

# GROUP 11: DOCUMENTATION ON THE PROJECT

**PROJECT: USIU ONLINE ORDERING FOOD SYSTEM**

**A DIGITAL TRANSFORMATION IN CAMPUS FOOD SERVICES**

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# PROJECT TITLE

**The title captures the essence of the project, emphasizing the technological advancement aimed at improving food service efficiency on the USIU campus. It sets the stage for a project that addresses current challenges in traditional food service methods through a modern, innovative approach.**

# INTRODUCTION

**Overview**

**The United States International University (USIU) is home to a diverse community of students, faculty, and staff who rely on campus dining facilities for their daily meals. However, traditional manual ordering systems pose challenges such as long queues, communication errors, and inefficient service delivery. With the increasing demand for convenience and the rapid adoption of technology in daily operations, an online ordering system presents a viable solution.**

**This project seeks to design and implement an Online Ordering System (OOS) tailored for the USIU community. By leveraging modern web technologies, the system will provide users with a seamless experience for browsing menus, placing orders, and making payments. The ultimate goal is to enhance satisfaction, reduce waiting times, and improve operational efficiency for cafeteria staff.**

**Background of the Project**

**Food service is a cornerstone of any university's operations, catering to the daily needs of students, faculty, and staff. At the United States International University (USIU), the cafeteria serves as a hub of activity, providing meals, snacks, and refreshments to a diverse population. However, the traditional ordering system—relying on manual communication, cash transactions, and physical queuing—has led to inefficiencies such as:**

1. **Prolonged Waiting Times: Students often spend significant time waiting in queues, which can interfere with class schedules and productivity.**
2. **Order Inaccuracies: Miscommunication between customers and cafeteria staff during peak hours leads to incorrect or incomplete orders.**
3. **Limited Payment Options: The current system predominantly relies on cash, which is inconvenient for a large portion of the tech-savvy student population.**

# The Role of Technology in Food Services

**In a world increasingly driven by digital solutions, food ordering systems have evolved significantly. Online ordering systems are no longer luxuries but necessities in institutions aiming to provide convenience, improve efficiency, and meet modern user expectations. By allowing customers to browse menus, place orders, and make payments via digital platforms, these systems eliminate the bottlenecks of traditional food service operations.**

**Institutions like Harvard, Stanford, and the University of Cape Town have adopted online ordering solutions, reporting substantial improvements in user satisfaction, operational efficiency, and financial performance. The USIU Online Ordering System aims to replicate and build upon these successes by addressing challenges unique to its campus environment.**

**Why USIU Needs an Online Ordering System**

**USIU, being a forward-thinking and innovative institution, prides itself on creating a world-class experience for its community. However, the cafeteria's current challenges compromise this standard. Introducing an online ordering system offers a transformative solution with the following benefits:**

* **Convenience for Users: Students, faculty, and staff can place orders remotely, saving time and effort.**
* **Efficiency for Staff: Orders are received and organized digitally, minimizing confusion and manual effort.**
* **Enhanced Campus Life: A smooth ordering process contributes to an overall positive experience at USIU.**
* **Reduced Operational Costs: By minimizing manual errors and optimizing staff workflow, the cafeteria can operate more efficiently and cost-effectively.**

**Key Features of the Online Ordering System**

**The proposed system will provide the following functionalities to the USIU community:**

1. **Menu Browsing: Users can explore a dynamic and regularly updated menu with dietary filters.**
2. **Order Placement: Customers can select items, customize orders, and choose quantities with ease.**
3. **Real-Time Notifications: Users will receive updates about their order status (e.g., "Order Received," "Being Prepared," "Ready for Pickup").**
4. **Payment Integration: Multiple payment options, including mobile money (M-Pesa), credit/debit cards, and PayPal, will ensure inclusivity and convenience.**
5. **Feedback Mechanism: Users can provide feedback on orders, helping the cafeteria continuously improve its services.**

# Objectives of the System

**The primary goal is to replace the current manual system with a technology-driven platform that offers simplicity, reliability, and user satisfaction. Specific objectives include:**

* **Reducing order processing time by 50%.**
* **Enhancing order accuracy by automating the communication process.**
* **Increasing the adoption of digital payments among users by providing secure and user-friendly options.**

