HexoSys

Mastering C++ Meta-Programming

Overview

This course provides a detailed exploration of meta-programming and templates in the C++ language led by industry experts. You'll familiarize yourself with templates through hands-on exercises, gaining insights into what distinguishes an expert C++ programmer. Learn from their experiences to avoid common pitfalls.

Length: 1 Day

Software: Visual Studio Community 2022

ENROLL NOW

Course Objectives

After completing this course, you will:

- Have a solid understanding of Meta-Programming.
- Be able to maximize reuse for your code.
- Know how to extend STD library algorithms and data types.

Target Audience

This course is tailored for C++ programmers and individuals eager to delve into advanced topics in C++ and programming. Beginning with core concepts, it progressively introduces more advanced ones. Hands-on practice reinforces newly acquired techniques throughout the course.

Prerequisites

Understanding of C++ language is essential for this course.

Teaching Methodology

- Instructional strategies include lectures, discussions, demonstrations, and workshop-based learning which are used to convey information, facilitate learning, and promote understanding.
- Learning activities include exercises and projects designed to engage students in the learning process actively.

Course Outlines

DAY 1	
Templates Refresher	◇ Class and Function Templates ◇ Non-Type Template Parameters
Templates Deeper Look	◇ Template Specialization ◇ Selective Instantiation ◇ Variable Templates ◇ SFINAE • Overload Set • C++20 Concepts
Design Pattern	◇ CRTP • Static Polymorphism • Mixin-Classes ◇ Policy
Workshop	