

JavaFX 1

X1

Introduction to JavaFX

JavaFX

Designed for rich client applications

- Graphics, Uis, video, audio, etc.

Java APIs

- Not to be confused with JavaFX 1.x, which is a scripting language
- Java 8-10, integrated with JDK
- Java 11-now, JavaFX is separate, and must be installed separately

Replaces Swing

Remember HelloTutor in Week 1?

JavaFX

Extend `javafx.application.Application`

- Override the `start()` method

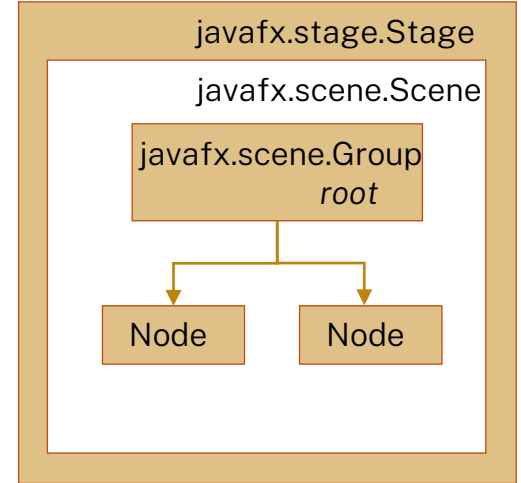
Stage: the window

Scene: a container for a scene graph

Node: object or group of objects in scene

Pane: organizer of nodes in scene graph:

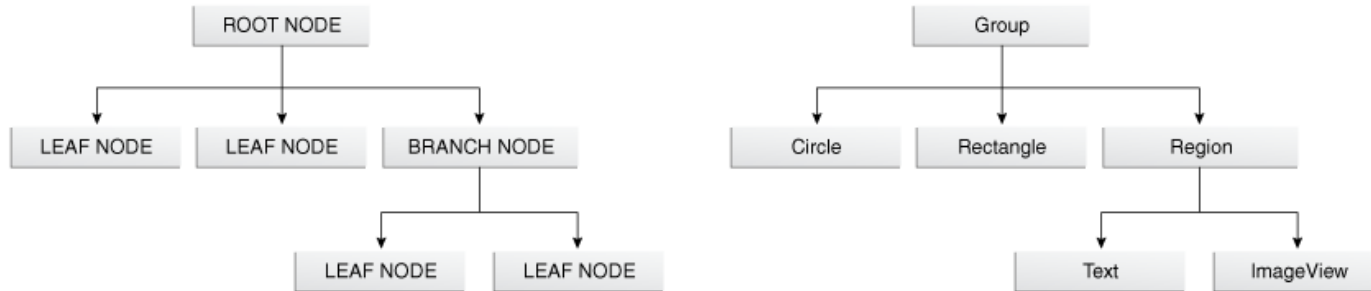
`FlowPane`, `TilePane`, `AnchorPane`, `StackPane`, ...



JavaFX Scene Graph

Tree of nodes, with a single “branch” at the root

- branch – may have children, e.g. Group, Region, Pane, ...
- leaf – may not have children, e.g. Rectangle, Circle, Text, ...



Copyright Oracle (<http://docs.oracle.com/javafx/2/scenegraph/jfxpub-scenegraph.htm>)

Nodes and Properties

Can set node properties programmatically:

```
Text message = new Text("Hello");  
message.setFont(Font.font("Tahoma", FontWeight.NORMAL, 40));  
message.setFill(Color.RED);
```

or declaratively using FXML/CSS:

```
#text {  
    -fx-font-family: Tahoma, sans-serif;  
    -fx-font-style: normal;  
    -fx-font-size: 40;  
    -fx-fill: red;  
}
```

IntelliJ has an editor for FXML