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# Introduction to Qt/QML for Embedded Development

Based on Qt 5.9, created on January 30, 2018

The logo for KDAB, featuring a stylized white lightning bolt icon to the left of the text 'KDAB' in a white, sans-serif font, all contained within a blue square with a white diagonal cutout at the bottom-left corner.

KDAB

*The Qt, OpenGL and C++ Experts*

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## 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
- 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
    - Connecting Signals to Slots
    - Defining Slots
    - Defining Signals
  - Defining Invokable Methods
- Variants and Properties
  - Variants
  - Properties
- Integrating QML with C++
  - Exporting Data and Functions to QML
    - Exporting Values to QML
    - Exporting Qt Objects to QML
  - Creating New QML Elements
    - Creating Non-GUI Elements
    - Creating GUI Elements
  - Tips and Tricks

## Supplemental Topics

### QML Topics

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

### Mixed C++/QML Topics

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

## Supplemental Topics (cont'd)

### C++ Topics

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

### Model/View

- Concepts
- Models
- ObjectModel