

# Module 2:

## "SOLID in Practice"

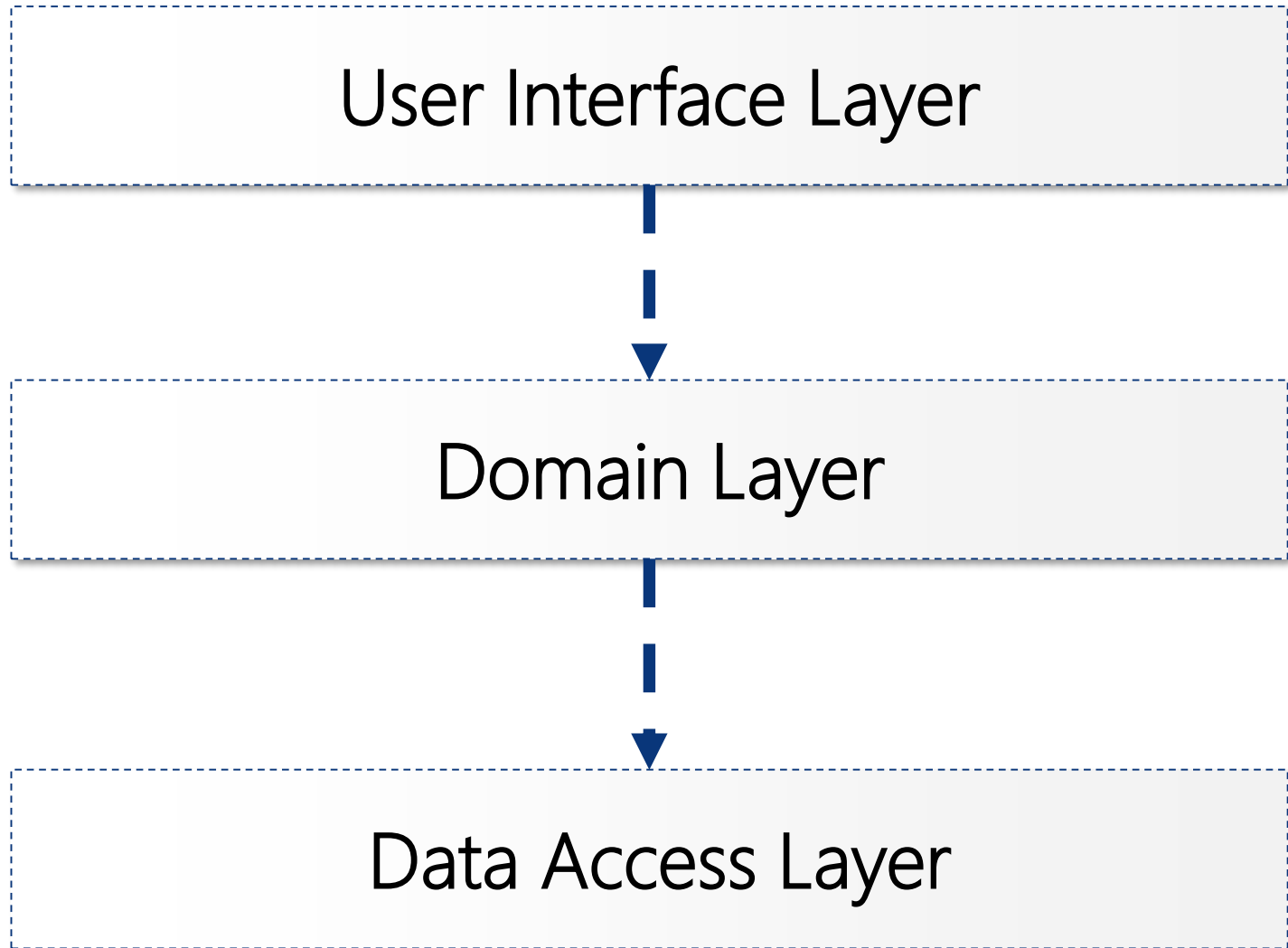


**TEKNOLOGISK**  
**INSTITUT**

# Agenda

- ▶ **Discussion: Evaluating the Design**
- ▶ *Pattern: Repository (with Entity Framework)*
- ▶ Workshop A.2: Data Access Layer with Repository
- ▶ Discussion: Evaluating the Design Again
- ▶ Workshop A.3: Modify the Data Access Layer

# Beautiful Layered Design?



# Discussion:

## Evaluating the Design

- ▶ Can we change the UI Layer from Console to e.g. Web or WPF?
- ▶ Can we unit test the Domain Layer?
- ▶ Can we change the Data Access Layer?

