Updated on 16/01/2025

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SwiftUI Advanced training: Master iOS application creation

1 day (7 hours)

Presentation

Our advanced SwiftUI training course will help you master the advanced features Apple's framework.

This course is designed for mobile developers who already have experience SwiftUI or who have taken our SwiftUI training course.

You'll learn to take advantage of the framework's strengths, namely its high-level API (its abstract nature simplifies coding), its strong interoperability and its use with Xcode.

In this course, our expert will show you how to create views by defining APIs, complete control over lists and scrollable views, and how to manage data and dependencies.

You'll also learn SwiftUI's integration with UIkit and Swift Concurrency, whether for nesting multiple view levels or triggering asynchronous tasks.

For this training, we use Xcode 16.

Objectives

- Learn advanced techniques for creating user interfaces with SwiftUI
- Getting around common SwiftUI limitations
- Prepare for production deployment of SwiftUI applications

Target audience

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

Prerequisites

- Know the basics of SwiftUI. It's preferable to have taken our SwiftUI training course beforehand.
- Fluency in English (our trainer speaks English)

Technical requirements

- a machine with at least iOS 13, macOS 10.15, tvOS 13, watchOS 6 or visionOS 1 or the most recent version of these platforms.
- Xcode 14.3.1 installed

SwiftUI Advanced training program

Using generics to create SwiftUI views

- Defining practical APIs for integrated views
- Avoid using AnyView
- Building customized containers

Controlling lists and scrolling views

- Creating lists with custom styles and layouts
- Scroll to specific views/locations
- Observe current scroll position

Data and dependency management

- Implementing lazy loading
- Binding transformation
- Decide how data/events are transmitted in an application
- Using ViewModels, factories and services
- Optimizing view updates

Advanced interoperability between SwiftUI and UIKit

- Imbrication of multiple SwiftUI and UIKit view levels

- Understanding the interaction between SwiftUI's layout system and Auto Layout

SwiftUI integration with Swift competitors

- Triggering asynchronous tasks from a SwiftUI view
- Error handling and display

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, 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.