

Object Oriented Programming

Level: medium / advanced

Length: 35 hours

Course Objective: recognize design problems, how to apply the object oriented programming principles and design patterns for a good refactoring

What You Will Learn

- How to apply analysis principles in order to discover the domain vocabulary
- Refresh the OOD principles
- Study a set of antipatterns, how to recognize problems in code
- How to refactor the code by applying principles and patterns

Who can attend: programmers who want to enhanced their object oriented skills

Prerequisites

- Knowledge of an object oriented programming language at least at medium level
- UML
- Design Patterns

Required Infrastructure: VGA projector, whiteboard, workstation, development environment for the chosen OO language – C++, Java, C#, Python

Connected Courses: Unified Modeling Language 2, Design Patterns, Applying OOP, UML & Design Patterns

Description

This course follows the trainings which teach UML & Design Patterns, it integrates already known subjects with principles and rules specific to OOP.

We shall approach the characteristics of OOP, GRASP principles in order to discover the domain principles, for assigning responsibilities and for discovering the links between types, study the applying of SOLID principles for a good design.

Besides these subjects we shall exercise the ways to detect problems in code, study several code smells, discussions about antipatterns.

The goal is refactoring, how to recognize we need one and how to perform it.



Contents

1. Introduction to Object Oriented Programming
2. OOP Principles
3. GRASP Principles
4. SOLID Principles
5. Code smells
6. Antipatterns
7. Refactoring