

The background of the slide is a reproduction of a painting, likely Vincent van Gogh's 'Olive Trees with Yellow Sky and Sea'. It depicts a landscape with several olive trees in the foreground and middle ground, their trunks rendered in dark, expressive brushstrokes. The foliage is a mix of green and yellow. In the distance, there are blue mountains under a bright, yellow sky. The overall style is characteristic of Impressionism, with visible, energetic brushwork.

# X01 JavaFX 1

Introduction to JavaFX



# JavaFX

- Designed for rich client applications
  - Graphics, UI's, video, audio, etc.
- Replaces Swing, AWT
- JavaFX HelloWorld

# JavaFX

Extend `javafx.application.Application`

Override the `start()` method

Stage: the window

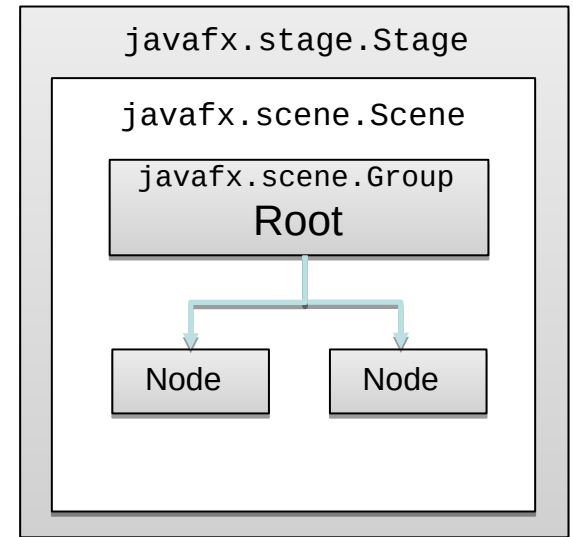
Scene: container for a scene graph

Node: object or group of objects in scene

Pane: organizer of nodes in scene graph:

`FlowPane`, `BorderPane`, `GridPane`, `HBox`,

`VBox`, etc.

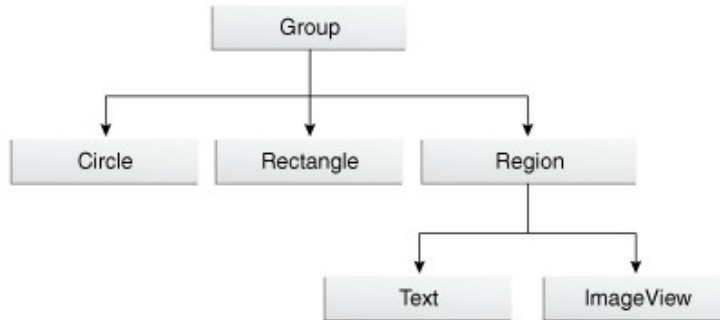
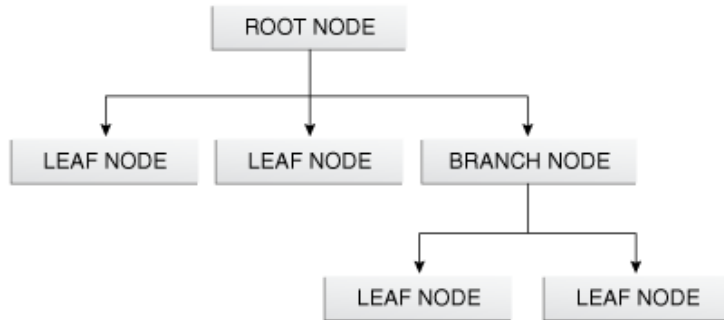


# Java FX Scene Graph

Tree of nodes, with a single 'branch' at the root

**branch** (may have children e.g. Group, Region)

**leaf** (may not have children e.g. Rectangle, Circle)



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# 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;  
}
```