

Object-oriented Design with Patterns («ODP»)

Modern software systems should be flexible and yet transparent. Design patterns serve this purpose by ensuring the reusability and maintainability of systems in a simple way.

Duration: 2 days

Price: 1'900.–

Course documents: Digicomp Kursmaterial

Content

In this practice-oriented seminar, our trainers will introduce you to the structure of design patterns. You will learn the correct application of design patterns for the design of flexible object-oriented systems. Using concrete examples, you will practice object-oriented design using various design patterns. The most important design patterns are presented here. In addition, our trainers also address other pattern collections. This seminar is language-independent. The design patterns are presented and practiced using class diagrams and object models (in UML) (JDP).

1. Introduction

- Aspects of flexible software design
- Overview of patterns
- Software Design Level Model (SDLM)
- What are design patterns?
- Structure and use of design patterns
- What can design patterns be used for?

2. Pattern catalog of the «Gang of Four»

- Creation patterns
- Structure patterns
- Behavior patterns

3. Examples of design patterns

- Observer
- Singleton
- Chain of Responsibilities

4. Exercise series with design problems and design patterns as a solution

- Abstract Factory
- Builder
- Prototype
- Adapter
- Composite
- Proxy
- Iterator
- Strategy
- Visitor

5. Further pattern catalogs

- «Siemens Catalog»
- «Analysis Patterns»

Key Learnings

- Comprehensive knowledge of design patterns and their application in object-oriented design
- Use of design patterns
- Designing and implementing object-oriented applications so that they are easily adaptable, extendable and maintainable
- Assessing and further developing object-oriented applications and frameworks with regard to these properties

Target audience

This course is aimed at IT architects and IT developers who wish to deepen their knowledge of object-oriented design.

Requirements

Knowledge of object-oriented software development as well as object-oriented analysis and design analogous to the following courses:

- [Basics of Object-oriented Software Development \(«OGL»\)](#)
- [Object-oriented Analysis and Design \(OOAD\) \(«OOU»\)](#)

Further courses

- [Domain-Driven Design \(«DDD»\)](#)
- [iSAQB® Certified Professional for Software Architecture – Foundation \(«CPSAFL»\)](#)

Any questions?

We are happy to advise you on +41 44 447 21 21 or info@digicomp.ch. You can find detailed information about dates on www.digicomp.ch/courses-software-engineering/it-architecture/enterprise-software-architecture/course-object-oriented-design-with-patterns