

Beginning C# Using Visual Studio 2010

GWEC1404
5 day

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Prerequisites

- There are no prerequisites for this class.
- Knowledge of programming fundamentals is helpful, but not required.
- Knowledge of SQL is helpful, but not required.

Course Summary and Lessons

Intro to C#

- .NET Framework
- Visual Studio 2010 Overview
- Creating a Simple Application
 - Console Application
 - Windows Forms Application
 - Web Application

Basic C# Syntax

- Variables
 - Value Types vs. Reference Types
 - Simple Types
 - Naming Variables
 - Literal Values
 - Declaring Variables
 - Assignment
- Expressions
- Operators
- Namespaces

Flow Control

- Operators
- Branching Statements

- Looping

More About Variables

- Type Conversion
- Enumerations
- Structures
- Arrays
- Manipulating Strings

Functions

- Defining Functions
- Using Functions
- Returning Values
- Parameters
- Overloading
- The Main() Function
- Delegates

Debugging and Error Handling

- Debugging in VS 2010
- Break Points
- Interrogating Variables
- Stepping Through Code
- Immediate Window

Beginning C# 4.0 using Visual Studio 2010 (cont)

- Command Window
- Call Stack
- Handling Errors
 - Try...Catch...Finally

Intro to Object-Oriented Programming

- Objects
- Properties
- Fields
- Methods
- Events
- Constructors
- Destructors
- Instance vs. Static Members
- Interfaces
- Inheritance
- Polymorphism
- Defining a Class
 - Fields
 - Methods
 - Properties
- Refactoring
- The This Keyword
- Implementing Interfaces
- The Partial Keyword

Collections

- Using Collections
- Indexers
- Iterators

Generics

- Introduction to Generics
- Nullable Types

C# Language Enhancements

- Initializers
- Anonymous Types
- Extension Methods
- Intro to Lambda Expressions

Basic Windows Programming

- Controls Overview
- Creating Windows Forms

- Creating MDI Applications
- Creating Menus
- Creating User Controls

Basic ASP.NET Programming

- ASP.NET Overview
- Creating a Simple Web Page
- Using Server Controls
- ASP.NET Postback
- Validation
- State Management Overview
- CSS
- Master Pages
- Site Navigation

Introduction to ADO.NET

- Connection
- Command
- DataReader
- DataAdapter
- DataSet

Working with Files

- Reading from Files
- Writing to Files

Deployment

- Deploying a Windows Application
- Deploying a Web Application