Vijay Tutor

C#

Course Syllabus

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Welcome
to the world of
Programming!

Let's start
a new journy with
VijayTutors !!!



Week 1

C# Basics and Data Types

Goal: Understand the syntax, data types, and control flow in C#

Day 1: Introduction to C#

- What is C#? Where is it used?
- Setting up Visual Studio
- Writing your first program (Hello World)
- Understanding Main method and Console class

Day 2: Variables and Data Types

- Declaring variables
- Data types (int, float, bool, string, etc.)
- Type inference (var)
- Constants (const, readonly)

Day 3: Operators and Expressions

- Arithmetic, logical, and comparison operators
- Assignment and compound operators

Day 4: Control Statements

- if, else, else if
- switch statement

Day 5: Loops

- for, while, do-while, foreach
- break, continue

Week 2

Methods, Arrays, and Strings

Goal: Learn to write reusable code, manage collections, and manipulate strings

Day 1: Methods

- Declaring and calling methods
- Parameters and return values
- Method overloading

Day 2: Arrays

- Declaring and initializing arrays
- Iterating through arrays
- Multi-dimensional and jagged arrays

Day 3: Strings

- String methods (Length, Substring, IndexOf, Replace, etc.)
- String interpolation and formatting

Day 4: Enums & Structs

- Creating and using enums
- Structs vs Classes (basic intro)

Day 5: Practice Day

- Mini-project or multiple practice programs

Q&A and revision

Week 3

OOP in C#

Goal: Master Object-Oriented Programming Concepts

Day 1: Classes and Objects

- Defining classes
- Creating objects
- Fields, properties, and methods

Day 2: Constructors and Access Modifiers

- Default and parameterized constructors
- public, private, protected, internal

Day 3: Inheritance

- Base and derived classes
- virtual, override, sealed

Day 4: Polymorphism and Abstraction

- Method overloading and overriding
- Abstract classes and interfaces

Day 5: Encapsulation

- Getters and Setters
- Auto-implemented properties
- Access levels and encapsulation demo

Week 4

LINQ, Exception Handling & File Handling

Goal: Use LINQ, handle errors, and read/write files

Day 1: Exception Handling

- try, catch, finally, throw
- Common exception types

Day 2: File Handling

- Reading from and writing to text files
- StreamReader, StreamWriter

Day 3: Introduction to LINQ

- What is LINQ?
- Basic LINQ Queries using where, select, orderby

Day 4: Advanced LINQ and Lambda Expressions

- First, FirstOrDefault, ToList, Any, All
- Lambda expressions (=> syntax)
- LINQ on collections and arrays

Day 5: Wrap-up + Final Practice

- Review all key concepts
- Final mini-project (e.g., student record system or basic inventory app)
- Feedback and next steps



Note:

This is a 4-week plan, but the duration may vary depending on the students' grasp and understanding.

The syllabus provides an overview of what you will learn; however, **we will be covering much more** than what is mentioned here.

Thank you !!!