

Summary Of lecture Of JavaFx

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On the date of March 23, Prof. Wesley gave us an lecture about what is JavaFX and the basics classes and functions.

Prof. Wesley bypassed the details about how to install the JavaFx into the Eclipse, by giving us a website which will show us how to install it. Instead, he emphasized that we have to include the `start()` method in our JavaFX application class with Eclipse, or it won't open the window.

After introducing the reasons and the objects of learning JavaFX, he briefly told us that JavaFX is a new framework to develop Java GUI programs which developed from AWT and Swing, and replaced them.

And then he mainly focus on introduced the basic structure and classes of JavaFx. He said basic structure of JavaFX includes stage, scene and button. Stage is a window for displaying a scene that contains nodes. Then, he used a UML diagram to show us the relationship of panes, nodes and scene. Panes are used to hold nodes in a desirable location and size. However, a scene can contain a control or a Pane, but not a Shape or an ImageView. A Pane can contain any subtype of Node. Then, he introduced the concept of binding properties which allow a target object to have a change automatically when its binding source object changes. Then, we were told that Nodes share many common properties, like style and rotate. JavaFx style properties set a Java CSS(cascading style sheets) style, rotate properties rotate a node an angle in degree.

After that, He introduced several classes, like classes of Color, Font, Image and ImageView. He stressed these classes make our objects more fun but not important. Color class is a subclass of Paint class, which can be used to create colors. The Font Class enable us to set fonts for rendering the text. Both Font class and Color class are immutable, once they are created, their properties cannot be changed. Image class represents a graphical image and is used for loading an image from outside. ImageView is a node to display an image, it can be created from an Image object. In order to help us familiar these classes, he showed us an example of JavaFX project named Egg.

In the pane section, he introduced many types of panes, like StackPane, FlowPane, GridPane, BorderPane, HBox, and VBox, they will automatically lay out nodes in a desired location and size. And then, by several examples, we were showed there are many shape classes in JavaFX for drawing text, lines, circles, rectangles, ellipses, arcs, polygons, and polylines. The Shape class is the abstract base class that defines the common properties for all shapes. Finally, we were given the case study, which develops a class that displays a clock on a pane.

In the last section of this lecture, he showed us more JavaFX projects of Egg series, which built us a general idea about what is JavaFX and its basic functions.