An Android Application for Bar Management

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***Abstract*—This thesis develops an Android application for bar management. The report analyzes management tasks and models interactions for drinks, orders, revenue and expenses, employees, and inventory. It reviews Android and Java development, Firebase, and application design, then presents diagrams and interface screens for the implemented workflows. The conclusion states that the main administrative functions were built. It proposes online payment, further performance work, richer statistics, promotions, and customer feedback as future additions. Although the author expects the application to save time, the source does not report a controlled comparison with the former workflow, production usage, or measured performance. The result is a documented mobile prototype with core operational screens; its effectiveness in a real venue and handling of sensitive business data remain to be evaluated.**

***Index Terms*—Android, bar management, orders, inventory, mobile application**

I. Introduction

A bar must maintain a list of drinks, record orders, monitor stock, and review income and costs. The thesis proposes a mobile interface for these activities on Android devices. It introduces the platform and describes the functions required by staff and management. The intended benefit is to make routine data entry and review more convenient. The report is a software development account and does not demonstrate measured business improvement [1]. Earlier ICTU student work on related designs is included here for context [4], [5], [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 author studies Android development and models administrative workflows through diagrams for drink search and maintenance, orders, staff, inventory, and financial reporting. The application is implemented in Java with Android Studio; the source also reviews Firebase as a data service. Screenshots show the resulting mobile views. The manuscript does not define a controlled field trial, a formal usability study, or a benchmark for response time and concurrent use [1].

III. Results

The report presents an Android application with screens for drink management, orders, revenue and expense summaries, employees, and stock. The conclusion says the central management functions were completed. Diagrams and interface images support that these workflows were implemented in the prototype. No evidence is provided for online payment, promotional campaigns, customer feedback, or measured time savings; those appear in the later-work discussion. Real-world adoption and reliability are also unreported [1].

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IV. Discussion

A mobile application can give staff access to current order and stock information, but the source does not test those effects in daily operation. The author proposes further optimization, more detailed statistics, online payment, promotions, and expanded employee and inventory management. These additions would require separate implementation and evaluation. The current report supports only the documented screens and processes. Data integrity, permissions, and financial reconciliation would be important in a production setting [1].

V. Conclusion

The thesis documents an Android bar-management prototype and the design of its drinks, orders, revenue, staff, and inventory functions. The source provides diagrams and application screens but no measured improvement in business outcomes. Planned payment, promotional, and reporting features remain future work. Further testing with actual staff and transactions would be needed before using the application as an operational management system [1].

References

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