JavaFX 1

Introduction to JavaFX
JavaFX

• Designed for rich client applications
  – Graphics, UI’s, video, audio, etc.
• Java APIs
  – *Not* to be confused with JavaFX 1.x, which is a scripting language, not a Java API
  – Java 8-10, integrated with JDK
  – Java 11-13, JavaFX is separate, and must be separately installed
• Replaces Swing
• 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`, `TilePane`, `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)
Nodes and Properties

Can set node properties programmatically:

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

or declaratively using FXML / CSS:

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