

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: "A 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#" <i>If Time Permits:</i> Module 04 Labs <i>If Time Permits:</i> Module 05: "Tips 'n Tricks"
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Resources and Links

Module 01: A 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/>