Chapter 1: Introduction

You will learn:

- NET framework concepts.
- CLR: Common Language Runtime.
- Common Type System.
- .NET framework base class library.

Chapter 2: Object-Oriented Programming in C#

You will learn:

- Class definition and creation.
- Instantiating and using classes.
- Building class hierarchies.
- Inheriting from System.Object.
- Sealed classes.
- Abstract classes and polymorphism.
- .NET namespaces.
- Value types versus reference.
- Types.
- Command line compiler options.
- Hiding.
- Inherited methods.

Chapter 3: Objects

You will learn:

- Reference types.
- Casting and conversions.
- Boxing and unboxing.
- Hashcodes.
- Object identity.
- Interface casting.
- Public.
- Constructors.
- Private constructors.
- Static.
- Constructors.

Chapter 4: .NET Collections and Interface

You will learn:

- IComparable.
- IDictionary.
- IEnumerator.
- IEnumerable.
- IList.
- ArrayList.
- SortedList.
- Hashtable.
- Implementing multiple interfaces.

Chapter 5: Operator Overloading

You will learn:

- Comparison operators.
- Overloading conversion.
- Operators.
- Overloading ToString.
- Overloading.
- GetHashCode.

Chapter 6: Delegates and Events

You will learn:

- Delegates.
- Callbacks and delegates.
- Singlecast delegates.
- Multicast delegates.
- Event-driven programming model.
- Events in C#.

Chapter 7: Accessing Data Using ADO.NET

You will learn:

- ADO.NET programming model.
- Data bound.
- Controls in Windows Forms.
- DataReaders.
- Using DataSets.
- Multiple tables with DataSets.
- DataViews.
- DataAdapters.
- Stored procedures.
- XML data access.

Chapter 8: File Access Using .NET

You will learn:

- Interacting with the file system.
- Manipulating files and directories.
- Readers and writers.
- Stream objects.
- FileSystemWatcher.

Chapter 9: Building Web Services

You will learn:

- WSDL: Web Service Description Language.
- UDDI: Universal Description, Discovery, and Integration.
- Static discovery files.
- Dynamic.
- Discovery files.
- Creating a web service.
- Consuming web services.

Chapter 10: Multithreading in .NET

You will learn:

- Threading concepts.
- Thread basics IThreads.
- Creation in C#.
- Problems with threads.
- Thread.
- Management.
- Thread synchronization.
- Interoperability with COM.

Chapter 11: .NET Interoperability Services

You will learn:

- Runtime callable wrappers.
- COM callable.
- Wrappers.
- COM servers from .NET.
- Calling.
- NET components from COM.
- Pinvoke: platform.
- Invocation service.
- Calling platform DLLs from .NET.
- DLLImport attribute.
- Interop marshalling.
- Pinning memory.

Chapter 12: Reflection and Attribute Programming

You will learn:

- Intrinsic attributes.
- Custom attributes.
- Reflection concepts.
- Viewing metadata.
- Extracting type information.