Executive Summary

Qaptain is a quiz management application that streamlines the classroom assessment by enabling teachers to create secure classrooms with auto-regeneratable passwords, build multiple-choice quizzes with deadlines, and track student performance in real-time, while students can join classrooms using the password distributed by the teachers, take interactive quizzes with immediate feedback, and monitor their progress across multiple attempts. The app fills a specialized niche in the education app market by focusing exclusively on quiz management rather than comprehensive learning management systems, targeting K-12 schools, universities, and training centers that need streamlined assessment tools without the complexity of full-featured LMS platforms. Technically, Qaptain uses Firebase Authentication for secure user management and Firestore for real-time data synchronization, implementing a SwiftUI-based architecture where user data, classroom memberships, quiz content, and student statistics are stored in nested Firestore collections that automatically sync across devices.