

UTILIZATION OF ANDROID TECHNOLOGY FOR E-MENU AT CAFE CINDY

David Saro¹

¹Program Studi Teknik Informatika- Fakultas Teknik – Universitas Ibnu Sina
e-mail: *david@uis.ac.id,

Abstract

In the digital era, technological advancements have significantly transformed the culinary industry, particularly through the implementation of Android-based e-menu applications. This study aims to develop and implement an e-menu application at Cafe CINDY to enhance operational efficiency and customer satisfaction. The research employs a mixed-methods approach, combining qualitative and quantitative methods, including interviews, surveys, and system analytics.

The findings indicate that the e-menu application streamlines the ordering process, reduces errors, minimizes reprinting costs, and provides customers with a more interactive and informative experience. Additionally, the system aids in inventory management and customer preference analysis, allowing for more strategic marketing decisions. Overall, the implementation of the Android-based e-menu application at Cafe CINDY offers significant operational improvements and a competitive edge in the culinary industry.

Keywords— E-menu, Android application, operational efficiency, customer satisfaction, culinary industry

INTRODUCTION

In the rapidly advancing digital era, innovations in information and communication technology have significantly transformed various sectors, including the culinary industry. Android-based applications have become crucial in simplifying and enhancing the efficiency of numerous business processes. One such application is the e-menu, which allows restaurants and cafes to present digital menus to their customers.

Cafe CINDY, which has been operating for several years, constantly strives to keep up with technological advancements to enhance customer service and experience. The use of physical menus at Cafe CINDY often faces several challenges, such as damage or loss of menus and additional costs for reprinting menus when changes occur. Furthermore, physical menus often fail to provide detailed and engaging information, such as high-quality images or comprehensive descriptions of the ingredients and preparation methods of the food and beverages offered.

By implementing an Android-based e-menu application, Cafe CINDY can address these issues. The e-menu allows for real-time menu updates without additional printing costs, provides more detailed and appealing information to customers, and reduces paper usage, which positively impacts the environment. Moreover, integration with digital ordering and payment systems can speed up transaction processes and reduce errors in order recording, thereby increasing the cafe's operational efficiency.

The e-menu technology also offers opportunities for more effective customer data collection. Through this data analysis, Cafe CINDY can understand customer preferences and habits, which can be used to develop more targeted marketing strategies and personalized services. Thus, the use of an Android-based e-menu application at Cafe CINDY is expected not only to improve operational efficiency and customer satisfaction but also to provide a competitive advantage in the increasingly competitive culinary industry.

This research aims to develop and implement an Android-based e-menu application that meets the needs of Cafe CINDY and analyze its impact on operational efficiency and customer satisfaction. With this background, it is hoped that this research can make a significant contribution to utilizing information technology to improve service quality in the culinary industry.

RESEARCH METHODS

Research Design

This study uses a mixed-methods approach, combining qualitative and quantitative research methods to develop, implement, and evaluate an Android-based e-menu application for Cafe CINDY.

Data Collection Methods

Interviews and Observations:

- Conduct interviews with Cafe CINDY's management, staff, and customers.
- Observe workflows and customer interactions to identify areas for improvement.

Surveys:

- Distribute pre- and post-implementation surveys to customers and staff.
- Use Likert scale questions to measure ease of use, convenience, and satisfaction.

System Logs and Analytics:

- Collect data on usage patterns, order processing times, and technical issues.

Development Process

Requirements Analysis:

- Identify and document specific application requirements from collected data.

Design:

Create wireframes and prototypes for usability testing with staff and customers.

Implementation:

- Develop the e-menu application and integrate it with the existing POS system and payment gateway.

Testing:

- Conduct functional, performance, and user acceptance testing (UAT).

Evaluation Procedures

Operational Efficiency:

- Measure key performance indicators (KPIs) such as order processing time and error rates before and after implementation.

Customer Satisfaction:

- Compare survey results to evaluate changes in customer satisfaction.
- Conduct follow-up interviews for qualitative feedback.

Data Analysis:

- Use statistical methods to analyze survey data.
- Perform thematic analysis on qualitative data.

Reporting and Recommendations:

- Compile findings into a comprehensive report.
- Provide recommendations for improvements and future research.

This methodology aims to create an effective e-menu application that enhances operational efficiency and customer satisfaction at Cafe CINDY.

RESULTS AND DISCUSSION

Implementation is an activity that is planned and carried out seriously, referring to certain norms in order to achieve the objectives of the activity. In carrying out this implementation, there are several limitations that need to be considered, namely:

Data Input:

- The data used for this implementation stage is only sample data.

Application Features:

- This application includes several main pages: Coffee Time, Login, Transactions, Orders, and Menu List.

The following is a screen design for the food and beverage ordering application at Coffe Time Pangkalpinang which has been created using the Android platform.

Login Menu:

This page is used for employee login. The account used is an account that has been created in the database, as shown in the image below.

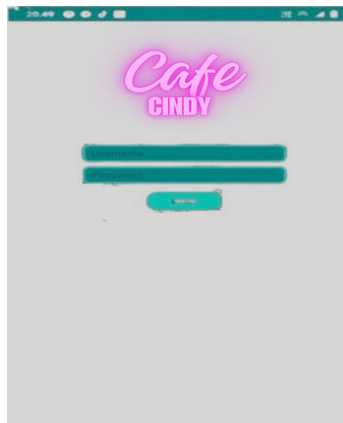


Figure 1: Login Page

Home Page

This page is used to display the main options, including ordering, transactions, menu list, and logout, as can be seen in the image below.

