



C# Software Development Internship

(15 Days | Practical-Oriented | Industry Ready)

INTERNSHIP SYLLABUS

Internship Objectives

- Master **C# programming fundamentals to advanced concepts**
- Build **real-world desktop / backend applications**
- Understand **OOP, .NET framework, and software architecture**
- Gain **project confidence + interview readiness**

DAY 1 – Introduction to C# & .NET

- What is C#? Why .NET?
- .NET Framework vs .NET Core
- Visual Studio setup
- First C# program
- Console input/output

Practical:

Hello Skypark Itech + Basic calculator

DAY 2 – Variables, Data Types & Operators

- Value types vs Reference types
- Type conversion
- Arithmetic, logical & relational operators

Practical:

Student marks calculation program

DAY 3 – Control Statements

- if, else, switch
- for, while, do-while loops
- break & continue

Practical:

Number guessing game

DAY 4 – Methods & Recursion

- Method declaration
- Parameters & return types
- Method overloading
- Recursion

Practical:

Factorial & Fibonacci programs

DAY 5 – Arrays & Collections

- Single & multi-dimensional arrays
- List, Dictionary, Stack, Queue
- foreach loop

Practical:

Employee management using List

DAY 6 – Object-Oriented Programming (OOP)

- Class & Object
- Encapsulation
- Access modifiers

Practical:

Bank account system

DAY 7 – OOP Continued

- Inheritance

- Polymorphism
- Abstraction
- Interfaces

Practical:

Shape area calculator using polymorphism

DAY 8 – Exception Handling

- try-catch-finally
- Custom exceptions
- Debugging techniques

Practical:

Login validation with exception handling

DAY 9 – File Handling

- Reading & writing files
- StreamReader & StreamWriter
- Serialization basics

Practical:

File-based student record system

DAY 10 – LINQ & Lambda Expressions

- Introduction to LINQ
- Filtering, sorting, grouping
- Lambda expression

Practical:

Data filtering using LINQ

DAY 11 – Introduction to Databases

- SQL Server basics
- CRUD operations
- ADO.NET connectivity

Practical:

C# + SQL Server CRUD app

DAY 12 – Windows / Web Application Basics

- Windows Forms / ASP.NET intro
- UI controls
- Event handling

Practical:

Simple form-based application

DAY 13 – Mini Project Development (Phase 1)

- Project selection
- Requirement analysis
- Database design
- Application structure

Examples:

- Billing system
- Library management
- Employee payroll system

DAY 14 – Mini Project Development (Phase 2)

- Coding implementation
- Error handling
- UI enhancement

Practical:

Full working project

DAY 15 – Testing, Deployment & Evaluation

- Debugging & testing
- Project presentation
- Viva + assessment
- Resume & interview guidance