AMBIENT-IT

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Updated 16/07/2024

Sign up

Concurrency Swift training

1 day (7 hours)

Presentation

Our Concurrency Swift training course will help you master concurrent programming in Swift. SwiftUI is a framework that complements the Swift language, enabling the construction of graphical user interfaces based on the declarative programming paradigm.

Thanks to this Concurrency Swift training course, your team will learn about reactive programming and its basic principles, as well as how to use Combine to refactor and rework existing code.

Our program also covers the use of async/await to efficiently structure concurrency and run multiple tasks in parallel.

For this course, we use Xcode 15 and the latest version of Swift: Swift 5.10.

Objectives

- Learn the fundamentals of concurrent programming in Swift
- Enhance your existing Swift projects with concurrent programming
- Mastering the use of async/await

Target audience

- **Developer**
- iOS developer
- Swift Developer

Prerequisites

- Know the basics of Swift: it is preferable to have taken our SWIFT training course beforehand.
- Test My Knowledge

Software requirements

A Mac with Xcode 14 installed.

Combine

- Introduction to reactive programming and its basic concepts
- Combine API overview: integrated editors, topics and operators
- Build data pipelines by applying operators to editors
- Bridging the gap between Combine and closure-based code
- Refactoring existing code using Combine
- Working with concurrent and multithreaded code using Combine
- Integrate Combine with UIKit and SwiftUI, using tools such as ObservableObject and @Published properties
- Unit testing of Combine-based code

Swift competition

- Introduction to async/await
- Structured competition and execution of several asynchronous tasks in parallel
- Using asynchronous streams and sequences, and how they relate to Combine
- Using actors to resolve data conflicts and structure competing systems
- Bridging the gap between Combine, async/await and closure-based code
- Unit testing of async/await-based code

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.