Android App Modernization: Updating and Optimizing the Kotlin-based 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.

Task:
Our existing native Android app functions 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 The current app frame is already written in Kotlin but is outdated and not up to the latest standards. Many aspects are outdated or no longer up to date. The goal of this project is to modernize the app frame, 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. You have the opportunity to bring our Android app frame up to date and improve the integration of our shop software on mobile devices.

Tasks and Milestones:
1. **Analysis of the Existing App Frame:**
    - Conduct a thorough code review of the Kotlin codebase
    - Identify outdated practices, libraries, and optimization opportunities
    - Create a detailed modernization strategy
2. **Planning the App Frame Modernization:**
    - Research and determine the current Android technologies and libraries to be used
    - Develop a realistic timeline for the phased modernization
    - Prioritize core functions for the initial modernization phase
3. **Implementation of the Modernization:**
    - Update the Kotlin codebase to the latest version and apply modern Kotlin features
    - Integrate current Android Jetpack components and libraries
    - Optimize webview integration and performance
    - Enhance native functions (e.g., push notifications, device APIs)
    - Implement Kotlin Coroutines for asynchronous operations
4. **Code Optimization and Architecture Improvement:**
    - Refactor code according to SOLID principles
    - Implement or improve Clean Architecture
    - Optimize app performance, resource usage, and battery efficiency
5. **Testing and Quality Assurance:**
    - Develop a robust testing strategy for the modernized codebase
    - Implement unit tests, integration tests, and UI tests
    - Conduct performance tests to compare the new version with the old
6. **Documentation and Knowledge Transfer:**
    - Create comprehensive documentation of the modernization process
    - Develop documentation for future Android developments within the company
    - Write a guide for Kotlin and Android best practices for future team members

Requirements:

- In-depth knowledge of Android development with Kotlin
- Experience with modern Android development practices and frameworks (e.g., Jetpack, Compose)
- Familiarity with Kotlin Coroutines and Flow
- Experience in optimizing webview integrations in native apps
- Knowledge of 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

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. We look forward to getting to know you!