

- Online Training
- ASP.NET Core Training
- Program
- ASP.NET Core Training
- Microservices Online Training
- using .NET Core
- Microsoft Azure Training

#### Introduction & Environment Setup

- How Computer Works
- Introduction to Programming Languages
- How Computer Programs Works
- Different Types of Applications
- Programming Methodologies
- Algorithm, Pseudocode, Programs, and Flowcharts
- Introduction to .NET Framework
- .NET Framework Architecture and Components
- Introduction to # Programming Language
- How to Download and Install Visual Studio on Windows
- Creating First Console Application using Visual Studio
- .NET Developer Roadmap for 2025
- Coding Standard Best Practices

#### C# .NET Basics

- Basic Structure of C# Program
- Methods and Properties of Console Class in C#
- Data Types in C#
- Literals in C#
- Type Casting in C#
- Variables in C#
- Operators in C#
- Control Flow Statements in C#
- If-Else Statements in C#
- Switch Statements in C#
- Loops in C#
- While Loop in C#
- Do While Loop in C#
- For Loop in C#
- Break Statement in C#
- Continue Statement in C#
- Goto Statement in C#
- Functions in C#
- User-Defined Functions in C#
- Call By Value and Call By Reference in C#
- Recursion in C#
- User Input and Output in C#
- Command Line Arguments in C#
- String in C#
- Static Keyword in C#
- Static vs Non-Static Members in C#
- Const and Read-Only in C#
- Properties in C#
- Why We Should Override ToString Method in C#
- Difference Between Convert.ToString and ToString Method in C#
- Checked and Unchecked Key words in C#
- Stack and Heap Memory in .NET
- Boxing and Unboxing in C#

#### OOPs in C#

- Object Oriented Programming (OOPs) in C#
- Class and Objects in C#
- Constructors in C#
- Types of Constructors in C#
- Why We Need Constructors in C#
- Static vs Non-Static Constructors in C#
- Private Constructors in C#
- Destructors in C#
- Garbage Collection in .NET Framework
- Differences Between Finalize and Dispose in C#
- Access Specifier in C#
- Encapsulation in C#
- Abstraction in C#
- Types of Inheritance in C#
- How to Use Inheritance in Application Development
- IsA and HasA Relationship in C#
- Generalization and Specialization in C#
- Abstract Class and Abstract Methods in C#
- Abstract Class and Abstract Methods Interview Questions in C#
- How to Use Abstract Classes and Methods in C#
- Interface in C#
- Interface Interview Questions and Answers in C#
- Interface Realtime Examples in C#
- Multiple Inheritance in C#
- Multiple Inheritance Realtime Example in C#
- Polymorphism in C#
- Method Overloading in C#
- Operator Overloading in C#
- Method Overriding in C#
- Method Hiding in C#
- Partial Class and Partial Methods in C#
- Sealed Class and Sealed Methods in C#
- Extension Methods in C#
- Static Class in C#
- Variable Reference and Instance of a Class in C#

#### OOPS Real-Time Examples

- Real-time Examples of Encapsulation Principle in C#
- Real-time Examples of Abstraction Principle in C#
- Real-time Examples of Inheritance Principle in C#
- Real-time Examples of Polymorphism Principle in C#
- Real-time Examples of Interface in C#
- Real-time Examples of Abstract Class in C#
- Exception Handling in C#
- Multiple Catch Blocks in C#
- Finally Block in C#
- How to Create Custom Exceptions in C#
- Inner Exception in C#
- Exception Handling Abuse in C#

#### Events, Delegates and Lambda Expression in C#

- Course Structure of Events, Delegates and Lambda Expression
- Roles of Events, Delegates and Event Handler in C#
- Delegates in C#
- Multicast Delegates in C#
- Delegates Real-Time Example in C#
- Generic Delegates in C#
- Anonymous Method in C#
- Lambda Expressions in C#
- Events in C# with Examples

#### Multi-Threading

- Multithreading in C#
- Thread class in C#
- How to Pass Data to Thread Function in Type Safe Manner in C#
- How to Retrieve Data from a Thread Function in C#
- Join Method and IsAlive Property of Thread Class in C#
- Thread Synchronization in C#
- Lock in C#
- Monitor Class in C#
- Mutex Class in C#
- Semaphore Class in C#
- SemaphoreSlim Class in C#
- Deadlock Prevention Testing of a Multithreaded Application
- Thread Pool in C#
- Foreground and Background Threads in C#
- AutoResetEvent and ManualResetEvent in C#
- Thread Life Cycle in C#
- Threads Priorities in C#
- How to Terminate a Thread in C#
- Inter Thread Communication in C#
- How to Debug a Multi-threaded Application in C#

#### Collections in C#

- Arrays in C#
- 2D Arrays in C#
- Advantages and Disadvantages of Arrays in C#
- Collections in C#
- ArrayList in C#
- Hashtable in C#
- Non-Generic Stack in C#
- Non-Generic Queue in C#
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#### File Handling

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- FileStream Class in C#
- StreamReader and StreamWriter in C#
- File Class in C#
- TextWriter and TextReader in C#
- BinaryWriter and BinaryReader in C#
- StringWriter and StringReader in C#
- FileInfo Class in C#
- DirectoryInfo Class in C#
- Export and Import Excel Data in C#

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#### Optional Parameter, Indexers and Enums

- How to make Optional Parameters in C#
- Indexers in C#
- Indexers Real-Time Example in C#
- Enums in C#

#### .NET Framework Architecture

- DOT NET Framework
- Common Language Runtime in .NET Framework
- .NET Program Execution Process
- Intermediate Language (IL/DASM & ILASM) Code in C#
- Common Type System in .NET Framework
- Common Language Specification in .NET Framework
- Managed and Unmanaged Code in .NET Framework
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#### Var, Dynamic and Reflection

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- Dynamic Type in C#
- Var Keyword in C#
- Var vs Dynamic in C#
- Ref Returns and Ref Locals in C#
- Generalized Async Return Types in C#
- Expression Bodied Members in C#
- Thrown Expression in C#
- Async Main in C#

#### C# 8 New Features

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- Readonly Structs in C#
- Default Interface Methods in C#
- Pattern Matching in C#
- Using Declarations in C#
- Static Local Functions in C#
- Disposable Ref Structs in C#
- Nullable Reference Types in C#
- Asynchronous Streams in C#
- Asynchronous Disposable in C#
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