

JAVAFX

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INTRO TO JAVAFX

- JavaFX is a set of graphics and media packages that enables developers to design, create, test, debug, and deploy rich client applications that operate **consistently across diverse platforms**.

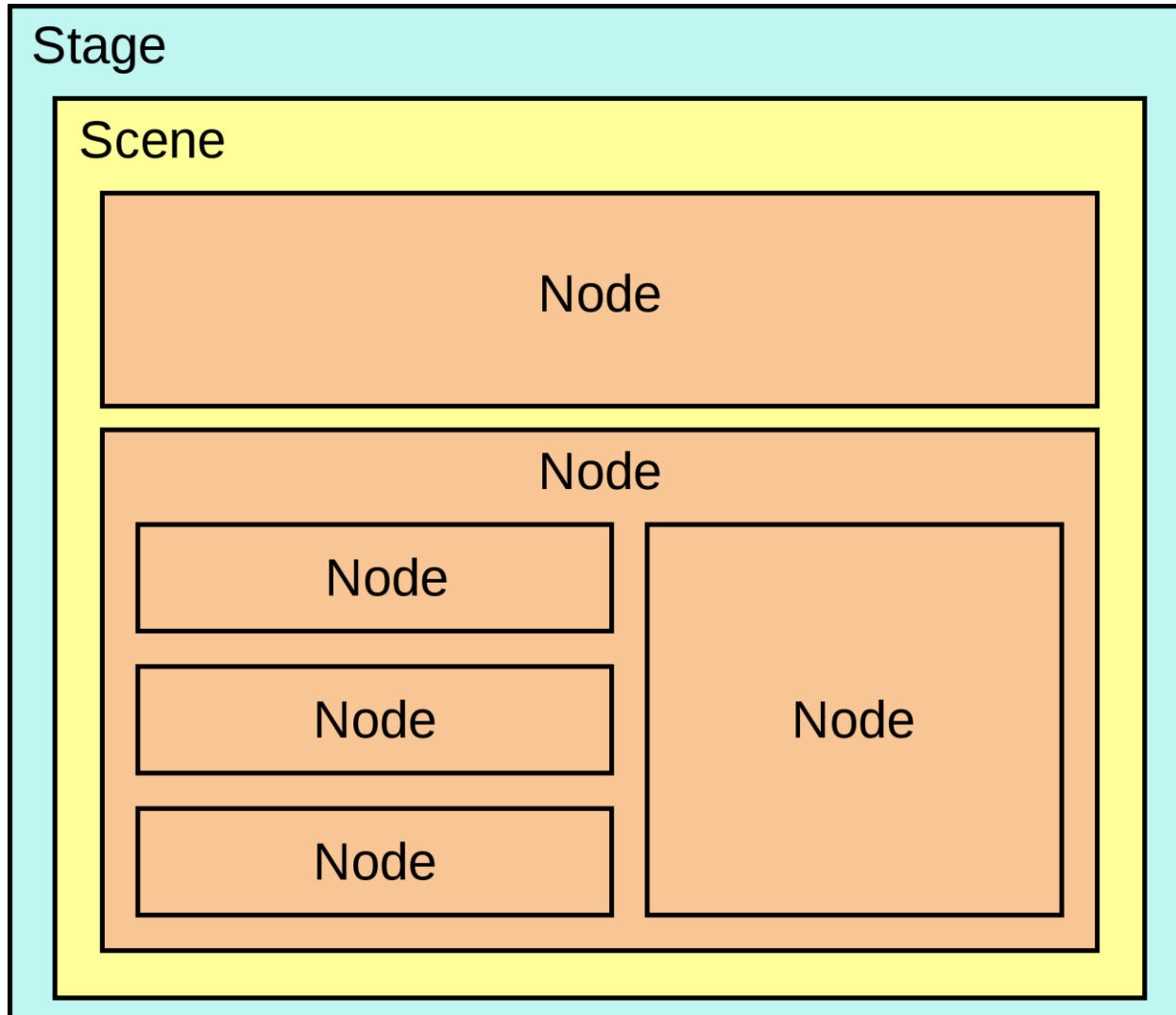
INTRO TO JAVA FX

- The JavaFX **scene graph** is
 - the starting point for constructing a JavaFX application.
 - a **hierarchical tree of nodes** that represents all of the visual elements of the application's user interface.
 - can handle input and can be rendered.

