Virtual Use Cases and UML Course

Brief Description

The workshop teaches the *Unified Modeling Language* (UML) and an understanding of the *Unified Process* and how to incorporate them into a repeatable development process at your organization. The seminar teaches and provides exercises in modeling techniques used for project planning, scoping, requirements gathering and design for object-oriented development projects. The UML diagramming is taught using an interactive hands on case study and Visio with a live instructor.

Detailed Description

The Learning Use Cases & UML Techniques Seminar provides training in the methodology needed for capturing and modeling the artifacts for Object-Oriented and Legacy System development. The class provides a life cycle and techniques used for IT process improvement using use cases and the Unified Modeling Language (UML). The seminar focus is on how to:

- Write use cases and build requirements and design models using the Unified Modeling Language
- Implement a repeatable process for project initiation, requirements definition, analysis and design

The objectives of the seminar are to:

- Provide an understanding of the Software Life Cycle, methodology steps and artifacts needed for Object-Oriented Development Projects
- Provide practical group exercises for building UML artifacts using the UML notations
- Define the Rapid Application Development Process, describe spiral vs. waterfall method, success factors and how to plan projects using an iterative and incremental approach

Seminar Content

Session 1 (1:00 – 5:00pm Eastern Time)

Class Introduction

UML Concepts

- Terms to get acquainted with
- History, scope, and philosophy of the UML
- Major types of diagrams supported by UML

Overview of the Project Life Cycle and UML Project Artifacts

Discovery Phase- Problem Statement/Scope of the Project

- Principles and terminology for Discovery-Problem Statement/Scoping Phase
• Constructing the Use Case Diagram (Project Scope) using UML
• **Case Study Exercise**- Building the Use Case Diagram

Discovery Phase- Requirements Analysis
• Principles and terminology for Discovery- Requirements Analysis Phase of the Project Life Cycle
• Constructing the Activity/Swimlanes Workflow Diagram using UML
  • UML notations
  • Uses of Activity Diagrams in the project life cycle
• Writing the High Level Use Case for Requirements Analysis
  • Guidelines for writing the use cases
  • Templates and samples
• **Case Study Exercises** - Building Activity/Swimlanes Workflow Diagrams and Writing High Level Use Cases for Requirements Definition

**Session 2 (1:00 – 5:00 pm Eastern Time)**

Discovery Phase- Requirements Analysis
• How to identify objects and build the object model
• **Case Study Exercise**- Building the Object Model using UML

Analysis & Design using UML Artifacts
• Principles and Terminology for the Analysis & Design Phase of the Project Life Cycle
• Creating the detailed use case diagram
  • How to identify use case dependencies
  • Notations for includes and excludes use cases
• **Case Study Exercise**- Creating the detailed use case diagram
• Writing Detailed Use Cases
  • Guidelines and templates for writing Detailed Use Cases
  • Building prototypes
• **Case Study Exercise**- Writing Detailed Use Cases and building prototypes for the Analysis/Design Phase

**Session 3 (1:00 – 5:00 pm Eastern Time)**

Analysis & Design using UML Artifacts
• Use Case realization – transforming the “what” to the “how”
  • Use case realization package
  • Interaction Diagrams
  • View of Participating Classes
  • Traceability diagram for all use cases
• Constructing the Collaboration Diagram
• **Case study exercise**- Creating the collaboration diagram
• Design using the Sequence Diagram
• Creating the Global Class Diagram

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• Identify the classes, methods, associations, multiplicities, inheritance and constraints.
• Reconcile the realizations-redundancies, missing classes and inconsistencies

◆ Case Study Exercise- Building the Sequence Diagram and Global Class Diagram
◆ Constructing the State Diagram
◆ Case Study Exercise- Building the State Diagram

Who Should Attend?

Those who will find this of value are: Team Leads, Developers, Business Analysts, Business Systems Analysts, System Analysts, Solutions Analysts, Information Architects, Designers, and Project Managers.