**The Vision for Digital Transformation**

**This project aligns with USIU's broader vision of embracing technological advancements to provide a cutting-edge learning and living environment. As students increasingly rely on technology in all facets of their lives, the online ordering system represents a step forward in integrating technology into campus operations, reflecting the institution's commitment to innovation and excellence.**

**Challenges Addressed by the Project**

* **Long Queues: Eliminated by enabling users to order in advance and pick up their meals at a designated time.**
* **Order Discrepancies: Resolved through digital records that eliminate miscommunication.**
* **Payment Delays: Mitigated by offering pre-payment options via integrated gateways.**
* **Inefficient Order Management: Cafeteria staff receive clear, real-time instructions, improving kitchen workflow.**

**Importance to Stakeholders**

* **Students and Staff: Convenience, time-saving, and enhanced dining experiences.**
* **Cafeteria Management: Streamlined operations, data-driven insights, and higher customer satisfaction.**
* **USIU Administration: A demonstration of commitment to modernization and student well-being.**

**Conclusion**

**The introduction of the USIU Online Ordering System is not merely a technological upgrade—it is a reimagining of how food services can contribute to a better campus experience. By addressing pain points in the current system and leveraging the latest in digital innovation, this project promises to deliver a solution that is as practical as it is transformative.**

# Citations:

* **Brown, J., & Johnson, P. (2022). *Digital solutions for campus food services: A case study approach.* Journal of Campus Innovations, 18(2), 34-49.**
* **Lopez, A. (2021). *User experience design in food ordering systems.* Design Quarterly, 23(1), 12-24.**

# Literature Review

**A comprehensive literature review is essential to understand the current landscape of online ordering systems in university settings, identify best practices, and uncover gaps that the USIU Online Ordering System can address. This section delves into existing research, examines various implementations, and highlights the critical factors that influence the success of such systems in academic environments.**

**The Evolution of Online Ordering Systems in Educational Institutions**

**The integration of online ordering systems within universities marks a significant shift towards leveraging technology to enhance campus life. Historically, campus food services relied on manual processes that were often inefficient and prone to errors. The transition to digital platforms has been driven by the need for greater efficiency, improved user experience, and the ability to handle increasing demand.**

**Adoption Trends:  
Several studies have documented the growing adoption of online ordering systems in higher education institutions. For instance, Brown and Johnson (2022) conducted a survey across 30 universities, finding that 85% had implemented some form of digital ordering system by 2021. This trend is attributed to the rising expectations of students and staff for convenient, technology-driven solutions that align with their everyday digital interactions.**

**Technological Advancements:  
Advancements in web and mobile technologies have made it easier to develop robust and user-friendly online ordering platforms. Nguyen (2020) emphasizes that the proliferation of smartphones and reliable internet access on campuses has been a catalyst for the successful deployment of these systems. The shift towards cloud-based solutions also offers scalability and flexibility, essential for accommodating varying user loads and evolving requirements.**

**Key Features of Successful Online Ordering Systems**

**The effectiveness of an online ordering system hinges on several key features that enhance usability, reliability, and overall satisfaction. Research highlights the importance of the following functionalities:**

**User Interface and Experience (UI/UX)  
Lopez (2021) underscores the significance of an intuitive and aesthetically pleasing user interface in driving adoption and ensuring ease of use. A well-designed UI/UX can reduce the learning curve, making it easier for users to navigate menus, place orders, and complete transactions without frustration.**

**Real-Time Order Tracking  
Real-time tracking capabilities are crucial for maintaining transparency and managing user expectations. According to Martin (2020), systems that provide live updates on order status—from preparation to readiness for pickup—significantly enhance user satisfaction by reducing uncertainty and wait times.**

**Secure Payment Integration  
The integration of secure and diverse payment options is essential for catering to the varied preferences of users. Brown and Johnson (2022) highlight that offering multiple payment methods, including mobile wallets, credit/debit cards, and campus-specific payment solutions, can increase the system's accessibility and user trust.**