# Anti-Pattern: Entourage

- ▶ *When A depends upon B, and you group B and C in the same assembly, then if C depends upon D, in effect, you have equipped A with a dependency upon D.*
- ▶ Outline
  - If you keep the interfaces and implementations in the same assembly, you essentially inherit dependencies' dependencies.
  - Entourage means ask for one assembly and it gives all its assemblies.
  - Nuget packages are potentially evil!
- ▶ See:  
"Adaptive Code" (2<sup>nd</sup> Edition)  
Gary McLean Hall (2017)

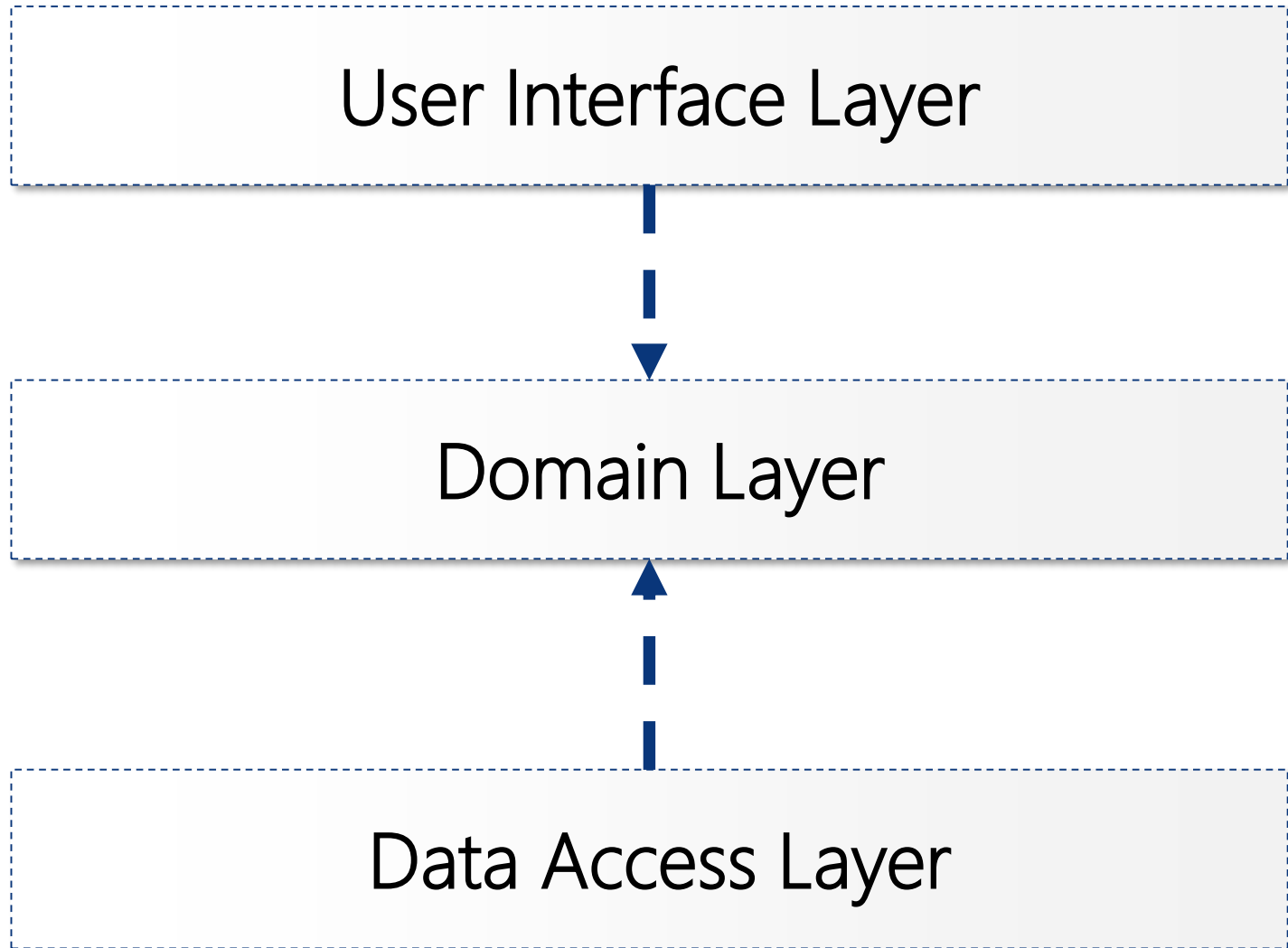
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- ▶ Discussion: Evaluating the Design
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# Better SOLID Design





# Workshop A.2: Data Access Layer with Repository



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- ▶ Workshop A.3: Modify the Data Access Layer

