Compiling and Running JavaFX from a Command Window

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Supplement for Introduction to Java Programming

1. Introduction

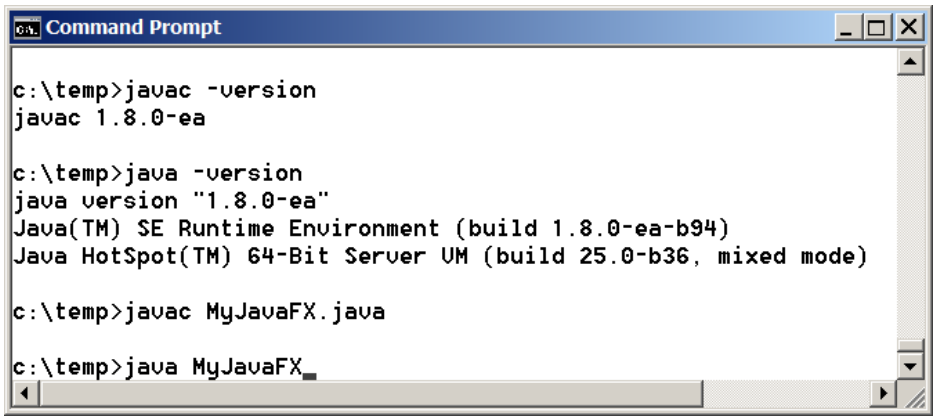
This supplement shows you how to compile and run a JavaFX program with JDK 1.8. First, please make sure that you have downloaded the final release version of JDK 1.8 from http://www.oracle.com/technetwork/java/javase/downloads/index.html. Set the c:\Program Files\java\jdk1.8.0\bin in the environment path (See Supplement I.B at http://www.cs.armstrong.edu/liang/intro10e/supplement.html).

2. Example

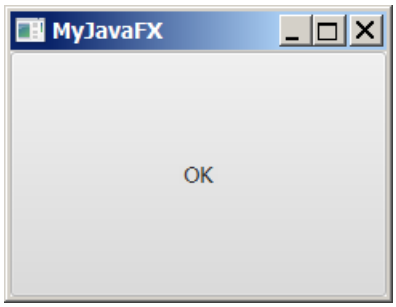
You can compile and run JavaFX program from a command window in the same way you compile and run other Java programs. Here is a sample run of a simple program. Note that the main method is not needed to run a JavaFX program from the command window. The JVM automatically inserts an appropriate main method to this program.

```
import javafx.application.Application;
import javafx.scene.Scene;
import javafx.scene.control.Button;
import javafx.stage.Stage;

public class MyJavaFX extends Application {
  @Override // Override the start method in the Application class
  public void start(Stage primaryStage) {
    // Create a button and place it in the scene
    Button btOK = new Button("OK");
    Scene scene = new Scene(btOK, 200, 250);
    primaryStage.setTitle("MyJavaFX"); // Set the stage title
    primaryStage.setScene(scene); // Place the scene in the stage
    primaryStage.show(); // Display the stage
  }

  /**
   * The main method is only needed for the IDE with limited
   * JavaFX support. Not needed for running from the command line.
   */
  public static void main(String[] args) {
    launch(args);
  }
}
```

The following figure shows how to compile and run a JavaFX progam.



The following figure shows the JavaFX window displayed from running the program.



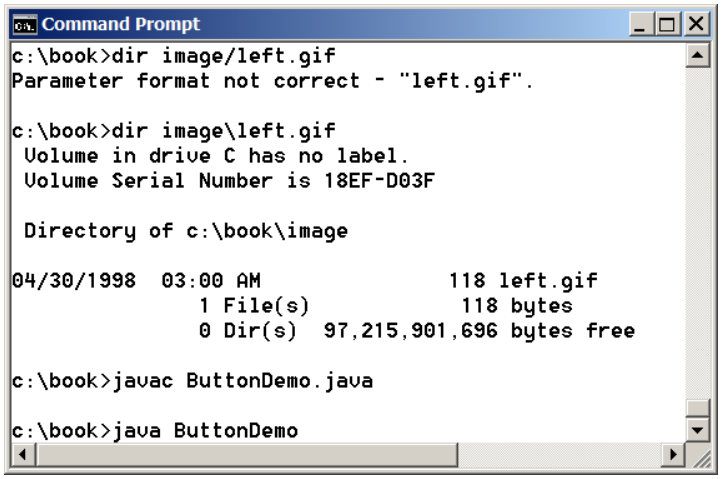
3. Example with Resources (such as images)

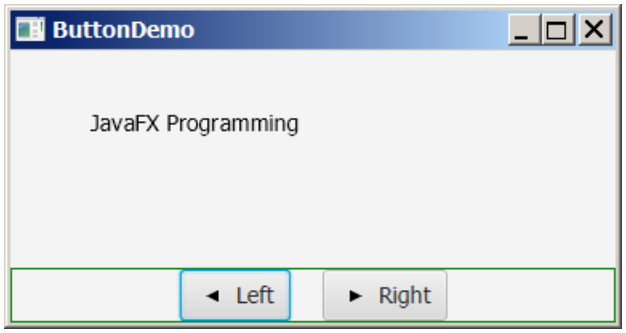
Your program may use resources such as images. The following program contains two images: image/left.gif and image/right.gif.

```
import javafx.application.Application;
import javafx.stage.Stage;
import javafx.geometry.Pos;
import javafx.scene.Scene;
import javafx.scene.control.Button;
import javafx.scene.image.ImageView;
import javafx.scene.layout.BorderPane;
import javafx.scene.layout.HBox;
import javafx.scene.layout.Pane;
import javafx.scene.text.Text;

public class ButtonDemo extends Application {
  protected Text text = new Text(50, 50, "JavaFX Programming");

  protected BorderPane getPane() {
    HBox paneForButtons = new HBox(20);
    Button btLeft = new Button("Left",
      new ImageView("image/left.gif"));
    Button btRight = new Button("Right",
      new ImageView("image/right.gif"));
    paneForButtons.getChildren().addAll(btLeft, btRight);
    paneForButtons.setAlignment(Pos.CENTER);
```

```
    paneForButtons.setStyle("-fx-border-color: green");

    BorderPane pane = new BorderPane();
    pane.setBottom(paneForButtons);

    Pane paneForText = new Pane();
    paneForText.getChildren().add(text);
    pane.setCenter(paneForText);

    btLeft.setOnAction(e -> text.setX(text.getX() - 10));
    btRight.setOnAction(e -> text.setX(text.getX() + 10));

    return pane;
  }

  @Override // Override the start method in the Application class
  public void start(Stage primaryStage) {
    // Create a scene and place it in the stage
    Scene scene = new Scene(getPane(), 450, 200);
    primaryStage.setTitle("ButtonDemo"); // Set the stage title
    primaryStage.setScene(scene); // Place the scene in the stage
    primaryStage.show(); // Display the stage
  }

  /**
   * The main method is only needed for the IDE with limited
   * JavaFX support. Not needed for running from the command line.
   */
  public static void main(String[] args) {
    launch(args);
  }
}
```

Where should these two files be placed? To run the program from the windows, places the folder in the same directory as ButtonDemo.java. The following figure shows the locations of the image files and a sample run of the program:




ButtonDemo
JavaFX Programming
◄ Left
► Right