

# Development and testing in Agile and Scrum Team

Course code: SCRUM\_DEV

Do you want to learn more about Agile methods and Scrum process, XP and engineering practices from the perspective of a member of the team? The course is focused on the practices implemented in Agile and Scrum teams in terms of development and testing. Agile Testing session is immersion into the guiding principles and enabling practices of testing in an agile environment, and to reinforce the idea that Agile testing encompasses a shift in mindset and culture.

We will discuss, code & learn together specific methods of Extreme Programming, Refactoring, Unit testing, TDD, BDD and other quality related practices. It is not important what software you are developing, or what technology you use, but your readiness to perceive new ideas, suggestions and procedures. Bring your laptop and favorite editor or IDE with you.

## What we teach you:

- You will learn that today's software development is not just about programming or testing itself, but about the effectiveness of the use of concepts and tools of modern agile development. Master the different techniques of product design, development, and testing. We will discuss for example system architecture design, when and how to automate testing, how long to maintain and refactor applications.
- You will practically learn techniques on various code katas on your own machines in your favourite language. You will get deeper understanding of practices and why use those in real situations in your job and you will gain tools to produce reliable, robust and verifiable software.

## Who the course is for:

- Developers
- Programmers
- Analysts
- Testers
- IT architects
- IT managers
- SW development directors

## Teaching methods:

- Professional explanation with practical samples, examples and practical coding katas and exercises.

## Teaching materials:

- Powerpoint handouts and module printouts.

## Course syllabus:

Underlying principles:

- Agile and Scrum in terms of development team member view
- Lean practices for developers - what successful delivery means
- Scrum development team - roles and responsibilities
- Agile Architecture and Design - emerging agile architecture approach
- Quality & Agile, Testing challenges in an Agile Environment
- XP - Engineering practices
- Devops

Code Katas - exercises focused on learning of principles and practices:

- Unit testing - basic setup and exercise
- Clean code - how principles are helping to make code better
- Test driven development (TDD)
- Refactoring - you don't have to write perfect code from scratch
- Kata retrospective & learnings

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Code Katas - focused on:

- Test doubles - Mocks, fakes and stubs
- Double loop TDD - acceptance test driven development
- Kata retrospective & learnings

Other helpful tools - hands on experience:

- Behavior driven development (BDD)
- Functional testing - when and how to use automated functional testing
- UI testing

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