**Customization and Personalization  
Modern online ordering systems benefit from offering personalized experiences. Nguyen (2020) points out that features such as saved preferences, personalized recommendations, and dietary filters (e.g., vegetarian, gluten-free) not only improve user satisfaction but also cater to the diverse needs of the university population.**

**Administrative Tools and Analytics  
Effective management tools are vital for cafeteria staff and administrators to monitor and optimize operations. Lopez (2021) discusses the importance of dashboards that provide insights into sales trends, peak ordering times, and user behavior, enabling data-driven decision-making and operational improvements.**

**Case Studies: Implementations in Various Universities**

**Examining real-world implementations provides valuable insights into the successes and challenges associated with online ordering systems in university settings.**

**Stanford University  
Stanford's online dining platform integrates seamlessly with its campus card system, allowing users to order and pay using their existing credentials. Brown and Johnson (2022) note that this integration has streamlined the payment process, reduced transaction times, and minimized the need for separate payment methods. Additionally, Stanford's emphasis on mobile accessibility has resulted in high user engagement and satisfaction.**

**Harvard University  
Harvard's implementation focuses on sustainability and waste reduction. The system includes features for pre-ordering, which helps the cafeteria manage inventory more effectively and reduce food waste. Lopez (2021) highlights that Harvard's approach not only enhances operational efficiency but also aligns with the university's sustainability goals, demonstrating a holistic approach to system design.**

**University of Cape Town  
The University of Cape Town introduced an online ordering system that emphasizes user feedback and continuous improvement. According to Nguyen (2020), the platform includes a robust feedback mechanism that allows users to rate their meals and provide suggestions. This feedback loop has enabled the cafeteria to make iterative improvements, resulting in higher quality services and increased user loyalty.**

# Challenges in Implementing Online Ordering Systems

**Despite the numerous benefits, implementing an online ordering system in a university environment presents several challenges that need to be addressed to ensure success.**

**Technical Integration  
Integrating the online ordering system with existing campus technologies, such as student information systems and payment gateways, can be complex. Martin (2020) discusses how seamless integration is critical for ensuring data consistency and providing a unified user experience. Challenges include compatibility issues, data migration, and maintaining security across interconnected systems.**

**User Adoption  
Achieving high user adoption rates requires more than just deploying a functional system. Lopez (2021) emphasizes the importance of effective training, user support, and continuous engagement to encourage users to transition from traditional methods to the new platform. Resistance to change and varying levels of digital literacy among users can hinder adoption efforts.**

**Data Security and Privacy  
Handling sensitive user data, including payment information and personal preferences, necessitates stringent security measures. Brown and Johnson (2022) highlight the importance of compliance with data protection regulations and the implementation of robust encryption and authentication protocols to safeguard user information and maintain trust.**

**Operational Workflow Adjustments  
Transitioning to a digital ordering system requires changes in the operational workflows of cafeteria staff. Martin (2020) points out that staff need adequate training to manage digital orders, handle technical issues, and utilize new administrative tools effectively. Failure to adapt workflows can lead to operational inefficiencies and staff dissatisfaction.**

**Addressing the Gaps: Tailoring Solutions for USIU**

**While existing literature provides a solid foundation, specific gaps remain that the USIU Online Ordering System aims to address:**

**Customization for Campus-Specific Needs  
Many online ordering systems are designed with generic features that may not cater to the unique requirements of a particular campus. USIU's system will incorporate features like meal plan integration, dietary preference filters, and real-time feedback tailored to the preferences and behaviors of the USIU community.**

**Enhanced Integration Capabilities  
USIU's system will prioritize seamless integration with campus-wide systems, including student portals, campus cards, and existing financial systems. This integration ensures a cohesive user experience and simplifies administrative processes.**

**Focus on Inclusivity and Accessibility  
The system will be designed with accessibility in mind, ensuring that users with disabilities can navigate and utilize the platform effectively. Features such as screen reader compatibility, adjustable font sizes, and keyboard navigation will be incorporated to meet diverse user needs.**

**Sustainability and Environmental Impact:  
In alignment with global sustainability trends, the USIU system will include features that promote eco-friendly practices, such as digital receipts, order optimizations to reduce food waste, and options for environmentally friendly packaging.**

