

## Kravhantering sammanfattning

- BDD/ATDD/Specification By Example
  - User stories
  - Acceptancetestfall/Testscenarion
- Icke-funktionella krav
- Technical Stories
- Dokumentation

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## Drive: The surprising truth about what motivates us

Viktigaste slutsatserna ur filmen?

Varför tror ni Spotify fokuserade så mycket på autonomy?

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## Dagens uppgift:

Muddiest point?

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## Design - översikt

- Vad är design?
- Domain Driven Design
- Designprinciper
- Design Patterns
- Vad är arkitektur?
- Architectural Patterns
- UML

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## Vad är design?

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google define: design

google define: design

“the act of working out the form of something”

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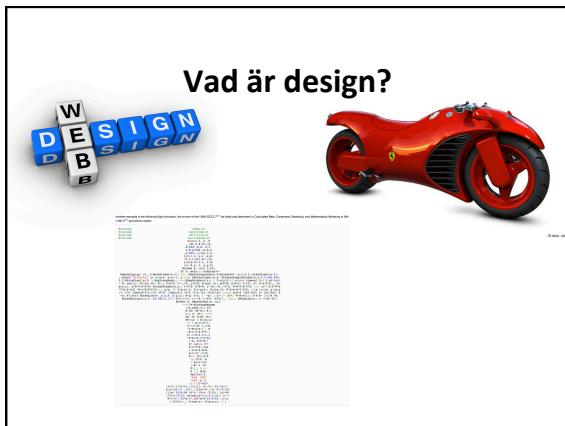
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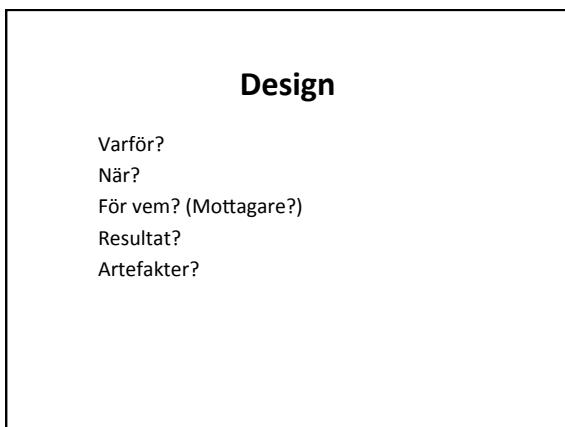
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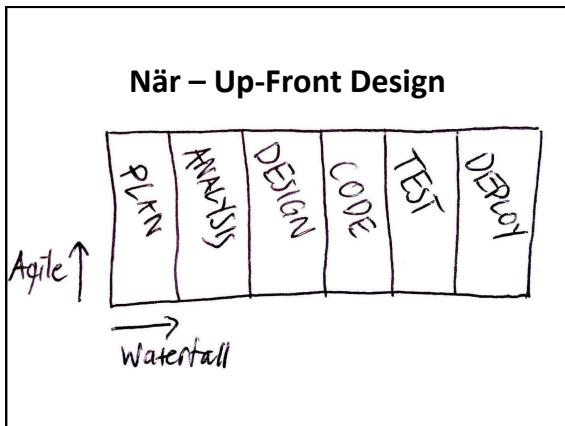
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## Analys

- Vart tog Analysen vägen?

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## Alternativ?

Incremental Design

Evolutionary Design

Emergent Design

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## Incremental Design

1. Välj ett problem
2. Lös det på **enklast möjliga sätt (KISS!)**
3. Välj ett nytt problem
4. Lös det på **enklast möjliga sätt**
5. Förenkla och tydliggör (Abstrahera, Generalisera)
6. Gå till 3

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Vad betyder TDD?

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TDD

Test Driven **Design**

Coding by intention  
Programming by intention

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**Designelement**

Metod  
Klass  
Komponent  
Tjänst  
Arkitektur  
Etc...

