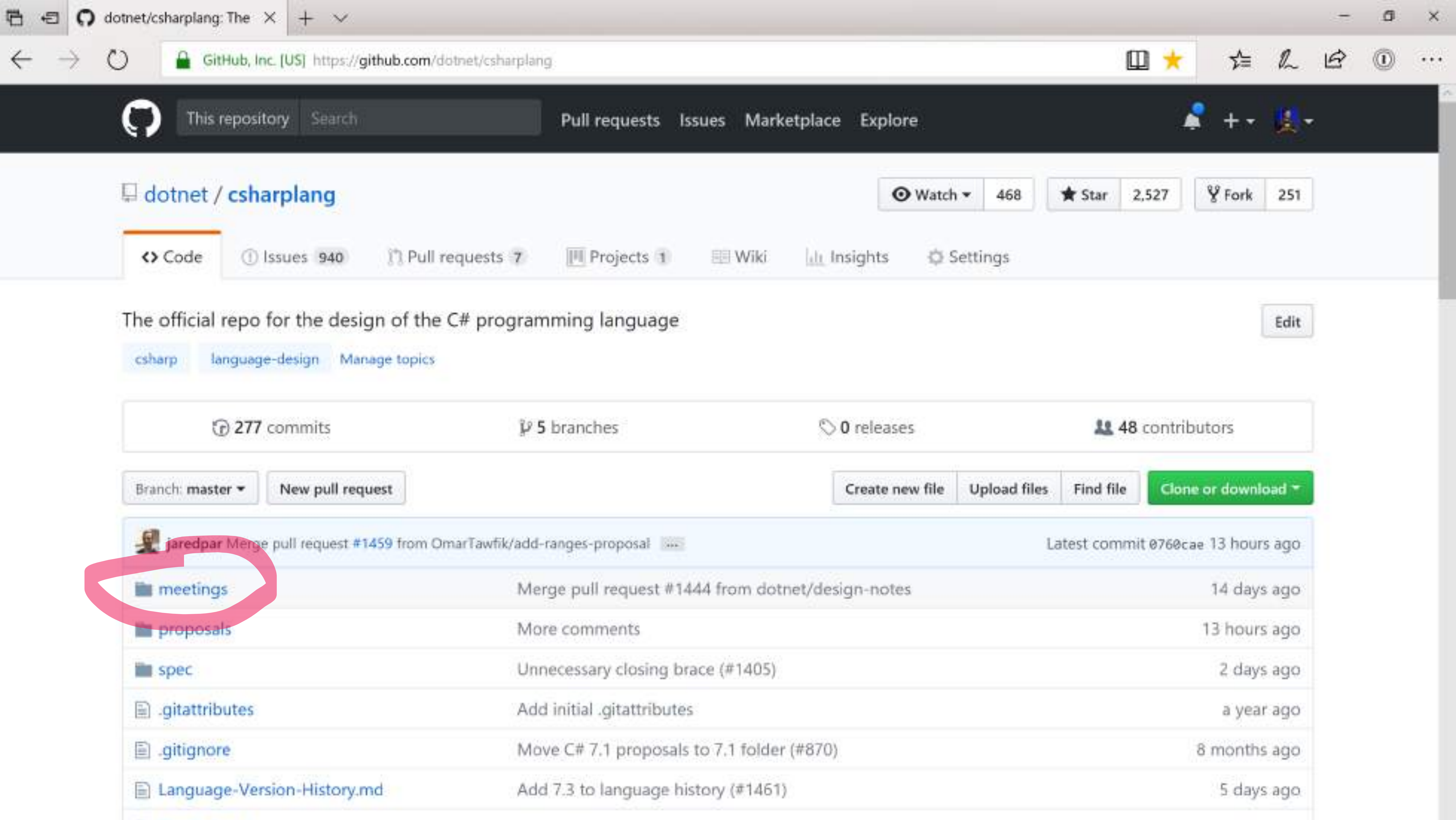


dotnet / csharplang

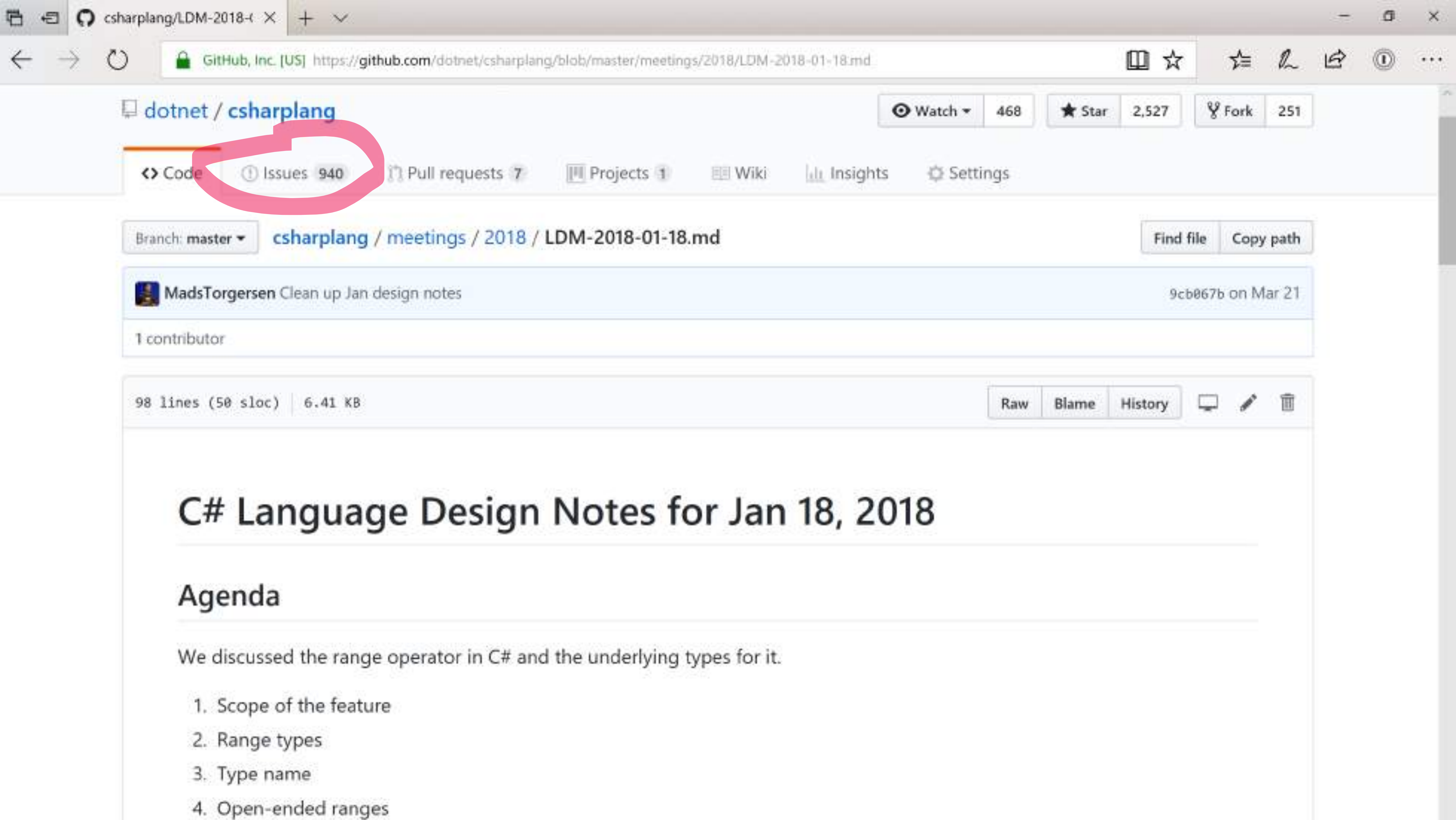
The official repo for the design of the C# programming language

