C++ 11, Part 1 of 4: Getting Started

page 1

Meet the expert: Peter Thorsteinson has been working for two decades in many areas of Microsoft-based software development technologies, including all the latest languages, frameworks, and tools. He has been involved in several large scale software development projects and has authored and co-authored several books and courses relating to ASP.NET, AJAX, JavaScript, WPF, WCF, WF, ADO.NET, and LINQ. Peter is currently focusing on ASP.NET MVC, jQuery, Task Parallel Library, Windows Azure, and SharePoint Development.

Prerequisites: This course assumes that students have some rudimentary understanding of general programming concepts. No specific experience with C or C++ is required. As with any such course, the more experience you bring to the course, the easier it will be to understand the material that is presented. As a result, if you know C# or Java, that might be somewhat helpful.

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Course description: Join software development expert Peter Thorsteinson as he covers topics related to getting started with the C++ programming language. In this course, he will show you where and how to obtain the necessary development tools and integrated development environments. Thorsteinson will also offer a detailed study of C++ language syntax including comments, white space, identifiers and the declaration of variables as well as provide code examples that demonstrate modern features of the language.

Course outline:

Introduction
- Introduction
- Demo: Intro to Command Line
- Demo: Command Line Hello World
- Demo: Intro to Visual Studio
- Compilers and Linkers
- History and Standardization
- C++ on the TIOBE Index
- Getting a C++ IDE
- Demo: Get C++ Tools
- Looking for Code
- Summary

Starter Examples
- Introduction
- Demo: Intro to Lambdas
- Demo: Lambda Expressions
- Demo: Lambdas Cont.
- Demo: Intro to For
- Demo: Range-Based For
- New Features in C++ 11
- Console Applications
- Demo: Hello World
- Demo: Main Method
- Summary

Learning C++ Concepts
- Introduction
- C++ Reference Documentation
- Demo: Reference Documentation
- C++ Language Characteristics
- Code Efficiency
- Performance vs. Type Safety
- Summary

Comments and Variables
- Introduction
- Demo: Whitespace
- Demo: Comments
- Demo: ToDo
- Identifiers and Variables
- Summary