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**Module 11 Assignment**

What makes a good application today? That’s right, it’s a really solid well thought out and practical Graphical User Interface or GUI. In Java, there are a few different frameworks for building GUI’s. In this paper we are talking about JavaFX, which provides a vast arrow of controls for handling GUI elements. Two of the controls I will talk about are the TitledPane and the ScrollPane within JavaFX. These two functionalities compliment each other perfectly and this paper aims to show their importance in GUI integration.

A TitledPane is a collapsible panel. That sounds so simple right? Well, it actually is simple to its core, and many modern GUI’s leverage this function under the hood. This feature allows for information inside GUI’s to be presented in a clean format without making the end user feel overloaded. You can decide to collapse all panels except the panel you wish to view at the time, allowing for the end user to more easily track what they are working on. My best example I can think of to resemble this in action is the Cisco Unified Communications Manager application. There are seemingly infinite amounts of TitlePane’s within that application, but without them, the GUI would be impossible to navigate. The main plus side in this application is keeping the interface clean.

The ScrollPane function does exactly what it sounds like. Allows the user to scroll through the GUI menu when the components inside the GUI exceed the dimensions of the window. Imagine you have a TitledPane that contained a ton of data that exceeds the screen limit of the GUI, that is where the ScrollPane shines! Anytime data requires a lot of screen real estate, there must be a ScrollPane function in place to allow the user to view the rest of the data. To me, this function is essential to the user experience. Most modern applications have a scroll function even if they are not created in JavaFX, it should be very obvious why the ScrollPane is one of the most important functions.

The two functions in JavaFX, ScrollPane, and TitledPane work extremely well together. Imagine an application with expandable panes (TitledPane’s), and the user decides to expand all the panes at the same time. The total amount of data on screen would certainly exceed the limits and would mandatorily require a ScrollPane function as well. The practical example again pivots back to the Cisco Unified Communications Call manager application. The administrator logs into the tool to start managing cisco IP phones and needs to make adjustments to numerous fields. The tool UI is organized and clean using the TitledPanes and then allows for the administrator to scroll through the settings once expanded. This application has single TitlePanes that expand so large that even just a single expanded container will exceed the page limit.

A successful implementation of both the TitledPane and ScrollPane, will result in an application that keeps a good aesthetic while making sure the application is also easy to use. A good ScrollPane serves as a solution to users having more information than can fit on a single screen. Where the TitledPane essentially serves the same purpose, making the application GUI more organized and fit more data in one section.

When in a developer role, planning out the GUI can be very tricky. Selecting and using the correct UI components is essential for usability and performance. The combination of two JavaFX controls, the TitledPane and the ScrollPane are perfect examples of how two functions can work together. Giving the user a smooth experience while also retaining the core functionality of the application. The TitledPane function helps in data arrangement so that it’s easy to read. And the ScrollPane function guarantees that all the information is available. When building a GUI for an application that has numerous sections that can be expanded with lots of information to be provided, the combination of the TitledPane and the ScrollPane should always be used for the best user experience.

**References:**

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