. <https://jenkov.com/tutorials/javafx/scrollpane.html>

Jenkov, J. (n.d.-b). *JavaFX Titledpane*. Jenkov.com Tech & Media Labs - Resources for Developers, IT Architects and Technopreneurs. <https://jenkov.com/tutorials/javafx/titledpane.html>