# Theoretical Frameworks and Models

**Understanding the theoretical underpinnings of technology adoption and user behavior is crucial for designing an effective online ordering system.**

**Technology Acceptance Model (TAM)  
Developed by Davis (1989), TAM posits that perceived usefulness and perceived ease of use are primary factors influencing user acceptance of technology. Applying TAM to the USIU system suggests that ensuring the platform is user-friendly and demonstrably beneficial will enhance adoption rates.**

**Unified Theory of Acceptance and Use of Technology (UTAUT)  
Venkatesh et al. (2003) expanded on TAM with UTAUT, which includes additional factors such as social influence and facilitating conditions. For USIU, this means considering the role of peer influence and ensuring that adequate support and resources are available to users.**

**Diffusion of Innovations Theory:  
Rogers (2003) outlines how innovations spread within a population. Understanding the stages of adoption—knowledge, persuasion, decision, implementation, and confirmation—can guide the deployment strategy for the USIU system, ensuring that each phase is addressed effectively to maximize uptake.**

# Summary of Literature Insights

**The literature underscores the transformative potential of online ordering systems in university settings, highlighting benefits such as increased efficiency, improved user satisfaction, and enhanced operational management. Key success factors include intuitive design, real-time tracking, secure payments, and robust administrative tools. However, challenges related to technical integration, user adoption, data security, and operational adjustments must be carefully managed.**

**The USIU Online Ordering System is poised to build on these insights by addressing identified gaps and tailoring solutions to meet the specific needs of its community. By leveraging theoretical frameworks like TAM and UTAUT, the project can strategically foster user acceptance and ensure sustained success.**

**Future Directions and Emerging Trends**

**As technology continues to evolve, so do the possibilities for enhancing online ordering systems. Future research and development could explore the following areas:**

**Artificial Intelligence and Machine Learning:  
Incorporating AI can enable personalized recommendations, predictive ordering based on user habits, and intelligent inventory management to further reduce waste and optimize operations.**

**Blockchain for Enhanced Security  
Blockchain technology offers potential benefits for securing transactions and ensuring data integrity, addressing some of the data security concerns highlighted in existing studies.**

**Integration with Smart Campus Initiatives  
Linking the online ordering system with broader smart campus initiatives, such as IoT-enabled kitchen appliances and automated delivery systems, can further streamline operations and enhance the user experience.**

**Sustainability Metrics  
Developing features that track and report on sustainability metrics, such as carbon footprint reduction and waste minimization, can align the system with global sustainability goals and appeal to environmentally conscious users.**

# Conclusion

**The literature review reveals that online ordering systems hold significant promise for transforming campus food services by enhancing efficiency, user satisfaction, and operational management. Successful implementations are characterized by user-centric design, robust functionality, and seamless integration with existing systems**

**. However, challenges such as technical integration, user adoption, and data security require careful consideration and strategic planning. By addressing these factors and leveraging insights from existing research, the USIU Online Ordering System can effectively meet the needs of its community, setting a benchmark for innovation and excellence in campus food services.**

**References:**

* **Brown, J., & Johnson, P. (2022). *Digital solutions for campus food services: A case study approach.* Journal of Campus Innovations, 18(2), 34-49.**
* **Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319-340.**
* **Lopez, A. (2021). *User experience design in food ordering systems.* Design Quarterly, 23(1), 12-24.**
* **Martin, K. (2020). *User-centric design principles.* Tech Innovations, 12(4), 78-89.**
* **Nguyen, T. (2020). *Technological adoption in higher education dining services.* HigherEd Innovations, 10(5), 101-117.**
* **Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.**
* **Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425-478.**

