

KDAB | Training

Trusted Software Excellence

An Overview

www.kdab.com

Contact us: training@kdab.com

Training with KDAB

With over 20 years' experience and rich store of well-structured, constantly up-dated training material, KDAB offers hands-on, practical programming training in Qt, Modern OpenGL, Modern C++ and more, for beginners as well as experienced developers. Classes are limited to a maximum of 12 participants and presented by engineers coming straight from the field, bringing the latest techniques and experience direct to the classroom.

"The most professional and thorough software development training I have ever followed."

Andrzej Cieslar, Siemens Industry Software

Scheduled training courses offer participants course material that can be dynamically adapted on the day by our skilled trainers, with presentation and labs interspersed for maximum learning integration. Developers from diverse companies can mutually gain insights from engineers on the same learning journey. Scheduled classes are generally 3 days long, have fixed dates and are held in English, French or German, usually at one of our training facilities.

In-company training is for groups of engineers, perhaps working on a project together and/or needing to raise their skill level in a particular area. Also offering a mix of presentation and hands-on learning, in-company training can easily be tailored to a chosen focus, drawing from KDAB's wealth of training material and topics. In-company courses are given at an agreed place and time with many language options available. Course length is generally from 3 to 5 days.

Online options for both kinds of training courses can be made available by arrangement.

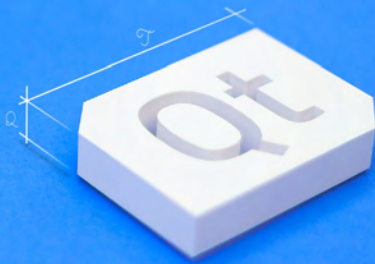




Courses you can take.

Introductory and Advanced Courses in Qt/QML

There is more in common than differs between Qt for desktop systems, embedded devices and mobile, and this is reflected in the detailed course Table of Contents, accessible for all our courses online at www.kdab.com/training. Nonetheless, as there are two UI technologies offered by Qt, these are covered by the QtWidget and Qt/QML variants. All courses cover the fundamentals.



Introduction to Qt/QML - 3 Days

Get quickly up to speed if you're new to QML or get a brush-up and reminder of best practices on this course, which focuses mainly on Qt Quick. Learn how to compose fluid interfaces with slick animations using QML, and how to hook up the QML side to the business logic in C++. Discover how Qt is used on both desktop and mobile.

Introduction to Qt/QML with Embedded Content - 3 Days

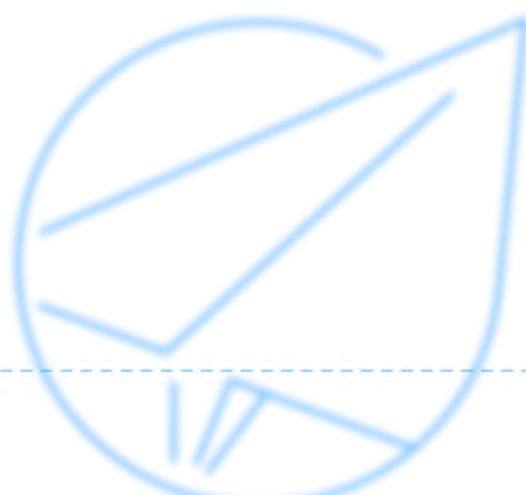
This variant gives you all of the above as well as an introduction to developing for Embedded with Qt Creator and performance tuning.

Advanced QML - 3 Days

If you already have some QML experience, this course introduces advanced QML/C++ integration and QML Application Architecture. You will also learn how to use OpenGL QML elements, how to analyse and profile the Qt Quick scene graph and how to remove bottlenecks affecting a QML UI. Best practices for achieving optimal performance even on limited hardware are covered too.

Introduction to Qt Widgets - 3 Days

With a focus on desktop platforms for developers with a functional knowledge of C++, this course covers Qt fundamentals, objects and widgets, Qt Creator and



Designer, then takes you under the hood to learn about core classes, custom dialogs, layout management, painting, event handling, and the fundamentals of Qt's model/view framework. No prior knowledge of Qt is needed.

Advanced Programming with Qt Widgets - 3 Days

Already familiar with Qt Widgets? This course offers a recap of Qt Fundamentals, then covers application infrastructure and Model/View with Qt. You will also learn about graphics and styling as well as text documents with Qt Widgets and a choice from our huge range of optional supplemental topics such as Multithreading and Inter-process Communications.

In-depth Multithreading with Qt - 3 Days

If you have a working knowledge of C++ and Qt, this course teaches multithreading application development techniques using the Qt/C++ object technology. You will gain general insight into multithreading problems and how they pertain to Qt programs. Contents include Synchronisation Primitives, QtConcurrent and Atomic Operations.

