Introduction to Qt/QML for Desktop

Based on Qt 5.15, created on March 16, 2023

KDAB

The Qt, OpenGL and C++ Experts

Fundamentals of Qt

- The Story of Qt
- "Hello World" with QtQuick
- Introducing Qt Creator
- Practical Tips for Developers

Introduction to QtQuick

- Introduction to Qt Quick
- Composing User Interfaces
  - Image Elements
  - Text Elements
  - Item Transformations
  - Anchor Layout
  - Colors and Gradients
- User Interaction
  - Mouse/Touch Input
  - Gestures Support
  - Keyboard Input

Dynamic User Interfaces

- Components and Dynamic Loading
  - Components
  - The Loader Element
  - Focus Handling Revisited
- Presenting Data
  - Arranging Items
  - Simple Data Models
  - Views

QtQuick and C++

- Objects in Qt
  - Common Features of Qt's Object Model
  - Qt Meta Object System
  - Object Communication Using Signals & Slots
  - Defining Invokable Methods
- Variants and Properties
  - Variants
  - Properties
- Integrating QML with C++
  - Exporting Data and Functions to QML
  - Creating New QML Elements
  - Tips and Tricks

Supplemental Topics

QML Topics

- Layouts
- QtQuick Controls
- QtQuick Controls 2
- QtQuick Input Handlers
- WebEngine
- Animations
- States and Transitions
- Declarative State Machines
- Painting and Effects
- JavaScript in QML
- Drag and Drop
- Component Design

Mixed C++/QML Topics

- Internationalization
- Unit Testing
- Plug-ins
- Platform, device, locale or resolution specific files

Supplemental Topics

C++ Topics

- Advanced Custom Property Types
- The Event System
- Customized Drawing
- Resources
- QPA

Model/View

- Concepts
- Models
- ObjectModel