

"Asynchronous Programming and Concurrency"

Agilent Special Course

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TEKNOLOGISK
INSTITUT

Presentation

- ▶ Name
- ▶ Company affiliation
- ▶ Area of expertise
- ▶ C# experience
- ▶ Expectations for the course

Prerequisites

- ▶ Working knowledge of newest C# and Visual Studio
 - Object-oriented development
 - Classes
 - Inheritance
 - Interfaces
 - Delegates
 - ...
- ▶ Interest in all the fun stuff about threading 😊
- ▶ Some knowledge about WPF
- ▶ A little knowledge about WCF

"Asynchronous Programming and Concurrency" – Day 1

- ▶ 00 – Introduction
- ▶ 01 – Threads
- ▶ 02 – Blocking Synchronization
- ▶ 03 – Signaling with Events and Handles
- ▶ 04 – Nonblocking Synchronization
- ▶ 05 – The Thread Pool
- ▶ 06 – Data Parallelism in TPL

"Asynchronous Programming and Concurrency" – Day 2

- ▶ A – Case Study: WPF and Threads
- ▶ 07 – Tasks in TPL
- ▶ 08 – Async, Await, and Task Combinators
- ▶ 09 – Concurrent Collections
- ▶ B – Case Study: Concurrent Updates in WPF
- ▶ 10 – New C# 8.0 Async Features (*If Time Permits...*)

Course Material

- ▶ Book
 - Joseph Albahari: *"Threading in C#"*
<http://www.albahari.com/threading/>
- ▶ Slides
- ▶ Examples for every module
- ▶ Labs (and lab solutions) for every module
- ▶ Case Study code
- ▶ Course evaluation after Day 2

Practical Information

- ▶ Each course day will be from 8.30 to 16.30
- ▶ Breaks
- ▶ Any questions...?



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