

## iOS App Modernization: Migrating from Objective-C to Swift for App Frame with Webview

WEBSALE creates online shops – with passion. For more than 25 years, we have been helping our customers succeed in e-commerce. As pioneers, we established the first cloud-based online shops in Germany. With our combined offering of e-commerce software, including support, hosting, and our own agency, we ensure functional e-commerce processes and support the growth of our customers.

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### Task:

Our existing native iOS app serves as a frame for our shop software, primarily displayed in a webview. The app provides additional native features like push notifications and other platform-specific functionalities. The current app frame is written in Objective-C and is outdated. The goal of this project is to migrate the app frame from Objective-C to Swift, optimize the code, and adapt it to current best practices. The existing functionality should be maintained and enhanced without rebuilding a complete shop system within the app. As a pioneer in this area for our company, you have the unique opportunity to redesign our iOS app frame from scratch and improve the integration of our shop software on mobile devices.

### Main Tasks:

- Migration of the app frame from Objective-C to Swift
  - Optimization of webview integration and performance
  - Enhancement of native functions (e.g., push notifications, device APIs)
  - Implementation of modern iOS development practices and patterns
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### Tasks and Milestones:

- 1. Analysis of the Existing App:**
  - Conduct a thorough code review of the Objective-C codebase
  - Identify outdated practices and optimization opportunities
  - Create a detailed migration strategy
- 2. Planning the Swift Migration:**
  - Research and determine the latest Swift version and iOS target version
  - Develop a realistic timeline for the phased migration
  - Prioritize core functions for the initial migration phase
- 3. Implementation of the Swift Migration:**
  - Gradually convert Objective-C code to Swift
  - Apply modern Swift features and idioms
  - Optimize webview integration and performance
  - Evaluate and potentially integrate SwiftUI for native UI components
- 4. Code Optimization and Modernization:**
  - Refactor code according to SOLID principles
  - Implement contemporary design patterns like MVVM or Clean Architecture
  - Optimize app performance and resource usage
- 5. Testing and Quality Assurance:**
  - Develop a robust testing strategy for the new Swift codebase
  - Implement unit tests and UI tests to ensure functionality
  - Conduct performance tests to compare the new version with the old

## **6. Documentation and Knowledge Transfer:**

- Create comprehensive documentation of the migration process
- Develop documentation for future iOS developments within the company
- Write a guide for Swift best practices for future team members

### **Requirements:**

- In-depth knowledge of iOS development with Swift
  - Experience migrating from Objective-C to Swift
  - Familiarity with modern iOS development practices and frameworks
  - Expertise in optimizing webview applications
  - Experience with software architecture patterns (e.g., MVVM, Clean Architecture)
  - Proficiency with version control systems (preferably Git)
  - Strong analytical skills and independent, structured working style
  - Ability to clearly communicate complex technical concepts
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### **What You Can Expect from Us:**

You will be assigned to one of our developers who will take care of you during the semester via regular 1-to-1 meetings (online or offline) and support you in the project. We are very flexible in terms of working time and, of course, will stay within the boundaries of the ECTS limit of the IDP.

### **What We Expect from You:**

If you can work independently and want to do something hands-on, then we are your partner! Besides the regular meetings, you will have complete freedom in terms of time management. It's your project!

### **Contact Information:**

At WEBSALE, your performance and personality matter. We value diversity and encourage applicants from all walks of life to apply.

Do you have questions? Feel free to contact Vera by phone at +49 911 6322 1629. Are you interested? Then apply now at [bewerbung@websale.de](mailto:bewerbung@websale.de). We look forward to getting to know you!