csharp language-design

277 commits 5 branches 0 releases 48 contributors

jaredpar Merge pull request #1459 from OmarTawfik/add-ranges-proposal … Latest commit 0760cae 13 hours ago

meetings	Merge pull request #1444 from dotnet/design-notes	14 days ago
proposals	More comments	13 hours ago
spec	Unnecessary closing brace (#1405)	2 days ago
.gitattributes	Add initial .gitattributes	a year ago
.gitignore	Move C# 7.1 proposals to 7.1 folder (#870)	8 months ago
Language-Version-History.md	Add 7.3 to language history (#1461)	5 days ago

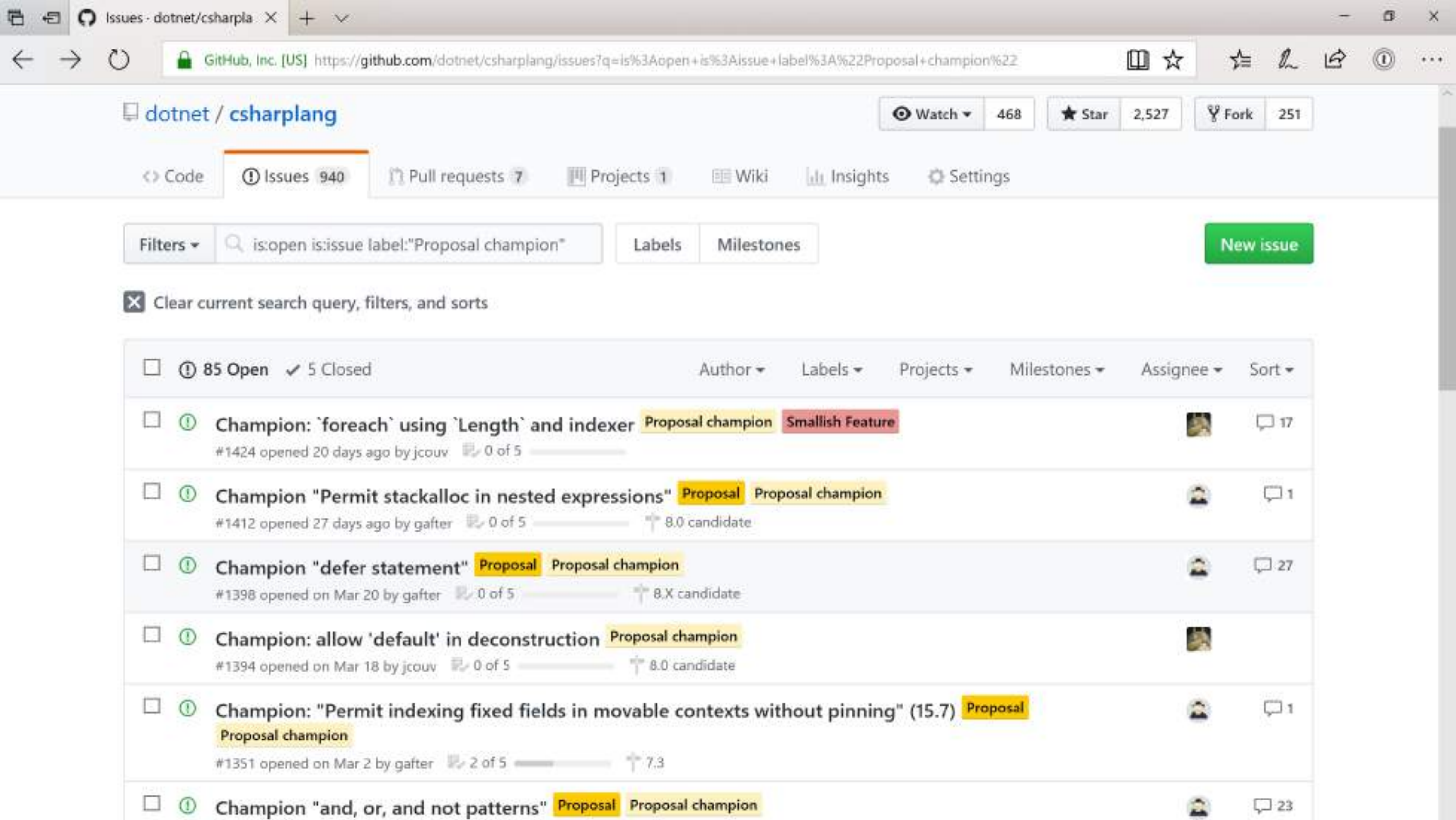

csharplang/LDM-2018-(
GitHub, Inc. [US] https://github.com/dotnet/csharplang/blob/master/meetings/2018/LDM-2018-01-18.md
dotnet / csharplang
Watch 468
Star 2,527
Fork 251
<> Code
Issues 940
Pull requests 7
Projects 1
Wiki
Insights
Settings
Branch: master
csharplang / meetings / 2018 / LDM-2018-01-18.md
Find file
Copy path
MadsTorgersen Clean up Jan design notes
9cb067b on Mar 21
1 contributor
98 lines (50 sloc) | 6.41 KB
Raw
Blame
History

C# Language Design Notes for Jan 18, 2018

Agenda

We discussed the range operator in C# and the underlying types for it.

1. Scope of the feature
2. Range types
3. Type name
4. Open-ended ranges



is:open is:issue label:"Proposal champion"

☒ Clear current search query, filters, and sorts

□ 85 Open ✓ 5 Closed

□ Champion: `foreach` using `Length` and indexer **Proposal champion** **Smallish Feature** 17
#1424 opened 20 days ago by jcouv 0 of 5

□ Champion "Permit stackalloc in nested expressions" **Proposal** **Proposal champion** 1
#1412 opened 27 days ago by gafter 0 of 5 8.0 candidate

