Universiti Teknologi Mara

Eatsy: Mobile Apps Food Ordering System for UiTM Machang Students

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ABSTRACT

Technological advancements have significantly transformed various industries, including the food service sector, through the adoption of mobile ordering systems that streamline operations and enhance user convenience. At UiTM Machang, the campus cafeteria faces persistent challenges during peak hours, such as long queues, service delays, and inefficiencies in manual ordering processes. These issues often lead to prolonged waiting times for students and difficulties for cafeteria staff in managing high volumes of orders efficiently, resulting in errors and reduced service quality. To address these challenges, this project developed Eatsy: Mobile Apps Food Ordering System for UiTM Machang Students. The system is designed to optimize the ordering and pickup process by enabling students to browse digital menus, place orders in advance, make cashless payments, and receive real-time updates on order status. Additionally, cafeteria staff are provided with a dedicated interface to manage incoming orders, update menu items, and monitor workflows effectively. The system was developed using the Rapid Application Development (RAD) methodology, which encompassed four key phases: Requirements Planning to identify system needs and define the project scope; User Design to create prototypes and user interface wireframes for both students and staff; Construction to develop and iteratively test core functionalities; and Cutover to deploy the application and evaluate its usability. The implementation of Eatsy demonstrates its potential to reduce congestion, improve operational efficiency, and enhance overall user satisfaction. To further strengthen the application, future development could focus on integrating loyalty programs to encourage repeat usage and improve user engagement, as well as implementing intelligent recommendation systems for more personalized ordering experiences. The system could also be expanded to support multiple cafeterias across campuses, ensuring broader scalability and usability in university settings.

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CHAPTER 1

INTRODUCTION

This chapter provides an overview of the Eatsy mobile food ordering application and establishes the foundation for the project. It begins with the background, highlighting the relevance of mobile technologies in enhancing food service operations. The problem statement outlines the challenges faced by UiTM Machang students and cafeteria staff in the current manual ordering process. The research questions and objectives are defined to guide the development of the application. The scope section describes the target users and the specific context of the system, while the project significance emphasizes the importance of the proposed solution in improving efficiency and user satisfaction. The expected outcomes and project limitations are also presented to give a clear picture of what the project aims to achieve and its constraints.

1.1 Background

Efficient food service systems play a crucial role in maintaining the smooth functioning of daily routines, especially in high-traffic environments like universities. Globally, dining facilities face challenges in meeting the needs of large and diverse student populations while maintaining operational efficiency. According to Gurukar et al. (2024), inefficiency in the dining area is usually caused by the manual ordering system with its long queues and mismanaged orders. These inefficiencies not only frustrate students but also put undue pressure on staff, affecting the overall dining experience.

Mobile technology has proliferated and brought changes to every aspect of daily life, including food ordering and consumption. Food-ordering mobile applications have been widely adopted and provide convenience for users by allowing them to pre-order, track orders in real time, and make digital payments. These systems have been able to reduce waiting time and improve customer satisfaction, especially within a structured dining environment like campus cafeterias. Furthermore, digital solutions have proven to significantly improve operational efficiency for food service providers by