An Android Application for Motorcycle Buying and Selling

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***Abstract*—This undergraduate thesis describes an Android application for motorcycle buying and selling. The manuscript defines user registration, login, vehicle search, favorite listings, listing creation and editing, account management, and appointment scheduling between interested parties. It reviews Java, Android development, and Firebase, models the functions with use-case, activity, and sequence diagrams, and illustrates principal screens. The methods chapter identifies Java, Android SDK, Firebase Realtime Database, and Firestore as proposed technologies. The report includes a general discussion of testing and deployment, but does not provide reproducible test cases, participant counts, store listings, or transaction records to substantiate its broad operational claims. Its screenshots and diagrams support the existence of a student prototype and an intended buyer-seller workflow. This summary presents the demonstrated interface and documented design while treating adoption, comprehensive testing, and external deployment as unverified.**

***Index Terms*—motorcycle marketplace, Android, classified listings, Firebase, appointment scheduling**

I. Introduction

A specialized mobile marketplace could help prospective motorcycle buyers inspect listings and contact sellers, while allowing sellers to post vehicle information. This thesis proposes such an Android application and frames search, saved listings, account management, and appointments as core interactions. The manuscript's stated aim is to make buying and selling more convenient and transparent. Its evidence, however, is principally design documentation and interface images. This English summary describes the recorded prototype and does not convert those aims into measured benefits or sales outcomes [1]. Earlier ICTU student work on related designs is included here for context [2], [3], [4], [5], [6], [7], [8]. Published technical books provide background for the methods discussed in this summary [9], [10], [11]. These contextual works were selected for this English summary; they are not asserted to appear in the original thesis bibliography.

II. Methods

The student reviews Java and Android application development and discusses Firebase services. The requirements section specifies buyer and seller interactions: registration, login, search, favorites, listing creation and updates, product details, profile editing, and appointment creation or revision. Use-case, activity, and sequence diagrams model these flows. The construction chapter names Java, Android SDK, Firebase Realtime Database, and Firestore and sketches a three-layer architecture. A later chapter describes application screens and lists possible unit, integration, system, interface, performance, and security tests. This summary checks those descriptions against the manuscript and treats the testing list as a plan because no traceable test outcomes accompany it [1].

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III. Results

The source illustrates screens for registration and login, adding motorcycle listings, saving favorites, account management, post editing, and appointment scheduling. It also documents diagrams for search and listing actions. Together, these show a designed mobile workflow for publishing, finding, and following up on motorcycle offers. Some narrative sections claim a large user base, successful deployment, and comprehensive testing, but the report supplies no user count, app-store record, test table, or transaction evidence. The defensible result is therefore a student application prototype with described functions, not a verified public marketplace or measured service [1].

IV. Discussion

The design links listing management to search and buyer-seller appointments, but several claims in the conclusion go beyond the evidence supplied. In particular, a generic test-method list cannot establish that unit, security, and performance tests passed, and screenshots cannot verify external deployment or sales. The report also alternates between Android/Java/Firebase descriptions and generic web-stack statements; implementation details should be checked against the actual code before making platform claims. A later evaluation should specify test cases for account access, listing ownership, appointment state, data consistency, and abuse prevention, and record results with reproducible evidence [1].

V. Conclusion

Nguyễn Trung Quỳnh's capstone documents an Android motorcycle-marketplace concept and a student prototype covering listings, search, favorites, account functions, and appointments. The source provides requirements, interaction diagrams, and illustrated screens. It does not substantiate claims of substantial adoption, comprehensive test success,

completed sales, or deployment to public app stores. The next version should reconcile its technical description with the implemented code, complete the buyer-seller workflow, and evaluate functionality, security, and usability using recorded tests before broader claims are made [1].

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