

Zilverline organizes a three-day Test-Driven Development (TDD) Masterclass together with Robert C. Martin (also known as Uncle Bob) of Object Mentor. The training will focus strongly on the notion of Software Craftsmanship.

It will be an intensely hands-on and exercise driven course that focuses on the design of clean, robust, and maintainable unit and acceptance tests. You will learn the principles of test design, and the practices of keeping tests clean. More importantly, you will learn the principles of designing applications for testability. Exercises include the refactoring of bad tests, the writing of clean tests, and the design and refactoring of applications to make them testable.

Target audience

Developers with one or more years experience with TDD.

Exercises are written in Java, but are applicable to C#, C++, and other object oriented languages. The course is primarily for Java programmers. .NET programmers should be prepared for a little extra fiddling, as Uncle Bob puts it.

Prerequisites

Working knowledge of Java, TDD and JUnit

Provided Materials

Course notes include extra information in additional note pages and references.

We will provide you a copy of Agile Software Development: Principles, Patterns, and Practices, Robert C. Martin, Prentice Hall, 2002

ROBERT C. MARTIN

ROBERT C. MARTIN (UNCLE BOB) IS A HIGHLY RESPECTED AND WELL-KNOWN LEADER IN THE AGILE COMMUNITY. HE IS THE PRESIDENT OF OBJECT MENTOR AND HAS PUBLISHED NUMEROUS ARTICLES AND LANDMARK BOOKS LIKE CLEAN CODE AND THE BOOK MENTIONED ABOVE. FURTHERMORE HE IS INITIATOR TO THE FITNESSE AUTOMATED ACCEPTANCE TEST TOOL.



Object Mentor, Inc.

ZILVERLINE

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When: October 12 - 14, 2011
Where: Amsterdam, exact location TBD
Cost: € 2150,- ex. VAT
Including: material, lunch, drinks and snacks
Website: <http://www.zilverline.com/training/test-driven-development-masterclass-2011>
Bring: Laptop

TDD MASTER CLASS



By Zilverline and Robert C. Martin

OCTOBER 12 - 14 2011
AMSTERDAM

Learning goals

- The professional's attitude towards TDD
- Coping with a non-TDD organization
- The Principles of Clean Tests
- Conventions for well written tests
- Avoiding and repairing fragile tests
- Testing with GUIs, Databases, Web Containers, and external resources
- Stubbing, Mocking, and Test Doubles
- Metrics and Tools
- Behavior-Driven Development (BDD)
- Acceptance Testing

DAY 1

Moderated Discussion of:

Fears, concerns, confounds & blockages
Professionalism, Clean Code, and TDD
Push-back: What Managers really want

Why TDD?

The Three Laws of TDD
Understanding the Costs and Benefits

Clean Tests

Test Smells
Multiple Logical Asserts
Accidental Complexity
Too Slow
Scope Too Wide
Slang
Cleaning Tests
Composed Asserts
Composed Results

Testing Behavior vs. State

Mocking and Stubbing
Ontology of Test Doubles

Exercises

Initial Setup
Coverage
Critiquing some good and bad tests
Cleaning Tests
Review The Presenter Model for UI testability

Coding Dojo

Group Exercise
TDD under the microscope

DAY 2

F.I.R.S.T. Principles

Making Tests Fast
Database Isolation
Web Container Isolation
Impact Analysis
Isolating Tests
Repeatable Tests
Hosting, Mocking.
Test Hierarchies
Self Validating Tests
Testing Tools, the good and the bad
Timely Tests

Test Conventions and Heuristics

Naming Conventions
Statistical testing
Principles of Test Encapsulation
Testing Inheritance Hierarchies
Test per Class
Splitting Test Files

Writing Maintainable Tests

The Fragile Test "Problem"
Interface Sensitivity
Abstract APIs
Behavior Sensitivity
Data Sensitivity
Context Sensitivity
Over-specification
Sensitive Comparison and Equality
Test Sensitivity

Preserving Tests

When are Tests Discarded
Solutions

Exercises

FitNesse
Wiki
Tests
Fixtures
Setup
Acceptance Tests Smells
Critiquing Acceptance Tests

DAY 3

Metrics

Coverage
Combining Cyclomatic Complexity and Coverage
Brathwaite's Correlation
Wall Metrics

S.O.L.I.D. The Principles of TEST design

How the principles of OO are used to design good tests

Static Analysis Tools

Behavior Driven Development (BDD)

GUI Testing

Testing Through The GUI
Testing Around the GUI
Stubbing the GUI
Stubbing the applications

The Levels of Testing

The Dilemma of Manual Testing
Unit Tests
Component Tests
Integration Tests
System Tests
Exploratory Tests

Functional and Performance Testing

Legacy Code

Convincing Others

Exercises

Refactoring applications to Separate GUI
Testing the GUI separately
Applying the Principles
Applying the Levels