UML Foundation

Description

The Unified Modeling Language, or UML, has become an essential standard in the field of software development. It provides a clear way to represent the structure and behavior of a system, while also improving communication between business and technical teams. Taking a UML training course helps participants better understand and document project requirements, from analysis through to design. This course follows a progressive and structured approach, combining theory with practical exercises, to ensure real mastery of the key UML diagrams.

Why choose this UML course

Learning is not limited to reading abstract concepts. You will work directly with different types of diagrams, such as use case diagrams, activity diagrams, and sequence diagrams. Each stage is supported by practical case studies that connect theory to real-world situations. This method makes skill acquisition more accessible and sustainable. As a result, you will develop a clear understanding of the importance of modeling within a modern software development lifecycle.

Course Content
Module 1: Introduction

- What is quality?
- What is a model?
- Why model?
- What is the object-oriented approach?
- Fundamental concepts of the object-oriented approach
- History of UML
- Overview of UML diagrams

Module 2: Use Case Diagram

- Primary and secondary actors
- Use cases
- Representation of a use case diagram
- Relationships between actors
- Relationships between actors and use cases
- Relationships between use cases
- Complements (package, namespace, stereotypes, notes)

Module 3: Activity Diagram

- Activities
- Actions (receive, send, wait)
- Decisions and conditions
- Nodes (initial, final, flow, fork, merge)

Module 4: Use Case Description

- Actors and stakeholders
- Triggering event
- Preconditions
- Main scenario
- Alternative flows
- Postconditions
- Non-functional constraints

Module 5: Class Diagram

- Classes and their attributes
- Associated methods
- Relationships between classes (cardinality, aggregation, composition, inheritance)

Module 6: State Diagram – Transitions

- States (initial and final)
- Events (signal, call, change, time)
- Transitions
- Decision

Module 7: Sequence Diagram

- Actors
- Lifelines
- Activation box
- Messages (synchronous, asynchronous, response, deletion)
- Operators (alternative, option, loop)

Lab / Exercises
Lab 1: Develop a Use Case Diagram Lab 2: Develop an Activity Diagram Lab 3: Develop a Use Case Lab 4: Develop a Class Diagram Lab 5: Develop a State Diagram Lab 6: Develop a Sequence Diagram
Documentation

- Digital courseware included

Participant profiles

- Business Analystes
- Architectes logiciels
- Développeurs
- Chefs de projet informatique
- Concepteurs de systèmes

Prerequisites

- No prerequisites

Objectives

- Understand the basics of UML
- Develop diagrams (use cases, activities, classes, states and sequence)

- Develop a use case

Description
UML Training – Fundamentals
Niveau
Fondamental
Classroom Registration Price (CHF)
1600
Virtual Classroom Registration Price (CHF)
1500
Duration (in Days)
2
Reference
UMLF