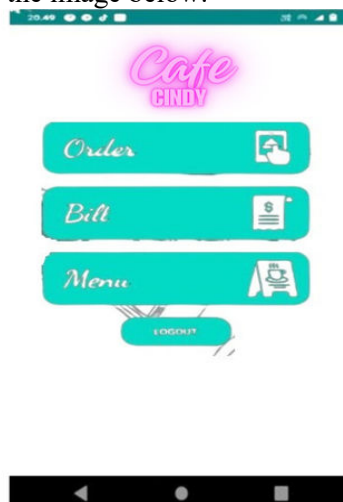


Figure 2: Main Page

Menu List

This menu contains a complete list of food and drinks along with their prices. Users can use this menu to input the order details they wish to order. This allows the ordering process to be more efficient by providing clear information about all the available options.



Figure 3: Menu List

Order Menu

This menu is used to input food or beverage choices along with the quantity and price. This feature makes it easy for users to place orders with specific and accurate details, as seen in Figure 4 below.



Figure 4: Order Menu

Transaction Menu

This menu is used to display details of orders that have been ordered, including information such as date, buyer name, total payment, payment made, and change. This feature makes it easier to track and manage transactions more efficiently, as seen in Figure 5 below.

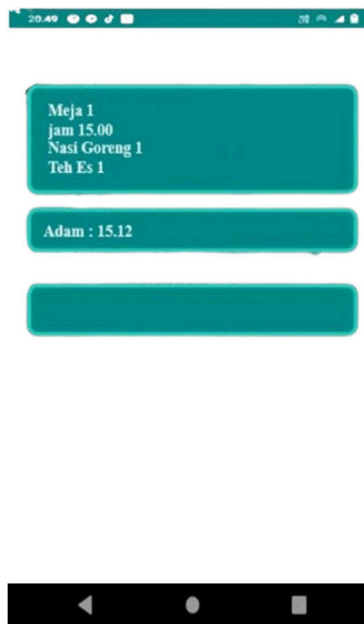


Figure 5: Transaction Menu

The implementation of an Android-based e-menu application at Cafe CINDY offers several significant advantages. First, operationally, the application increases efficiency by reducing dependence on physical menus that require regular updates. This not only saves the cost of reprinting menus, but also speeds up the ordering and order management process. Customers can easily access complete information about the menu, including images and detailed descriptions, which helps them make menu choices faster and more accurately. In terms of customer experience, the e-menu application provides greater interactivity. Customers can explore various menu options digitally, providing a modern and enjoyable experience. The data collected from the application also allows the cafe to offer personalized menu recommendations according to customer preferences, increasing customer satisfaction and loyalty levels.

In addition, the application simplifies inventory management with more accurate and structured order recording. With integrated data analysis, Cafe CINDY can track sales trends, manage stock more efficiently, and make strategic decisions based on factual data. Thus, the implementation of the e-menu application not only changes the way the cafe operates, but also improves the overall customer experience and managerial efficiency.

CONCLUSION

This study successfully developed and implemented an Android-based e-menu application at Cafe CINDY to enhance operational efficiency and customer satisfaction. The implementation results show that the e-menu streamlines the ordering process, reduces recording errors, and eliminates menu reprinting costs. Additionally, customers enjoy a more interactive experience with access to comprehensive menu information.

The application also aids management in inventory control and customer preference analysis for more targeted marketing strategies. Overall, the e-menu implementation provides a competitive advantage for Cafe CINDY in the culinary industry.

BIBLIOGRAPHY

1. Suarantalla, R., Nugroho, F. A., & Hermanto, K. (2020). Rancang Bangun Aplikasi Pemesanan Makanan Berbasis Android Pada Rumah Makan 'Bengawan Tepi Sawah'.
2. Pradinata, D. A., & Sela, E. I. (2020). Perancangan Aplikasi E-Menu Sebagai Media Pemesanan Makanan dan Minuman Berbasis Web.
3. Widyawati, E., et al. (2020). Rancang Bangun Aplikasi Pusat Oleh-Oleh Berbasis Android di Sate Bandeng Kang Cepi.
4. Suciati, F. E. B. (2021). Rancang Bangun Aplikasi Resep Kuliner Berbasis Android Menggunakan Kodular.
5. Setiawan, H., Rahayu, W., & Kurniawan, I. (2020). Perancangan Aplikasi Pemesanan Makanan dan Minuman pada Rumah Makan Cepat Saji D'Besto.
6. Payara, G. R., & Tanone, R. (2021). Penerapan Firebase Realtime Database pada Prototype Aplikasi Pemesanan Makanan Berbasis Android.
7. Defrina, D., & Lestari, D. P. (2020). Aplikasi Pemesanan Makanan dan Minuman Online Berbasis Mobile Browser pada Restoran Tiga Saudara.
8. Setiawan, R., & Nugroho, W. (2021). Rancang Bangun Aplikasi Pemesanan Makanan Berbasis Android.
9. Kurniawan, I. (2020). Perancangan Aplikasi Pemesanan Makanan dan Minuman pada Rumah Makan Cepat Saji D'Besto.
10. Prasetya, A. A. (2020). Sistem Informasi Reservasi Gedung Serbaguna di Kota Palembang Berbasis Android.