

OBJECT ORIENTED SOFTWARE DESIGN with UML



Goals : Understand the basics of the OO Software Design, starting from the business idea up to the skeleton of the product.

Target : Developers with basic skills and Business Analysts newly introduced in the IT world.

Format : 32 hrs (50% Theory – 50% Workshop).

Notes : The specific tools used in the course are previously checked out with the client in order to better match the real working environment.

SYLLABUS

Introduction

Contents

- The Project: Actors and Life cycle
- Project's Requirement Elicitation
- Introduction to UML

Use Case Diagrams

Contents

- General introduction to UML Behaviour Diagrams and elements of UCDs
- Development of the UCDs from different perspectives (business owner, stakeholders etc.)
- UC/Requirement Matrix
- Basic Tools for UML modelling

Workshop

- Use Cases for a Hotel Reservation business idea

Behaviour Diagrams

Contents

- Activity Diagrams
- Sequence Diagrams
- Interaction Overview

Workshop

- ADs and SDs for the Hotel Reservation project

Object Oriented Principles

Contents

- The three pillars of OO:
 - Encapsulation
 - Inheritance
 - Polymorphism
- Key Abstraction and CRC Analysis
- Introduction to the Structure Diagrams: Class Diagram

Workshop

- Configuration of Papyrus plugin for Eclipse
- Class Diagram for the Hotel Reservation Project

Advanced Topics

Contents

- From Diagrams to Coding
- Architectural Model
- Package and Deployment Diagrams
- Basic Design Patterns

Workshop

- Putting all together: The Hotel Reservation Project Skeleton