UML, RUP en OOAD

Experience the Unified Modeling Language methodology and tools

▶ Doel & voor wie geschikt?

During these 4 days, we'll use the UML notation, apply best of breed methodologies and profit from the knowledge contained in patterns to constantly verify our evolving business models.

During this course, we give an overview of the UML modeling language and industry-standard modeling tools. You will learn the capabilities of UML in the area of enterprise modeling and you will gain insight into the added value of using advanced applications that offer functionality such as reverse engineering and code generation. Using a notation to model your business however is just part of the solution! Therefore, we will look at Object Oriented Analysis and Design (OOAD) methodologies that you can use to define and discover the specifics of your business domain model. The Rational Unified Process (RUP) will serve as a guideline throughout this course. Using a methodology also implies applying some form of best practice, and talking about best practices in the UML context is best done referring to patterns. The Gang of Four (Gof) developed a set of patterns that offer solutions to common design decisions.

▶ Onderwerpen

Package 1
• What is the Unified Modeling Language?
• Why use models?
• Identifying business processes.
• Development of a business vision.
• The Rational Unified Process. (RUP)
• Streamlining processes in function of the business vision.
• Introducing UML, the notation.
• Overview of Object Oriented Analysis & Design: the Methodology.
• Applying Patterns: our best practices.
• Identifying real-life objects.
• Definition of business objects: workers, entities and organizations.
• Creation of use-cases.
Package 2
• Structuring of a high-level UML business use-case model.
• Describing detailed use-cases.
• Sequence diagrams to detail the use case.
• Emphasis on the time-ordered flow.
• UML Sequence diagram notation and events.
• Real-life examples, usage of industry standard tools.
• Definition of the Domain Model.
• Adding associations to the domain model.
• Identifying attributes for the domain model.
• Operation contracts..
• Detailing pre-and postconditions.
Package 3
• Collaboration diagrams.
• Operations translated in Collaboration diagrams.
• UML Objects and messages.
• Notation of message structure and iteration.
• Patterns and their usage.
• Applying best practices to refine the Domain model.
• The Object Constraint Language.
• In which cases can OCL be useful?
• Classes, objects and their behavior.
• Modeling state of an object by using state diagrams.
• Identification of state and transitions.
• When to use UML automates?
Package 4
• Identification of candidate classes.
• Definition of responsibility and role of classes.
• Multiplicity and bidirectional associations.
• Inheritance, generalizations and specializations.
• Polymorphism, extensions and restrictions.
• Generating code, based on a class diagram.
• Detailed work, process and information flows.
• Some more details on the RUP.
• Other patterns of the GOF (Gang of Four).
• Advanced concepts.
• What will the future bring?
• Conclusions.

▶ Instapniveau

Algemene kennis van Windows en OO technologie volstaat.

▶ Opzet

Deze cursus wordt normaalgesproken in het Nederlands gegeven maar kan desgewenst ook in het Engels of Frans worden verzorgd. Het lesmateriaal is grotendeels Engelstalig.

Deze cursus duurt vier dagen, van 9.30 - ca. 16.30 uur. Tussen 12.00 - 12.45 uur is er een lunch in buffetvorm. Koffie, thee en frisdrank zijn de gehele dag beschikbaar.

▶ Kosten & lestijden

De cursus kost EUR 1895,00 per persoon, excl. BTW. Inclusief cursusmateriaal, deelnamecertificaat, lunches en consumpties.