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# Work Breakdown Structure (WBS)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Phase** | **Task** | **Description** | **Responsible Party** | **Start Date** | **End Date** | **Duration** |
| 1. **Planning** | **Project Approval** | **Formal approval from USIU management** | **Project Sponsor** | **01 -Dec-2024** | **03-Dec 2024** | **3 days** |
|  | **Requirement Analysis** | **Identify user needs , scope and features** | **Business Analyst** | **04-Dec-2024** | **08-Dec-2024** | **5 days** |
| 1. **Design** | **System Architecture Design** | **Design system framework and workflows** | **System Architect** | **09-Dec-2024** | **13-Dec-2024** | **5 days** |
|  | **User Interface (UI) Design** | **Create wireframes and UI prototypes** | **UI/UX Designer** | **14-Dec-2024** | **18-Dec-2024** | **5 days** |
| 1. **Develpoment** | **Backend Development** | **Build server-side functionalities and M-Pesa integration** | **Backend Developer** | **19-Dec-2024** | **29-Dec-2024** | **10 days** |
|  | **Frontend Development** | **Build the user interface and integrate backend APIs** | **Frontend Developer** | **30-Dec-2024** | **10-Jan-2025** | **10 days** |
|  | **Database Setup** | **Configure and test database for secure data handling** | **Database Administrator** | **19-Dec-2024** | **26-Dec-2024** | **8 days** |
| 1. **Testing** | **Unit Testing** | **Test individual modules** | **Quality Assurance Team** | **11-Jan-2025** | **15-Jan-2025** | **5 days** |
|  | **System Testing** | **Test the system as a whole, ensuring integration and security** | **Quality Assurance Team** | **16-Jan-2025** | **21-Jan-2025** | **6 days** |
|  | **User Acceptance Testing (UAT)** | **Test with end users and gather feedback** | **Selected USIU Staff/Students** | **22-Jan-2025** | **28-Jan-2025** | * 1. **days** |
| 1. **Deployment** | **Training** | **Train cafeteria staff on using the platform** | **Project Team** | **29-Jan-2025** | **31-Jan-2025** | **3 day** |
|  | **System Go-Live** | **Deploy the platform for official use** | **Development and IT Teams** | **01-Feb-2025** | **01-Feb-2025** | **1 day** |
| 1. **Maintenance** | **Ongoing Support** | **Address technical issues and provide updates** | **Support Team** | **02-Feb-2025** | |  | | --- | | **Continuous** |  |  | | --- | |  | | |  | | --- | | **Continuous** |  |  | | --- | |  | |

# Objective

**Primary Objective**

**To develop an efficient and user-friendly Online Ordering System (OOS) that improves the dining experience for the USIU community while enhancing the operational capabilities of cafeteria staff.**

**Specific Objectives**

1. **User Accessibility:  
   Design a system that allows students, faculty, and staff to browse menus and place orders anytime, anywhere.**
2. **Order Management Efficiency:  
   Provide cafeteria staff with tools to manage orders in real-time, reducing errors and delays.**
3. **Secure Transactions:  
   Integrate payment gateways to allow for secure and diverse payment options, including mobile money and card payments.**
4. **Real-Time Notifications:  
   Notify users about the status of their orders, from preparation to pick-up.**
5. **Data Analytics:  
   Implement an analytics dashboard for cafeteria administrators to track sales, popular menu items, and peak ordering times.**
6. **Sustainability:  
   Reduce paper usage by digitizing order receipts and communications.**

# SCOPE OF THE USIU ONLINE FOOD ORDERING SYSTEM

**The USIU Online Ordering System is a comprehensive solution tailored to address the specific needs of the United States International University (USIU) community. This section defines the boundaries of the project, detailing the functionalities, user groups, operational considerations, and technological components. By establishing a clear scope, the project ensures alignment with USIU’s goals, efficient resource allocation, and the delivery of a solution that meets user expectations.**

**Scope Overview**

**The scope of the project encompasses the design, development, implementation, and maintenance of an online ordering system that facilitates the seamless purchase of food and beverages from the university cafeteria. The system is intended for use by students, faculty, and staff, providing a streamlined process for ordering, payment, and pickup.**

# Functional Scope

**The USIU Online Ordering System will offer the following key features:**

**User Registration and Login**

* **Account Creation: All users (students, faculty, staff) must register on the platform using their institutional email addresses.**
* **Authentication: Secure login using email and password. Two-factor authentication (optional) may be included for enhanced security.**
* **Profile Management: Users can update personal information, including name, contact details, and preferred pickup locations.**

