



# .NET Developer Roadmap

## 1 The .NET Platform

- The History of .NET
- What is .NET?
- Why learn .NET?
- What can you build?
- .NET Documentation

## 3 Basic C#

- What is C#?
- Console App - Hello World!
- Explicit Startup
- The C# Compiler
- Reading Program Arguments
- Debugging in Visual Studio
- Reading from the Console
- Writing to the Console
- C# Value Types
- Casting & Conversion
- Strings & String Parsing
- DateTime
- Operators
- Conditionals (if)
- Switch Statements
- Iteration Statements (Loops)
- Basic Variable Scopes

## 5 Intermediate C#

- Implicit Typing & Var Keyword
- Const Keyword
- Garbage Collection
- Enumerations
- Switch Expressions
- Structs
- Passing Value Types
- Passing Reference Types
- Exception Handling

## 7 Advanced C#

- Named Arguments
- Optional Arguments
- Extension Methods
- Generic Types
- Params Keyword
- Nullable Value Types
- Nullable Reference Types
- Record Types
- Class Libraries
- Custom Exception Types

## 9 Basic Testing in C#

- Why automated Testing?
- Test Projects
- Writing Unit Tests
- MsTest Testing Framework

## 0 Good to Know

- Git
- GitHub
- Bash/Cmd

## 2 Development Environment

- Installing Visual Studio
- Installing VS Code
- Developing with Windows
- Developing with Linux & Mac

## 4 OOP in C#

- Introduction to OOP
- Classes & Objects
- Reference Types
- Fields & Properties
- Constructors
- Methods
- Access Modifiers
- Namespaces
- Interfaces
- Method Overloading
- Inheritance
- Polymorphism
- Advanced Variable Scopes

## 6 Arrays & Collections in C#

- Arrays
- ArrayList
- Generic List
- Generic Stack
- Generic Queue
- Generic Dictionary

## 8 Introduction to LINQ

- What is LINQ?
- Filtering Data using LINQ
- Ordering Data using LINQ
- Selecting Data using LINQ
- Grouping Data using LINQ
- The LINQ Query Syntax

## 10 What's Next? Up to You!

- Web, Mobile, AI, Game, API, Desktop, Cloud, IoT, ML, ... development