JAV900 : Java FX Programming

Code :   JAV900   **Duration :**   2 days   **Category :**   Java

Audience :

Java developers who need to learn Java FX for designing desktop and mobile front ends.

Prerequisites :

To join this course knowledge of Java development is required. Experience with GUI design is beneficial for a proper understanding.

Realization :

The theory is treated on the basis of presentation slides and is interspersed with exercises. Demos are used to clarify the theory. The course material is in English.

Java FX Programming

Contents :

JavaFX is pitched squarely at the Adobe Flash / Microsoft Silverlight arena of bringing rich interfaces to internet and mobile applications. The course is aimed at Java developers who need to create front ends to replace AWT and Swing (for desktop) or Java ME and JWT (for mobile). In this course students will learn to create user interfaces using a declarative style enabled by the JavaFX builder classes. Attention is paid to patterns for JavaFX developers and to property binding to keep the UI synchronised with the model. Students will also learn about JavaFX UI controls, charts, shapes, effects, transformations and animations to create stunning, responsive, user interfaces. Also discussed are the JavaFX layout classes to define the user interface in a cross-platform fashion and the observable collection classes to observe changes in, and bind to, Java collections. Finally JavaFX media classes to play audio and video are treated and the interaction with external application services to create an enterprise application with JavaFX as well.

Module 1 : JFX Intro

Introducing JavaFX
Minimum effort and maximum impact
Comparing Java and JavaFX
Comparing JavaFX with Adobe AIR
GWT, and Silverlight
Deployment and More
Packaging and Deployment
JavaFX in Swing
Interoperability with SWT
Use a Doclet

Module 2 : Creating a GUI

Startup Window
Main Window
Menu Bar
Selection and Message Bar
Content Panel
Library Panel
Hierarchy Panel
Inspector Panel
Style Sheet Support
Internationalization Support

Module 3 : Properties and Bindings

Understanding Properties
Defining a Property
Using a ChangeListener
High-Level Binding API
Using the Bindings Class
Combining Both Approaches
Observable, ObservableValue
InvalidationListener
ChangeListener
Low-Level Binding API

Module 4 : Java FX

Application Logic
Architecture and Framework
Work with the Scene Graph
Use Properties and Binding
Work with Collections
Concurrency and Threads
Implement Best Practices

Module 5 : JavaFX UI Controls

Work with Layouts
Add Text
Work with UI Controls
Build UI with FXML
Handle Events
Create Charts
Add HTML Content
Skin Applications with CSS
Drag and Drop Data
Work with Canvas
Use Image Ops
Scene Builder
Scene Builder Overview
Get Started with Scene Builder
Scene Builder User Guide

Module 6 : Collections and Concurrency

Java Collections Basics
Using a List
Using a Map
Collections Class
JavaFX Collections
Using an ObservableList
Using ObservableMap
FXCollections
Change Notifications

Module 7 : Creating Charts in JavaFX

Introduction to JavaFX Charts
Pie Chart
Line Chart
Area Chart
Bubble Chart
Scatter Chart
Bar Chart
Styling Charts with CSS

Module 8 : Using the Media Classes

Effects, Animation, and Media
Create Visual Effects
Add 2D and 3D Transformations
Add Transitions & Animation
Incorporate Media