Enterprise Software Development

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Simplified Unit Testing with the EF Core InMemory Provider

NDC Sydney 2017

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Agenda

Typical Approach

Remove dependencies on EF

Implement abstractions

Create test doubles

Write unit tests

Agenda

Typical Approach

Simplified Approach

Limitations & Concerns

Learning Resources

Simplified Approach

~~Remove dependencies on EF~~

~~Implement abstractions~~

~~Create test doubles~~

Write unit tests

EF Core InMemory Provider

Just a database provider

Built for testing purposes

Uses in-memory database

No overhead of I/O operations

Lightweight with minimal dependencies

Demo

Simplified Unit Testing with the

EF Core InMemory Provider

Agenda

Typical Approach

Simplified Approach

Limitations & Concerns

Learning Resources

Limitations

InMemory is not a relational database provider

Constraints won't be enforced, you can violate referential integrity

For unit testing, this does not matter

Concerns

You're writing integration tests, not unit tests

Concerns

Lack of isolation, e.g. tests are exercising code

with dependencies on EF

Concerns

Unit of work and repository patterns

are best practice!

Agenda

Typical Approach

Simplified Approach

Limitations & Concerns

Learning Resources

GitHub, Inc. [US] | https://github.com/JasonGT/NDCSydney2017Demo

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JasonGT / **NDCSydney2017Demo**

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The slides and demo code for my talk on Simplified Unit Testing with the EF Core InMemory Provider at NDC Sydney 2017   Edit

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Slides & Code - bit.ly/efcore-testing

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Jason Taylor

Jason is a passionate solution architect with over 16 years professional experience. He has worked with .NET since 2001, and currently specialises in teaching and developing enterprise applications utilising .NET Core, ASP.NET Core, EF Core, and Angular. He achieved a Master of Information Technology (Software Architecture) in 2011 and Microsoft Certified Solutions Developer (Web Applications) in 2016. Jason loves a challenge and is skilled at progressing from a simple proposal into a well

SSW .NET Core Dev Superpowers Tour – Sydney – Friday, 20ᵗʰ October 2017

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Duncan Hunter

Duncan Hunter a Software Architect at SSW. Making sustainable software that solves real world issues is what makes Duncan tick. He is a full stack web developer specialising in making responsive frontend applications with AngularJS and TypeScript.

With the current speed of change in frontend best practices Duncan helps teams learn and implement modern frontend build processes to produce scalable and maintainable applications

Summary

❌ Don't remove dependencies on EF

❌ No need to implement abstractions

❌ Don't create test doubles

✅ Writing unit tests

Thank you!

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