Introduction to Qt/QML for Embedded Development

Based on Qt 5.9, created on June 12, 2019

KDAB

The Qt, OpenGL and C++ Experts
Fundamentals of Qt for Embedded Linux

- Fundamentals of Qt for Embedded Linux
- The Story of Qt
- "Hello World" with QtQuick
- Qt for Embedded Linux Overview
- Supported Platforms
  - EGL
  - Introduction to Wayland
- Building Qt for Embedded Linux
- Introducing Qt Creator
- Developing for Embedded Linux with 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
<table>
<thead>
<tr>
<th>QML Topics</th>
<th>Mixed C++/QML Topics</th>
<th>C++ Topics</th>
<th>Model/View</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Layouts</td>
<td>• Internationalization</td>
<td>• Advanced Custom Property Types</td>
<td>• Concepts</td>
</tr>
<tr>
<td>• QtQuick Controls</td>
<td>• Unit Testing</td>
<td>• The Event System</td>
<td>• Models</td>
</tr>
<tr>
<td>• QtQuick Controls 2</td>
<td>• Plug-ins</td>
<td>• Customized Drawing</td>
<td>• ObjectModel</td>
</tr>
<tr>
<td>• WebEngine</td>
<td>• Platform, device, locale or resolution specific files</td>
<td>• Resources</td>
<td></td>
</tr>
<tr>
<td>• Animations</td>
<td>• Wayland Compositor</td>
<td>• QPA</td>
<td></td>
</tr>
<tr>
<td>• States and Transitions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Declarative State Machines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Painting and Effects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• JavaScript in QML</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Drag and Drop</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>