ARCHITECTURE WITH HENNING SCHWENTNER

Starring **Layers Hexagons Rings** With **Onion and Clean Architecture** Special Appearance **Tactical Design**

Directed By **Dependency Inversion** Introducing **Architecture Hamburger**

NC-17 NO ONE 17 AND UNDER ADMITTED

FSK ab 18

Metro Goldwyn Lolcat

BUNDESREPUBLIK DEUTSCHLAND
FEDERAL REPUBLIC OF GERMANY / REPUBLIQUE FEDERALE D'ALLEMAGNE
PERSONALAUSWEIS
IDENTITY CARD / CARTE D'IDENTITE
[redacted]
Name/Surname/Nom
SCHWENTNER
Vornamen/Given names/Prénoms
JENS HENNING
OLD!
Geburtstag/Date of birth/
Date de naissance
Staatsangehörigkeit/Nationality/
Nationalité
16.05.1979
DEUTSCH
Geburtsort/Place of birth/Lieu de naissance
HAMBURG
Gültig bis/Date of expiry/
Date d expiration
03.12.2027
Unterschrift der Inhaberin/des Inhabers
Signature of bearer · Signature de la titulaire/du titulaire
J. Henning Schwentner
PHP
JAVA
JAVASCRIPT
C#
ABAP
PYTHON

“A Short History of Software Architecture”

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No Architecture

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No Architecture

2 Layer Architecture

The One Rule

⇒ ACYCLIC DEPENDENCY PRINCIPLE

3 Layer Architecture

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Non-Strict vs. Strict

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4 Layer Architecture

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The Problem

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The Problem

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From above/below to inside/outside

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Hexagonal Architecture

ALISTAIR COCKBURN

https://web.archive.org/web/20180822100852/http://alistair.cockburn.us/Hexagonal%2Barchitecture

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Kinds of Ports

PRIMARY:

- FOR UI ETC.
- METHODS TO BE CALLED
- "FROM ABOVE"

SECONDARY:

- FOR DATABASE AND INFRASTRUCTURE
- INTERFACES TO BE IMPLEMENTED
- "FROM BELOW"

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Kinds of Ports

→ DEPENDENCY

→ FLOW OF CONTROL

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The Solution

STEP 1

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Dependency Inversion

DEPEND ON ABSTRACTIONS, NOT ON CONCRETIONS!

ROBERT C. MARTIN

"UNCLE BOB"

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Onion Architecture

<—> "APPLICATION CORE"

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The 4 Tenets

- *The application is built around an independent object model*
- *Inner layers define interfaces. Outer layers implement interfaces*
- *Direction of coupling is toward the center*
- *All application core code can be compiled and run separate from infrastructure*

JEFFREY PALERMO

@hschwentner

Designed for Testability

"ALL APPLICATION CODE CAN BE COMPILED, RUN, AND TESTED SEPARATE FROM INFRASTRUCTURE"

⇒ EASY UNIT TESTS

⇒ PLAYS WELL WITH TDD

CLEAN ARCHITECTURE

INTERACTOR = USE CASE OBJECT

Robert C. Martin

"Uncle Bob"

Model View Controller

TRYGVE REENSKAUG

VARIANTS:

MODEL-VIEW-PRESENTER

MODEL-VIEW-VIEWMODEL

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Domain-Driven Design

ERIC
EVANS

Tactical Design

Repositories

Services

Aggregates

Entities

Factories

Value Objects

Entity vs. Value

IDENTITY

LIFE CYCLE

CAN BE MUTABLE

CONTRACT

MAP

NO IDENTITY

IMMUTABLE

LENGTH

12.5 m

AMOUNT

$ 100.00

"JOHN MILLER"

NAME

Repository

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Architecture Hamburger

COARSE GRAINED

@hschwentner

Architecture Hamburger

FWK CRAMMED

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einfach & schnell
öffnen
Happy End
Recycling
3
aus
Recycling-
papier
Umweltfreundlich, da aus 100% Altpapier
PRO PLANET
aus
Recyclingpapier
200
8x

OBAMA OUT

This has been a presentation of

Metro Goldwyn Lolcat

Henning Schwentner

@hschwentner

hs@wps.de

DDD

Slides: speakerdeck.com/hschwentner

Book: leanpub.com/domainstorytelling