Programming C# 6, Part 10 of 12: Classes and Methods

Meet the expert: Don Kiely is a featured instructor on many of our SQL Server and Visual Studio courses. He is a nationally recognized author, instructor, and consultant specializing in Microsoft technologies. Don has many years of teaching experience, is the author or co-author of several programming books, and has spoken at many industry conferences and user groups. In addition, Don is a consultant for a variety of companies that develop distributed applications for public and private organizations.

Prerequisites: This course builds upon: Programming C# 6: Getting started Programming C# 6: Your First App Programming C# 6: Projects and Syntax Programming C# 6: Variables and Data Types Programming C# 6: Adv Data Types and Operators Programming C# 6: Strings, File I/O and Date Types Programming C# 6: Conditions and Looping Programming C# 6: Objects and Classes It is considered a more Intermediate to advanced topic after you have gone through these other courses.

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Course description: In this course, Visual Studio expert Don Kiely teaches you the techniques needed to build sophisticated classes in your code. Using a sample customer class, he will demonstrate how to validate property values and also explore automatic properties as well as advanced method techniques such as parameter arrays.

Course outline:

Properties
- Introduction
- Sample Customer Class
- Demo: Class Properties
- Demo: Write & Read Properties
- Demo: Location Property
- Demo: Calculated Property Value
- Demo: Annual Sales Property
- Demo: Changing Values
- Summary

Automatic Properties
- Introduction
- Demo: Automatic Properties
- Demo: Backing Fields
- Demo: Intitializers
- Getter-Only Auto-Properties
- Demo: Read-Only Auto-Property
- Summary

Methods
- Introduction
- Methods
- Parameters and Return Values
- Passing Arguments to Methods
- Demo: Pass Parameters
- Demo: Pass by Reference
- Demo: Pass with Out
- Summary

Optional Param and Caller Info
- Introduction
- Demo: Flexible Parameters
- Demo: Named Parameters
- Caller Information Attributes
- Demo: Caller Info Attributes
- Summary

Methods in Classes
- Introduction
- Methods in Classes
- Class Constructors
- Demo: Constructors
- Summary

Save and Retrieve Info
- Introduction
- Demo: XMLWriter
- Demo: SaveCustomer
- Demo: GetCustomerInfo
- Demo: GetLocation
- Summary

Return and Pass Arrays
- Introduction
- Demo: Parameter Array
- Demo: Variable-Length Array
- Demo: Pass Parameter Array
- Summary

Instance and Static Members
- Introduction
- Demo: Static Variables
- Demo: RecordSales
- Demo: GetCustomerName
- Summary

Expression Bodied Methods
- Introduction
- Lambda Expressions
- Demo: Expression-Bodied Method
- Demo: Refinements
- Demo: Using Lambda Expressions
- Summary