INTRO TO JAVAFX

- A single element in a scene graph is called a **node**.
- Each node has an ID, style class, and bounding volume.
- With the exception of the root node of a scene graph, each node in a scene graph has a single parent and zero or more children.
- A node can have:
 - Effects, such as blurs and shadows
 - Opacity
 - Transforms
 - Event handlers (such as mouse, key and input method)
 - An application-specific state

JAVAFX MAIN CONCEPTS



JAVAFX INSTALLATION

- Install **Java SE - JDK**
 - <http://www.oracle.com/technetwork/java/javase/downloads/index.html>
- Install Eclipse IDE for Java EE Developers
 - <https://www.eclipse.org/downloads/>
- Install Plug-in **e(fx)clipse**
 - **Eclipse, Help, Install new software**, copy and past the following link:
<http://download.eclipse.org/efxclipse/updates-released/2.3.0/site/> *(this can take a while)*

EXAMPLE 1

```
1  
2 public class FirstFX{  
3     public static void main (String[] args){  
4         System.out.println("Hello, World");  
5     }  
6 }  
7  
8
```

EXAMPLE 2

```
1  import javafx.application.Application;
2  import javafx.stage.Stage;
3
4  public class FirstFX extends Application {
5      public static void main(String[] args) {
6          launch(args);
7      }
8
9      @Override
10     public void start(Stage stage) throws Exception{
11         stage.show();
12     }
13 }
```


JAVA FX INSTALLATION (ONLY IF REQUIRED)

- In case you want to turn off this check open your preferences and go to
 - Mac: Eclipse >
 - Windows: Windows >
 - Preferences > General > Startup and Shutdown and uncheck 'JavaFX Tooling Java Check'
- File, New java project, use execution environment JRE.
- Properties, BuildPath, Libraries. Here you want JDK and not JRE.
 - Remove JRE, go to add library, select one with JDK.
 - Add library, User Library, User Library, New, Add External Jar, "C:\Program Files\Java\jdk1.8.0_25\jre\lib", jfxswt.
 - If the type Application is not recognized as API, then go to Properties, Java Build Path, double click on the Java SE package, select alternate, ok, ok...

EXAMPLE 3

```
1  import javafx.application.Application;
2  import javafx.stage.Stage;
3
4  public class FirstFX extends Application {
5      public static void main(String[] args) {
6          launch(args);
7      }
8
9      @Override
10     public void start(Stage stage) throws Exception{
11         stage.setTitle("My First Stage Title");
12         stage.show();
13     }
14 }
```

EXAMPLE 4

```
1  import javafx.application.Application;
2  import javafx.scene.Scene;
3  import javafx.scene.control.Label;
4  import javafx.scene.layout.VBox;
5  import javafx.stage.Stage;
6
7  public class FirstFX extends Application {
8
9      Label Labell;
10
11     public static void main(String[] args) {
12         launch(args);
13     }
14
15     @Override
16     public void start(Stage stage) throws Exception{
17         stage.setTitle("My First Stage Title");
18         Labell = new Label("My first Label");
19         VBox root = new VBox();
20         root.getChildren().add(Labell);
21         Scene scene = new Scene(root);
22         stage.setScene(scene);
23         stage.show();
24     }
25 }
```

EXAMPLE 5

```
1  import javafx.application.Application;
2  import javafx.event.ActionEvent;
3  import javafx.event.EventHandler;
4  import javafx.scene.Scene;
5  import javafx.scene.control.Button;
6  import javafx.scene.control.Label;
7  import javafx.scene.layout.VBox;
8  import javafx.stage.Stage;
9
10 public class FirstFX extends Application {
11
12     Label labell;
13     Button button1;
14     int i=1;
15     public static void main(String[] args) {
16         launch(args);
17     }
18
19     @Override
20     public void start(Stage stage) throws Exception{
21         stage.setTitle("My First Stage Title");
22         labell = new Label("My first Label");
23         VBox root = new VBox();
24
25         Scene scene = new Scene(root, 400, 800);
26         stage.setScene(scene);
27
28         button1 = new Button("My first button");
29         button1.setOnAction(new EventHandler<ActionEvent>() {
30
31             public void handle(ActionEvent event) {
32                 System.out.println("Hello World!!!");
33                 labell.setText("Try"+i);
34                 i++;
35             }
36         });
37
38         root.getChildren().addAll(labell,button1);
39         stage.show();
40     }
41 }
```

LINKS

- <http://docs.oracle.com/javase/8/javase-clienttechnologies.htm>
- <http://www.tutorialspoint.com/javafx/>
- <http://www.javafx tutorials.com/>