### Programming with Qt

Qt Essentials - Training Course

Produced by Nokia, Qt Development Frameworks

Material based on Qt 4.7, created on August 13, 2010



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#### Part 1

- Fundamentals of Qt
  - The Story of Qt
  - · Developing a Hello World Application
  - · Hello World using Qt Creator
  - Practical Tips for Developers
- Objects in Qt
  - Common Features of Qt's Object Models
  - Object Communication using Signals & Slots
  - Signal & Slot Variations
     Handling Events in Qt
  - Handling Ever
- Core Classes
  - String Handling
     Item Container
  - File Handling
  - Variants



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#### Part 2

- Widgets
  - Common Widgets
  - Layout Management
     Guidelines for Custom Widgets
- Painting and Styling
  - Painting on Widgets
  - Color Handling
- Painting Operations
- Style Sheets
- Application Creation
  - Main Windows
  - Settings
  - Resources
  - · Translation for Developers
- Deploying Qt Applications

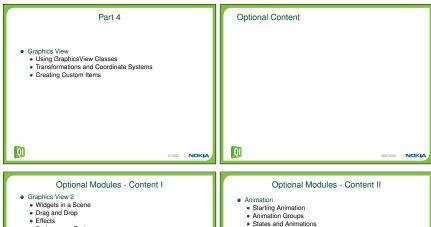


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#### Part 3

- Dialogs and Designer
- Dialogs
- Common Dialogs
- Qt Designer
   Model/View
- Item Widgets
  - Model/View Concept
  - Model/View Concept
     Custom Models
- Custom Mo
   Item Views
- Item View
   Data IO
  - . SAX and DOM XML APIs
  - XML Streaming API
  - SQL Database API
  - SQL Models





- · Performance Tuning
- · Advanced Graphics QImage
  - · Custom Image Formats
  - · Coordinate Systems
  - OpenGL in Qt
- Multimedia
  - Playing Sounds
  - Multimedia with Phonon

- Events and Transitions
- Gestures
  - Introduction to Gestures
  - · Recognizing Gestures
- Multitouch
  - Starting Multitouch
  - Touch Events



#### Optional Modules - Content III

- Development Process
  - OMake
  - · Some Thoughts About Portability
  - · Qt Debugging Aids
  - · Development Tools for Linux
  - Qt Licensing
  - · Shipping Qt With Your Application
  - · Unit Testing with QTestLib
- Other IDEs
  - · Visual Studio Integration
  - · Eclipse Integration
  - KDevelop



### Optional Modules - Content IV

- Application Scripting
  - Qt Script
  - Debugging Scripts
- Inter-Process Communication
  - · Running Processes
  - · Shared Memory with Qt
  - · QtDBus Qt Bindings to D-Bus
- Multithreading
  - Multithreading I
  - QtConcurrent (Multithreading II)
  - Multithreading III



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### Optional Modules - Content V

- Specialized Widgets
  - · Emulating MDI with QMdiArea Scroll Areas
- · Native System Integration
  - ActiveOt
  - · Migration Techniques
- · Migrating Motif programs to Qt
- Widget Styles

  - Widget Styles · Custom Widget Styles
  - · Translucent and Shaped Windows

# Optional Modules - Content VI

- Advanced Xml Processing
  - XQuery, XPath and XSLT XML Schema
- Network Programming
  - The Network Module
  - Protocols
  - · Request / Reply
  - TCP/LIDP Sockets
  - SSI Sockets
  - DNS and Proxies
- The Event System
- Synthetic Events





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## Optional Modules - Content VII

- WebKit
  - WebKit
  - QWebView
  - Settings
  - Accessing the DOM
- Text Processing
  - Validating Input
  - · Rich Text Editing and Processing
- Other Topics
  - Memory mapped files
  - Timers

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