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
   - Interator
   - 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»)

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