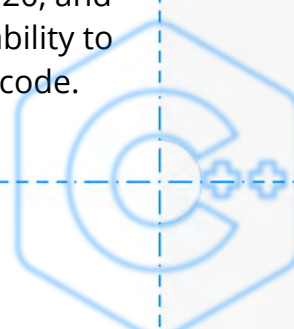
Introductory and Advanced Modern C++


Modern C++: Introduction - a minimum of 3 Days

This course is for you if you have a good working knowledge of any other programming language. You will learn C++ language essentials, with an emphasis on how to write modern, clean and correct C++ code, using facilities from the latest C++ standard editions.

Advanced Modern C++ - 4/5 days


Take your C++ skills to the next level with this comprehensive course, designed for developers with a good working knowledge of the C++ language. Learn modern techniques and tools from C++11 to C++20, and even some features from C++23, giving you the ability to write better, more efficient and less error-prone code.





3D/Modern OpenGL

Modern OpenGL: Introduction - 3/4 Days




If you already know C or C++, this course offers the fundamental topics for developing high-performance OpenGL code on desktop, embedded and mobile, starting with the basic concepts. Key techniques include lighting, texturing, frame buffer objects and transformations. An optional fourth day will provide an introduction to modern graphics APIs such as Vulkan or Metal and how the concepts originating in the OpenGL material have evolved to achieve more performance and more advanced rendering.

Modern OpenGL: Advanced Rendering and Effects - 3 Days

Learn to implement many different rendering techniques to achieve realistic, advanced visuals in OpenGL applications. Explore techniques in depth with many examples, analysis of shader code and implementation details.

Modern OpenGL: Advanced Pipeline and Performance - 3/4 Days

If you want to create or improve existing rendering code, this course offers strategies to increase performance and extract full potential from hardware. Techniques you will learn include multi-pass rendering, the use of uniform buffers, shader storage buffers and indirect drawing. An optional fourth day will provide an introduction to modern graphics APIs such as Vulkan or Metal and how the concepts originating in the OpenGL material have evolved to achieve more performance and more advanced rendering.



Debugging and Profiling

Debugging & Profiling - 3 Days

We offer 4 variants of this course, depending on whether you are working in **Windows or Linux** with or without **Qt**. Each course covers the tools to help you find bugs and performance issues. Problems covered range from general purpose debugging and CPU profiling to Qt specific high-level analyzers.

Rust Offered by KDAB Partner, Ferrous Systems, Rust experts since before Rust 1.0

WhyRust? - Half day

For managers, educators and technical leads wanting to assess whether to introduce Rust to their projects.

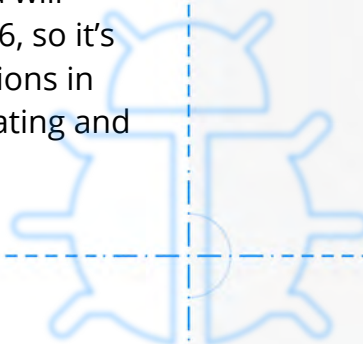
Introduction to Rust (online) - 5 half days

Learn how Rust can best be applied to your project. Become familiar with Rust fundamentals like the Rust toolchain, syntax, basic types, and data structures before moving on to concepts unique to Rust, like ownership and borrowing.

Dev Tools and Practices

Introduction to CMake - 2 Days

CMake is the de facto standard build system for C and C++ outside of frameworks that require their own. It has strong support for building Qt applications and will replace qmake as the build system for Qt in Qt6, so it's more than a useful alternative if you hit limitations in qmake. This course will teach the basics of creating and building projects with CMake.





Testing Qt with Squish - 2 to 5 days

Learn to use Squish for testing your application over and over again and with much reduced effort. The techniques you will learn involve recording a script with Squish and then adapting this into a piece of reusable code that is much less likely to break with the next version of the application it tests.

Introduction to Qt Design Studio - 2 Days

Qt Design Studio (QtDS) lowers the code barrier for designers for UI/UX real-time execution and into production. You will learn the basic elements of Qt Design Studio, what it is and what it is not, with a specific focus on real-life workflow between designers and developers.

Introduction to Git - 1 Day

This course provides a comprehensive introduction to modern software development with the code version control system Git. All the fundamental topics to manage code bases in Git are covered, starting from the basic concepts. You will also learn strategies for common workflows in life cycles, and some options for collaboration on large-scale or widely distributed projects.



The KDAB Group is the world's leading software consultancy for architecture, development and design of Qt, Modern C++ and OpenGL applications across desktop, embedded and mobile platforms. KDAB is the biggest independent contributor to Qt and the global market leader in Qt training.



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