# Discussion:

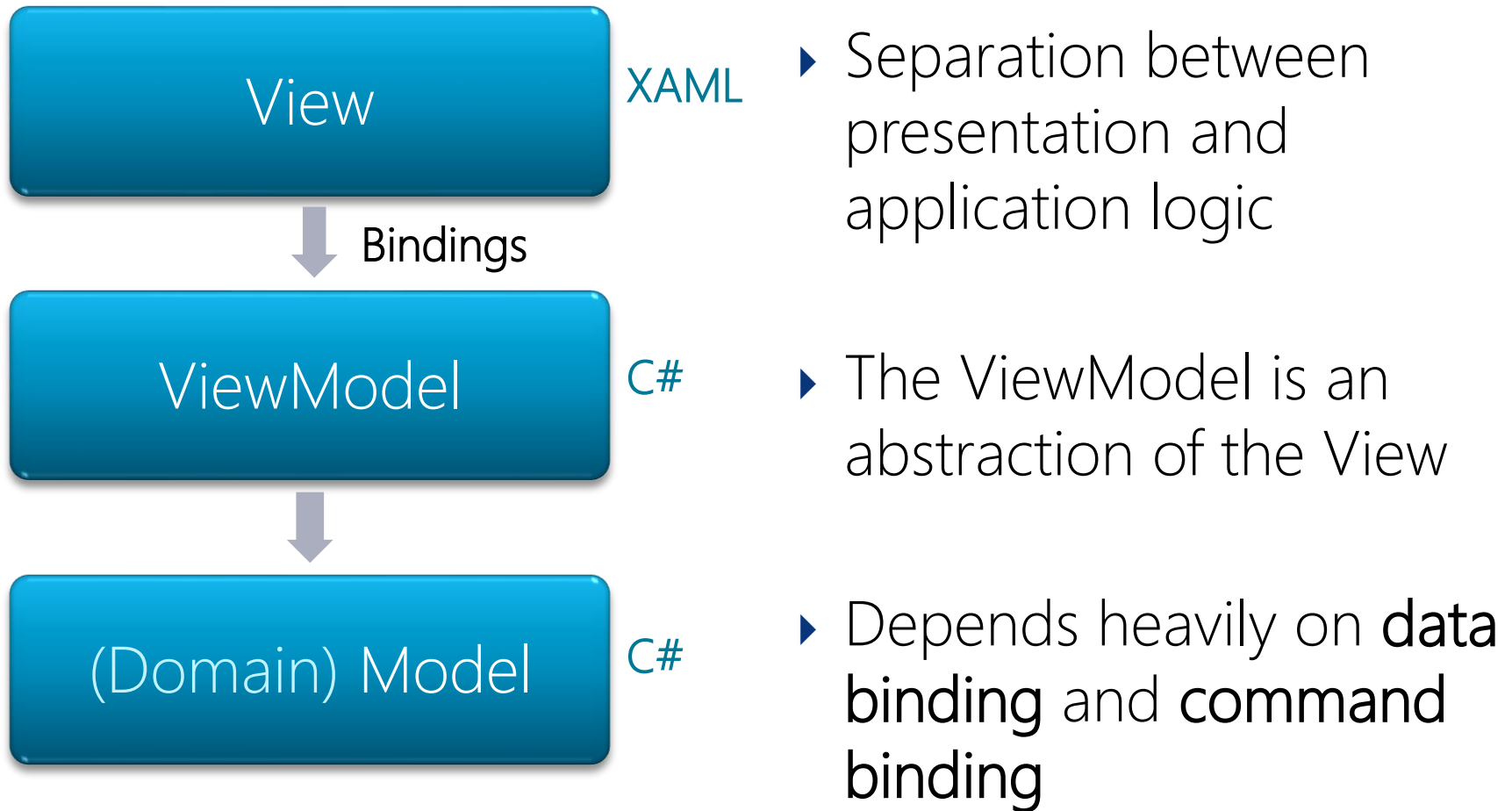
## Evaluating the Design

- ▶ Can we change the UI Layer from Console to e.g. Web or WPF?
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# Pattern: Stairway

- ▶ *Let your implementation packages depend upon packages that exclusively contain interfaces (or interface-like classes). Moreover, your packages should not depend other implementation packages.*
- ▶ Outline
  - This is essentially the “module” part of DIP
  - Avoids the Entourage anti-pattern
  - May not be practically manageable
- ▶ See:  
“Adaptive Code” (2<sup>nd</sup> Edition)  
Gary McLean Hall (2017)

# Pattern: Model-View-ViewModel



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- ▶ **Workshop A.3: Change the Data Access Layer**

# Workshop A.3: Change the Data Access Layer



# Summary

- ▶ Discussion: Evaluating the Design
- ▶ *Pattern: Repository (with Entity Framework)*
- ▶ Workshop A.2: Data Access Layer with Repository
- ▶ Discussion: Evaluating the Design Again
- ▶ Workshop A.3: Change the Data Access Layer





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