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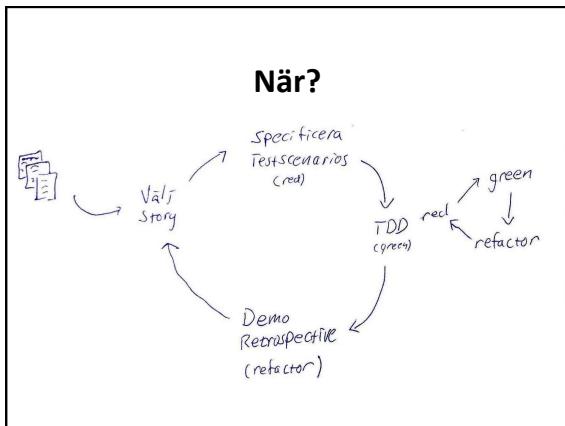
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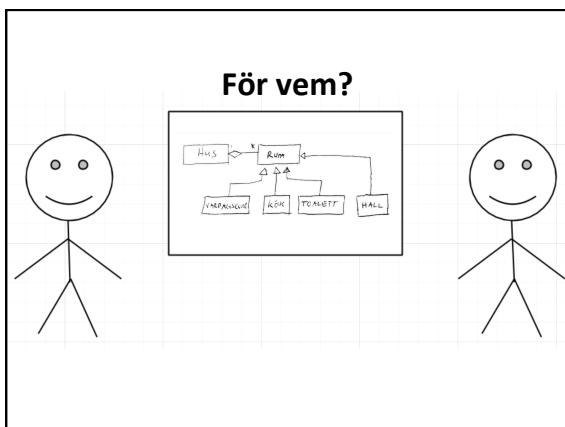
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Vad är en bra design?

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## Designprinciper

- Abstraction
- Decomposition and modularization
- Coupling and Cohesion
- Encapsulation and information hiding
- Consistency (Ubiquitous language)

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## Designprinciper

- Reveal Intent - *Naming*
- SRP: Single Responsibility Principle
  - One and one reason only to change
- DRY: Don't Repeat Yourself
  - Duplication: Missed opportunity for abstraction!
- KISS: Keep it simple, stupid!
- YAGNI: You ain't gonna need it!

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## Designprinciper – att tänka på

No one gets it right the first time!

Analysis Paralysis

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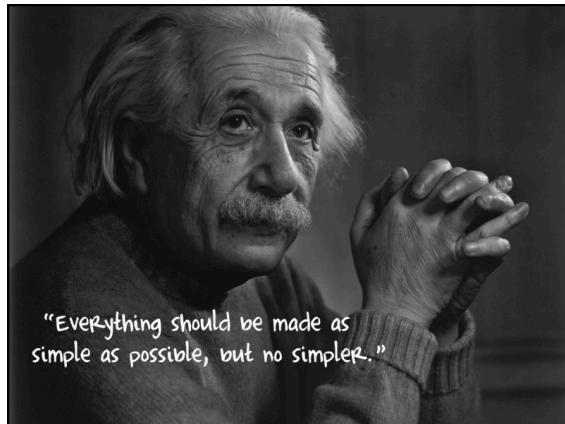
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"Everything should be made as simple as possible, but no simpler."

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### Design pattern

— “Each pattern describes a problem that occurs over and over again in our environment, and then describes the core of the solution to that problem...”

— Christopher Alexander

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### Software Design Pattern

- “a general reusable solution to a commonly occurring problem within a given context”

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[http://en.wikipedia.org/wiki/Software\\_design\\_pattern](http://en.wikipedia.org/wiki/Software_design_pattern)

## Design patterns

- Factory
- Builder
- DI
- ServiceLocator

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## GoF

- Creational
  - Builder,
  - Factory method, ...
- Structural
  - Adapter, Decorator, ...
- Behavioral
  - Iterator, Observer, ...



"workarounds for missing features in C++"?

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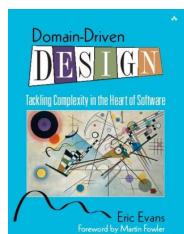
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## Some DDD Design patterns

- Entity
- Value-Object
- Aggregate
- Repository
- Service
- ...




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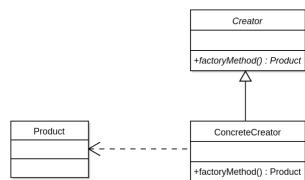


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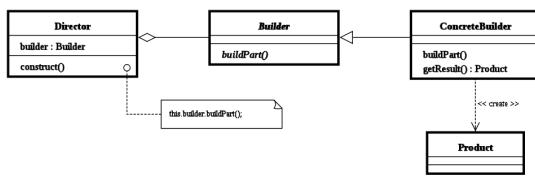
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## Factory method



– [http://en.wikipedia.org/wiki/Factory\\_method\\_pattern](http://en.wikipedia.org/wiki/Factory_method_pattern)

## Builder



– [http://en.wikipedia.org/wiki/Builder\\_pattern](http://en.wikipedia.org/wiki/Builder_pattern)

## Pattern Language

“A pattern language is a method of describing good design practices within a field of expertise”

[http://en.wikipedia.org/wiki/Pattern\\_language](http://en.wikipedia.org/wiki/Pattern_language)

