

Introduction Summary

The top-level structure for a JavaFX application is shown below.

```
package package_name;

import javafx.application.Application;
import javafx.scene.Scene;
import javafx.stage.Stage;
// other imports

public class Class_Name extends Application {

    @Override
    public void start(Stage primaryStage) {
        // Construct root for application,
        // delegating to other methods in this
        // or other classes as needed.
        //
        // Then the following lines set up the
        // application to run either in a browser
        // or stand-alone.
        Scene scene = new Scene(root);
        primaryStage.setTitle("app_title");
        primaryStage.setScene(scene);
        primaryStage.show();
    }

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) {
        launch(args);
    }
}
```

Constructing the root for a scene involves the following types of objects:

- **Controls** have a visual appearance and are used for user input, user output, or both.
- **Layout panes** control the placement of controls.
- **Behavior mechanisms** are mechanisms that implement program responses to user actions.
- **Graphics objects** have a visual appearance in an application. The JavaFX control objects are generally constructed from multiple graphics objects. In addition, programmers can add their own graphics objects such as Square and Circle objects.
- **Menus** provide a compact tool for the user to invoke actions provided by an application.
- **Dialogs** are used to gather information from the user without cluttering the main application window.