Java GUI

GUI or in other words a Graphical User Interface in Java gives many programmers an advantage of easy-to-use visual experience to build applications in the Java language. The GUI is made of graphical components such us windows, buttons, and labels, and much more through which the user is able to interact with an application. The Abstract Windowing Toolkit also known as AWT was Sun’s initial effort to create a set of cross-platform GUI classes. According to the research I found, it was introduced in JDK 1.0. Abstract Windowing Toolkit mapped general Java Code to each operating system’s real Graphical User Interface system. In addition to that the Abstract Windowing Toolkit was limited to lowest common denominator which made the usability clunky. If one knows how to create and use the Graphical User Interface, there are many benefits to using one.

Going along with that, a Swing is a newer Graphical User Interface library that was written from the ground up and allows much more powerful graphics and Graphical User Interface construction. It was introduced right after JDK 1.1. The Swing points Graphical User Interface controls itself pixel by pixel rather than handing it off to the Operating System. In addition to that, it has better features, better design, and better compatibility (Edu, 2011). Going along with that, the Graphical User Interface toolkit provides rich set of widgets and packages. It is also a part of Java Foundation Classes also known as JFC, which is an API for Java programs that provide Graphical User Interface. The Swing library is built on top of the Java Abstract Widget Toolkit, known as AWT, an older platform dependent GUI toolkit. Lastly, one can use the Java Graphical User Interface components such as textbook, button, etc. from the library and does not have to create the components from scratch making it quicker to work with (Swing, 2018).

To create a Graphical User Interface a programmer can use the JavaFX. JavaFX is one of the most used software platforms for creating and delivering desktop application along with internet applications. It provides Java developers with a high-performance graphics platform and many say that it is better to use it over Swing. The JavaFX can be used to create graphical user interfaces on numerous devices for example on mobile phones, TVs, tablets, desktops and much more. The toolkit comes with the Java Development Kit package so one does not need to install it to make a GUI program. It has the following features: library, scene builder, CSS like styling, high-performance media engine, graphics pipeline, and much more. Overall, the JavaFX has plenty of features such as Prism, which is a new graphics engine which is designed to produce high quality graphics for JavaFX applications. JavaFX is very popular in today’s world and many programmers prefer it over anything else.

Another technology a programmer can use to create a GUI is the Swing toolkit. It is a lightweight toolkit that has a strong set of widgets. The Swing library is developed on top of the Java Abstract Widget Toolkit also known as AWT which is Java’s original and independent platform for windowing, graphics, and user-interface widget tool kit. It is a part of the Java Foundation Classes that assists as a standard API for GUI programming. It has a native user interface components, robust event-handling model, imaging and graphic tools, a layout manager and much more (Team E, 2020).

In summary, the Graphical User Interface is very beneficial. It provides interaction through clarity and control making it easier to use and more appealing. It has a rich history and a there is a lot of technology out there to create easy Graphical User Interfaces to satisfy each need.

*Works Cited*

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