

Course 472: Java Best Practices and Design Patterns (2 days)

This in-depth workshop provides developers and architects the ability to identify, apply and customize object-oriented (Gang-of-Four) and Java Enterprise design patterns. The course also introduces best practices in organizing and testing Java projects.

Who can benefit?

This is an intermediate level Java programming course, designed for developers who wish to improve their Java programming and design skills. The student should be an experienced J2EE / Java programmer, with practical development experience in Java.

Chapter 1: Automating building and testing

- Ant
- Ant custom tasks
- Maven
- Versioning systems
- JUnit 3.8 and JUnit 4
- Testing utility classes
- Testing business objects
- How to maintain a unit test
- Unit testing from an IDE
- Unit testing from Ant

Chapter 2: Designing Java Classes

- Singleton
- Delegation vs. inheritance
- Template method
- Strategy
- Converting a method into an object
- Command
- Memento

Chapter 3: Creating behavior at runtime

- General-purpose classes
- Bridge
- Composite
- Visitor
- Role



Chapter 4: Creating objects on demand

- Limitations of constructors
- Prototype factory
- Factory method
- Inversion of control
- Builder
- Abstract Factory

Chapter 5: Improving code structure

- Adapter
- Façade
- Proxy
- Decorator
- Chain of responsibility
- Mediator
- Session Façade
- Service Locator
- DAO
- Business Objects and Transfer Objects
- Business objects in the age of Hibernate and JPA
- Servlet Filter

Chapter 6: Optimization patterns

- Optimizing loops
- Loop order
- Flyweight
- Iterator
- Object pooling
- Double-checked locking
- Read-write lock
- ThreadLocal

Chapter 7: Anti-patterns

- Methodology anti-patterns
- Design anti-patterns
- Programming anti-patterns

Please contact your ROI representative to discuss course tailoring!!!