□ Champion "defer statement" **Proposal** **Proposal champion** 27
#1398 opened on Mar 20 by gafter 0 of 5 8.X candidate

□ Champion: allow 'default' in deconstruction **Proposal champion**
#1394 opened on Mar 18 by jcouv 0 of 5 8.0 candidate

□ Champion: "Permit indexing fixed fields in movable contexts without pinning" (15.7) **Proposal** **Proposal champion** 1
#1351 opened on Mar 2 by gafter 2 of 5 7.3

□ Champion "and, or, and not patterns" **Proposal** **Proposal champion** 23

Going open – open to change

Open source

Runtime, framework, compiler

Cross platform

Runs pretty much anywhere

Open language API “Roslyn”

Syntax trees and more

Cross IDE

OmniSharp

Open design

Language design is a conversation

Open to change

Let’s never be afraid to explore new directions

“New direction” on the Great Wall

LINQ – Language Integrated Query

```
from c in customers           customers
where c.City == "Beijing"     .Where(c => c.City == "Beijing")
select c.Name;                .Select(c => c.Name);
```

```
from c in customers           customers
where c.City == "Beijing"     .Where(c => c.City == "Beijing")
from o in c.Orders            .SelectMany(c => c.Orders, (c, o) => new { c, o })
select (c.Name, o.Price);     .Select(p => (p.c.Name, p.o.Price));
```

Async – Keeping C# imperative since 2012

```
void PlaySongs(int[] ids)
{
    foreach (var id in ids)
    {
        try
        {
            var data = service.GetEncodedData(id);
            var song = Decode(data);
            Play(song);
        }
        catch (Exception e) { /* just skip the song */ }
    }
}
```

