

# Resources and Links for "What's New in C# 11 and 12 (with Additional Tips 'n Tricks"

## Contents

This course describes the newest additions to the C# language added in the C# 11 and 12 releases. In order to appreciate these features fully we first quickly recap the C# 8, 9, and 10 releases. Finally, we apply all these new features to generally raise the quality bar for the C# code we write in our everyday contexts.

The course consists of both module presentations and practical exercises.

## Prerequisites

This course is aimed at C# developers with a preexisting knowledge of C# 7, 8, 9, 10 and earlier.

## Agenda

The course has a duration of 1 course day following the agenda outlined below.

Day 1	Introduction Module 01: "Very Quick Recap of C# 8, 9, and 10" Module 02: "What's New in C# 11?" Module 02 Labs Module 03: "Newest Additions to C# 12" Module 03 Labs Module 04: "Code Better C#" Module 04 Labs Module 05: "Tips 'n Tricks"
-------	---

## Resources and Links

### Module 01: Very Quick Recap of C# 8, 9, and 10

- C# Language Version History
  - <https://github.com/dotnet/csharplang/blob/master/Language-Version-History.md>
- Pattern Matching
  - <https://docs.microsoft.com/en-us/dotnet/csharp/pattern-matching>
  - <https://csharp.christiannagel.com/2017/02/15/patternmatching/>
- What's New in C# 8
  - <https://docs.microsoft.com/en-us/dotnet/csharp/whats-new/csharp-8>
- What's New in C# 9
  - <https://docs.microsoft.com/en-us/dotnet/csharp/whats-new/csharp-9>
- What's New in C# 10
  - <https://docs.microsoft.com/en-us/dotnet/csharp/whats-new/csharp-10>
- Indices and Ranges

- <https://learn.microsoft.com/en-us/dotnet/csharp/tutorials/ranges-indexes>
- Readonly
  - <https://learn.microsoft.com/en-us/dotnet/csharp/language-reference/proposals/csharp-8.0/readonly-instance-members>

## Module 02: What's New in C# 11?

- What's New in C# 11
  - <https://learn.microsoft.com/en-us/dotnet/csharp/whats-new/csharp-11>
- .NET Conf 2022
  - <https://www.youtube.com/watch?v=H18CfoinPZg>

## Module 03: Newest Additions in C# 12

- What's New in C# 12
  - <https://learn.microsoft.com/en-us/dotnet/csharp/whats-new/csharp-12>
- .NET Conf 2023
  - <https://www.youtube.com/watch?v=by-GL-SjHdc>

## Module 04: Code Better C#

- Clean Code
  - <https://www.youtube.com/watch?v=McDvyFglkvU>
  - <https://www.youtube.com/watch?v=cVQEKamdLK8>
- Exception Do's and Don'ts
  - <https://ericlippert.com/2008/09/10/vexing-exceptions/>
  - <https://blog.stephencleary.com/2011/03/exception-types.html>
  - <https://www.milanjovanovic.tech/blog/8-tips-to-write-clean-code#8-use-the-result-object-pattern>
- Code Complexity
  - <https://learn.microsoft.com/en-us/visualstudio/code-quality/code-metrics-values?view=vs-2022>
- Curing Primitive Obsession
  - <https://medium.com/the-sixt-india-blog/primitive-obsession-code-smell-that-hurt-people-the-most-5cbdd70496e9>
  - <https://www.telerik.com/blogs/avoiding-primitive-obsession-dotnet>
  - <https://www.youtube.com/watch?v=4DzxKDnWkj0>

## Module 05: Tips 'n Tricks

- Exceptions
  - <https://learn.microsoft.com/en-us/dotnet/standard/exceptions/using-user-filtered-exception-handlers>
  - <https://learn.microsoft.com/en-us/dotnet/standard/exceptions/best-practices-for-exceptions>
  - <https://www.educative.io/answers/what-are-throw-expressions-in-c-sharp>
- Collections
  - <https://khalidabuhakmeh.com/working-with-dotnet-six-priorityqueue>
- Spans and Performance
  - <https://blog.ndepend.com/improve-c-code-performance-with-spant/>