C++ 11, Part 2 of 4: Syntax Fundamentals

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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: In this course, software development expert Peter Thorsteinson examines topics related to data types, operators and expressions. He will define constants and explain the important distinction between expressions known as L values and R values. After an overview of the majority of built-in C++ operators, Thorsteinson will finish off with a look at literal values as well as old style and new style texturing, and how to obtain user input in a console application.

Course outline:

Data Types and Inference
- Introduction
- Demo: Auto Type Deduction
- Demo: Using decltype
- Fundamental Data Types
- Summary

Sizeof and IEEE 754
- Introduction
- Demo: Sizeof
- Demo: Integer Sizes
- Demo: IEEE 754
- Demo: Float Precision
- Demo: IEEE 754
- Demo: Divide by Zero Scenario
- Demo: Exceptions
- Summary

Constants, L and R Values
- Introduction
- Demo: Constants
- Lvalues vs. Rvalues
- Summary

Operators and Precedence
- Introduction
- Demo: Operators
- Demo: Conditional Operator
- Demo: Using Operators
- Demo: Logical and Comparison
- Demo: Precedence
- Summary

Literals
- Introduction
- Demo: Literals
- Demo: More Literals
- Demo: String Literals
- Demo: Character Literals
- Strings Old and New
- Demo: Strings
- Summary