Async – Keeping C# imperative since 2012

```
Task PlaySongsAsync(int[] ids)
{
    foreach (var id in ids)
    {
        try
        {
            var data = service.GetEncodedData(id);
            var song = Decode(data);
            Play(song);
        }
        catch (Exception e) { /* just skip the song */ }
    }
}
```

Async – Keeping C# imperative since 2012

```
async Task PlaySongsAsync(int[] ids)
{
    foreach (var id in ids)
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            var song = Decode(data);
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        }
        catch (Exception e) { /* just skip the song */ }
    }
}
```

Async – Keeping C# imperative since 2012

```
async Task PlaySongsAsync(int[] ids)
{
    foreach (var id in ids)
    {
        try
        {
            var data = await service.GetEncodedDataAsync(id);
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Async – Keeping C# imperative since 2012

```
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            await PlayAsync(song);
        }
        catch (Exception e) { /* just skip the song */ }
    }
}
```

Async – Keeping C# imperative since 2012

```csharp
async Task PlaySongsAsync(int[] ids)
{
    foreach (var id in ids)
    {
        try
        {
            var data = await service.GetEncodedDataAsync(id);
            var song = await Task.Run(() => Decode(data));
            await PlayAsync(song);
        }
        catch (Exception e) { /* just skip the song */ }
    }
}
```

Async – Keeping C# imperative since 2012

