An Android Hotel Booking Application

Bế Thanh Tùng
Thai Nguyen University of Information and Communication Technology
Thai Nguyen University, Thai Nguyen, Vietnam
student585@ictu.edu.vn

***Abstract*—This undergraduate thesis investigates an Android application for hotel booking. Travellers need a way to view accommodation and request a room from a mobile device. The student designs and builds an Android booking application using Firebase as its data store. The thesis describes the main application screens and basic reservation workflow. The conclusion reports a completed student application with basic booking functions. It acknowledges that the feature set remains limited and that some functions are not yet effective. The source does not verify real hotel participation, confirmed room inventory, live paid reservations, or performance under many users. The contribution is a documented student study or prototype whose stated scope can guide further testing.**

***Index Terms*—Android, hotel booking, Firebase, mobile application**

I. Introduction

Travellers need a way to view accommodation and request a room from a mobile device. This thesis investigates an Android application for hotel booking. It begins from a practical engineering need and explains the technologies and workflow chosen for the case. The objective is to document a student implementation or comparative investigation, together with the evidence available in the manuscript. Broader operational or economic effects require separate measurements and are not assumed from the existence of a prototype [1]. Earlier ICTU student work on related designs is included here for context [2], [3], [4], [5]. Related published studies provide context for the subject and methods [6], [7], [8], [9], [10]. These contextual works were selected for this English summary; they are not asserted to appear in the original thesis bibliography.

II. Methods

The student designs and builds an Android booking application using Firebase as its data store. The thesis describes the main application screens and basic reservation workflow. The source is summarized through its stated design, implementation material, examples, and conclusion. Features shown in the manuscript are distinguished from proposals for later development. This review does not add a new experiment, fill missing measurements with estimates, or treat a planned capability as an observed result. The source thesis remains the provenance for the reported work [1].

Supervisor: Trần Quang Quý, Thai Nguyen University of Information and Communication Technology (tqquy@ictu.edu.vn).

III. Results

The conclusion reports a completed student application with basic booking functions. It acknowledges that the feature set remains limited and that some functions are not yet effective. The report's screens, configurations, examples, or measurements constitute the evidence for this summary. A capability described only as a design intention is not counted as a validated operational outcome. No additional performance, adoption, financial, or safety figure has been introduced here. The result is interpreted within the scope of the student's documented setup [1].

IV. Discussion

The source does not verify real hotel participation, confirmed room inventory, live paid reservations, or performance under many users. Further work could test the reservation lifecycle with actual hotels, improve layout and data-loading speed, and check the handling of availability changes. These limitations affect how the evidence should be read. The current manuscript can support understanding of the design and reported demonstration, while independent tests would be needed for stronger claims. Any later deployment should document its environment and separate observed outcomes from intended benefits [1].

V. Conclusion

The thesis documents an Android application for hotel booking. The conclusion reports a completed student application with basic booking functions. It acknowledges that the feature set remains limited and that some functions are not yet effective. The source does not verify real hotel participation, confirmed room inventory, live paid reservations, or performance under many users. Further work could test the reservation lifecycle with actual hotels, improve layout and data-loading speed, and check the handling of availability changes. Accordingly, the present contribution is a source-grounded account of the student work and its tested or illustrated scope. Claims about broader effectiveness should be assessed in later work using explicit evaluation conditions [1].

References

[1] Bế Thanh Tùng, "An Android Hotel Booking Application," internal undergraduate thesis (original in Vietnamese), Thai Nguyen University of Information and Communication Technology, 2024.

[2] Nguyễn Khắc Việt, ”Construction of a Hotel Booking Website for Việt Minh Resort,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2021.
[3] Đàm Quang Hiếu, ”Development of a Booking and Service Promotion System for Bao Minh Radiant Hotel,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2021.
[4] ICTU Student 126, ”Construction of a Hotel Management Program Integrated with Online Booking Services,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2009.
[5] ICTU Student 125, ”Construction of a Hotel Management Program for Thai Nguyen,” internal undergraduate thesis, Thai Nguyen University of Information and Communication Technology, 2009.
[6] Karan Kumar et al., ”Development of Online Service Booking Mobile Application Using Android Studio,” International Journal of Innovative Research in Engineering & Management, 2022. doi:10.55524/ijirem.2022.9.3.14.
[7] Chunnu Khawas et al., ”Application of Firebase in Android App Development-A Study,” International Journal of Computer Applications, 2018. doi:10.5120/ijca2018917200.
[8] Divya Sharma et al., ”Firebase as BaaS for College Android Application,” International Journal of Computer Applications, 2019. doi:10.5120/ijca2019918977.
[9] Sai Lokesh G et al., ”An Android Application for Calculating Trip Expenses Using Firebase,” International Journal of Advanced Research in Science, Communication and Technology, 2022. doi:10.48175/ijarsct-5012.
[10] Ricky Yohanes Wijaya et al., ”Travel Journal Application as an Android-Based Traveling Visitor Using Firebase,” JISA(Jurnal Informatika dan Sains), 2023. doi:10.31326/jisa.v6i1.1446.