

Course Outline for Object-Oriented Programming with C# Training

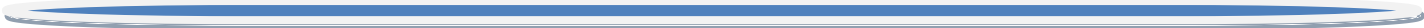
DETAILED COURSE OUTLINE

#	Chapters & Strategies	Topics
1	.NET: What You Need To Know	.NET Executables and the CLR A .NET Testbed for C# Programming Using Visual Studio
2	First C# Programs	Hello, World Namespaces Variables and Expressions Using C# as a Calculator Input/Output in C# .NET Framework Class Library
3	Data Types in C#	Data Types Integer Types Floating Point Types Decimal Type Characters and Strings Boolean Type Conversions Nullable Types
4	Operators and Expressions	Operator Cardinality Arithmetic Operators Relational Operators Logical Operators Bitwise Operators Assignment Operators Expressions

		Checked and Unchecked
5	Control Structures	If Tests Loops Arrays Foreach More about Control Flow Switch
6	Object-Oriented Programming	Objects Classes Inheritance Polymorphism Object-Oriented Languages Components
7	Classes	Classes as Structured Data Methods Constructors and Initialization Static Fields and Methods Constant and Readonly
8	More about Types	Overview of Types in C# Value Types Boxing and Unboxing Reference Types
9	Methods, Properties and Operators	Methods Parameter Passing Method Overloading Variable-Length Parameter Lists Properties Operator Overloading

10	Characters and Strings	Characters Strings String Input String Methods StringBuilder Class Programming with Strings
11	Arrays and Indexers	Arrays System.Array Random Number Generation Jagged Arrays Rectangular Arrays Arrays as Collections Bank Case Study - Step 1 Indexers
12	Inheritance	Single Inheritance Access Control Method Hiding Initialization Bank Case Study - Step 2
13	Virtual Methods and Polymorphism	Virtual Methods and Dynamic Binding Method Overriding Fragile Base Class Problem Polymorphism Abstract Classes Sealed Classes Heterogeneous Collections Bank Case Study - Step 3
14	Formatting and Conversion	ToString Format Strings String Formatting Methods Bank Case Study - Step 4

		Type Conversions
15	Exceptions	Exception Fundamentals Structured Exception Handling User-Defined Exception Classes Inner Exceptions Bank Case Study - Step 5
16	Interfaces	Interface Fundamentals Programming with Interfaces Using Interfaces at Runtime Bank Case Study - Step 6 Resolving Ambiguities
17	.NET Interfaces and Collections	Collections Bank Case Study - Step 7 IEnumerable and IEnumerator Copy Semantics and ICloneable Comparing Objects Generic Types Type-Safe Collections Bank Case Study - Step 8
18	Delegates and Events	Delegates Anonymous Methods Events
19	Introduction to Windows Forms	Creating Windows Applications Using Visual Studio Partial Classes Buttons, Labels and Textboxes Handling Events Listbox Controls



20	Additional C# Features	Auto-Implemented Properties Implicitly Typed Variables Object Initializers Collection Initializers Anonymous Types Partial Methods Extension Methods Lambda Expressions Language-Integrated Query (LINQ)
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