```
async Task PlaySongsAsync(int[] ids)
{
    Task currentlyPlaying = Task.FromResult(true);
    foreach (var id in ids)
    {
        try
        {
            var data = await service.GetEncodedDataAsync(id);
            var song = await Task.Run(() => Decode(data));
            await PlayAsync(song);
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            var song = await Task.Run(() => Decode(data));
            await currentlyPlaying;
            currentlyPlaying = PlayAsync(song);
        }
        catch (Exception e) { /* just skip the song */ }
    }
    try { await currentlyPlaying; } catch (Exception e) { }
}
```
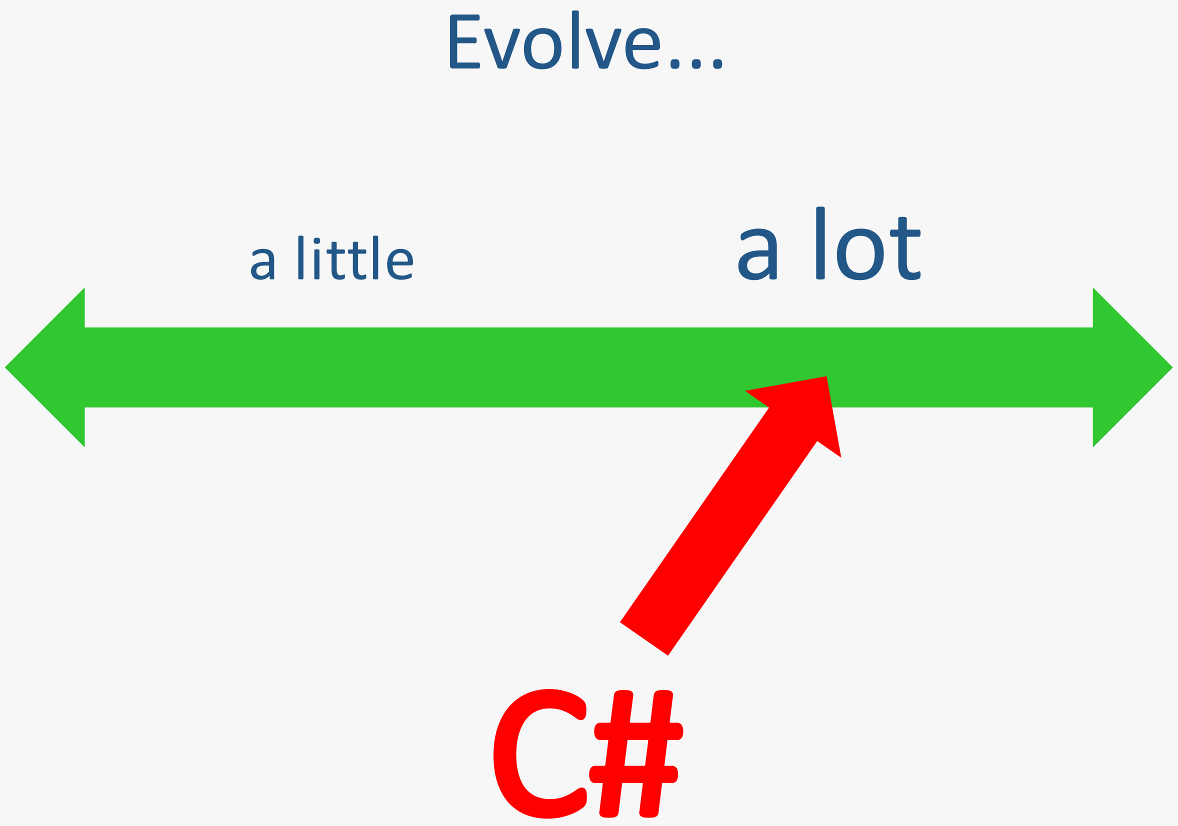

C# evolution – pace

Stagnation



Evolve...

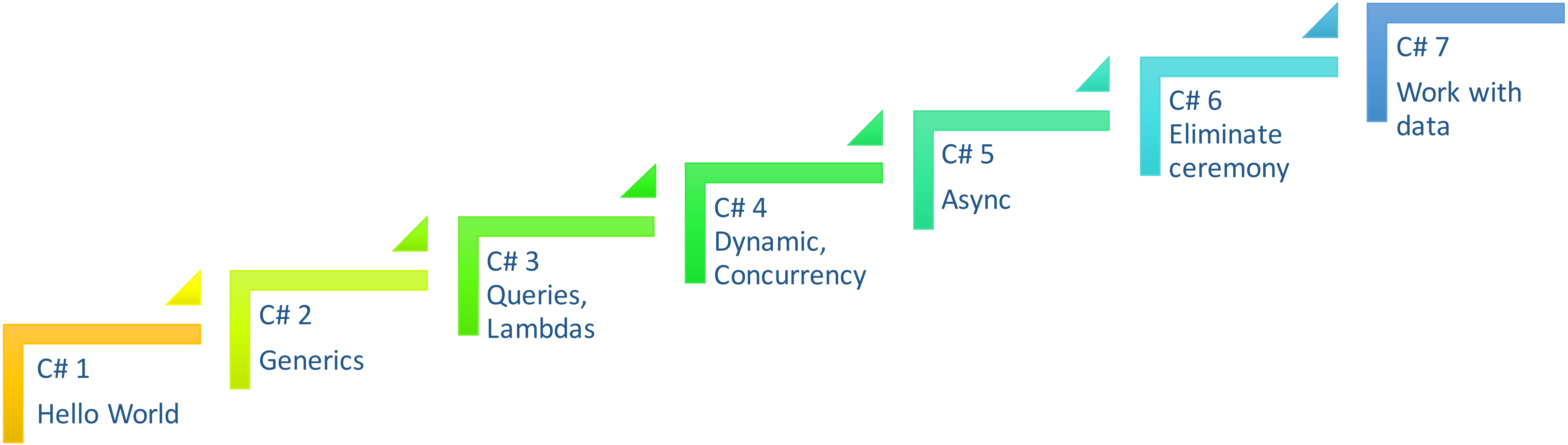
a little

a lot

C#

Explosion

C# evolution – history



C# 1
Hello World

C# 2
Generics

C# 3
Queries,
Lambdas

C# 4
Dynamic,
Concurrency

C# 5
Async

C# 6
Eliminate
ceremony

C# 7
Work with
data

Open for business

Open source

Runtime, framework, compiler

Cross platform

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Open mind

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