

# "SOLID Programming in C#"

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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
    - ...
  - Some knowledge of Design Patterns might be helpful (but is not required)
  
- ▶ An interest in producing maintainable C# code ☺

# "SOLID Programming in C#" – Day 1

- ▶ Module 0: Introduction
- ▶ Module 1: The SOLID Principles
  - Single Responsibility Principle
  - Open/Closed Principle
  - Liskov Substitution Principle
  - Interface Segregation Principle
  - Dependency Inversion Principle
- ▶ Module 2: SOLID in Practice
  - Workshop A.1
  - 2.1: Repository Pattern
  - Workshop A.2

# "SOLID Programming in C#" – Day 1

- ▶ Module 2: SOLID in Practice (Cont'd)
  - (Optional) 2.2: Automatic Testing
  - Workshop A.3
  
- ▶ Module 3: Managing Dependencies
  - Workshop A.4
  - 3.1: Null Object Pattern
  - (Optional) Workshop A.5

# "SOLID Programming in C#" – Day 2

- ▶ **Module 04: Workshop B: Create User Service**
  - 4.1: Strategy Pattern
  - 4.2: (Optional) Decorator / Proxy Pattern
  - 4.3: (Optional) Composite Pattern
  
- ▶ **Module 05: Dependency Injection Containers**
  - Containers
  - Workshop C.1: Adding Unity DI
  - Dependency Injection Patterns
  - Workshop C.2: Interception
  - Lifetime Management

# "SOLID Programming in C#" – Day 2

- ▶ Conclusion
- ▶ (For Later) Workshop D: If Time Permits...

# Course Material

- ▶ Book
  - Mark Seemann and Steven van Deursen:  
*"Dependency Injection Principles, Practices, and Patterns"*  
*Manning (2019), 1<sup>st</sup> Edition*
- ▶ Slides
- ▶ Examples for every module
- ▶ Workshop and all workshop solutions
- ▶ Course evaluation after Day 2



# Practical Information

- ▶ Each course day will be from 9.00 to 16.00
- ▶ Breaks
- ▶ Toilets
- ▶ Food and beverages
- ▶ Phones and devices
- ▶ Smoking
  
- ▶ Any questions...?



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