



C# - Async API Lab

Orestis Meikopoulos
Consultant – Modern Apps



Agenda

- We will transform an existing API running in a synchronous execution model, to an asynchronous execution model, applying async / await best practices along the way.

ASK: Work inside the **AsyncApiCore.Starter** project, you will find inside the **Day 2 -> Async API Lab** inside **Microsoft.CSharp.Advanced** solution. Transform all synchronous methods to asynchronous, allow async code to grow naturally through the codebase and expand to every entry point controller action.

How it Works

- For every action item, you will be given the allotted time to complete the request
- Once you are done you need to create a new branch, push the branch to the repository and create a pull request
- At the end of the allotted time, one of you is going to be picked to walk us through the changes

Lab prerequisites

1. [MSSQLLocalDB](#) installation
2. [Postman](#) installation

Git – How to submit your work

1. Create the branch

```
git checkout -b async-api-lab/{surname}-{name}
```

2. Stage your changes

```
git add .
```

3. Commit your changes

```
git commit -m "Exercise {number} – {task-description}"
```

4. Push to the remote repository

```
git push --set-upstream origin async-api-lab/{surname}-{name}
```

Exercise 1

Embrace async all the way -> Change all method call from synchronous to asynchronous using `async / await` (30 mins)

Hint: Start with changing all interface declarations (inside **Interfaces** folder) to return `Task<...>` and adding the `Async` suffix to each method's name

Wheel of fortune

Exercise 2

Embrace async all the way -> Add cancellation support by utilizing the CancellationToken framework construct (10 mins)

Hint: Start with changing all interface declarations (inside **Interfaces** folder) to also accept a CancellationToken cancellationToken = default parameter.

Wheel of fortune

Exercise 3

Embrace async all the way -> Consider if `.ConfigureAwait(false)` should be added to every await inside our codebase for this particular scenario (5 mins)

Wheel of fortune

Thank You

- For the opportunity
- For participating
- For listening