**Menu Display**

* **Static Menu: The system will feature a fixed menu, pre-determined by the cafeteria management.**
* **Category Listing: The menu will be divided into clear categories (e.g., Breakfast, Lunch, Beverages, Snacks) to simplify navigation.**
* **Nutritional Information: Basic details, such as calorie counts or allergen warnings, will be displayed for transparency.**
* **Price Visibility: All menu items will have their prices listed prominently.**

**Order Placement**

* **Item Selection: Users can select items from the menu and specify quantities.**
* **Order Review: A summary of the selected items, quantities, and total cost will be presented before order confirmation.**
* **Order Confirmation: Users must confirm their orders to initiate the preparation process.**

**Payment System**

* **Integrated Payment Gateway: The system will exclusively support M-Pesa, Kenya’s leading mobile money platform. This aligns with the financial habits of the USIU community and ensures secure, cashless transactions.**
  + **Pay Bill Integration: Users will make payments through an M-Pesa Pay Bill number assigned to the cafeteria.**
  + **Real-Time Payment Verification: The system will verify payments automatically, linking them to the corresponding order.**
  + **Receipts: A digital receipt will be generated for every transaction, available for download and emailed to the user.**

**Order Tracking**

* **Status Updates: Users will receive real-time notifications about their order status (e.g., "Order Received," "Being Prepared," "Ready for Pickup").**
* **Pickup Time Estimates: Approximate preparation and pickup times will be displayed for each order.**

**Pickup Process**

* **Order ID System: Each order will have a unique identifier for easy pickup. Users must present this ID (via phone or printed receipt) at the collection counter.**
* **Pickup Locations: Users can select designated pickup points within the cafeteria during order placement.**

**Feedback Mechanism**

* **Ratings: Users can rate their experience with orders, helping the cafeteria improve its services.**
* **Suggestions: An optional text box will allow users to provide comments or suggestions.**

# Non-Functional Scope

**Performance Requirements**

* **Scalability: The system must handle high traffic during peak hours (e.g., lunchtime).**
* **Response Time: The platform will process orders and payments with minimal latency, ensuring a smooth user experience.**

**Security and Privacy**

* **Secure Payments: M-Pesa integration will leverage end-to-end encryption to protect user transactions.**
* **Data Protection: User data, including personal and payment details, will be stored securely and comply with data protection laws.**

**Availability**

* **24/7 Access: Users can place orders anytime, but order fulfillment will adhere to cafeteria operating hours.**
* **Cross-Platform Accessibility: The system will be accessible via web browsers and mobile devices for maximum convenience.**

# Inclusion Criteria

**The system will support the following:**

1. **User Groups:**
   * **Current USIU students, faculty, and staff.**
   * **Cafeteria management and staff responsible for order fulfillment and system administration.**
2. **Languages and Currency:**
   * **The primary language will be English, with pricing displayed in Kenyan Shillings (KES).**
3. **System Administrators:**
   * **Cafeteria staff will have administrative access to update menu items, monitor orders, and generate sales reports.**

# Exclusion Criteria

* **Dynamic Menus: The system will not include a dynamic menu that updates based on inventory levels or user preferences. Instead, a static menu determined by the cafeteria will be displayed.**
* **Multiple Payment Gateways: Payment will be limited to M-Pesa, excluding credit/debit cards, PayPal, or other mobile money platforms.**
* **Home Delivery: The system will not support delivery services; all orders are for pickup only.**
* **Dietary Filters: While nutritional information is provided, the system will not allow users to filter items based on specific dietary preferences.**

**Geographic Scope**

**The system is exclusively designed for the USIU campus in Nairobi, Kenya. All transactions, pickups, and operations will occur within the confines of the campus cafeteria.**

**Temporal Scope**

**The system will operate within the cafeteria’s business hours, which will be clearly displayed on the platform. Orders placed outside these hours will be scheduled for the next available operating period.**

# Limitations

**While the USIU Online Ordering System addresses critical needs, it operates within the following constraints:**

* **Connectivity Dependence: Users must have access to reliable internet or cellular data to use the platform.**
* **Manual Intervention: Some backend processes, such as updating menu prices or resolving payment discrepancies, may require manual handling by cafeteria staff.**

Assumptions

* **The majority of USIU’s population actively uses M-Pesa, making it a viable sole payment option.**
* **Users have access to smartphones or computers for placing orders.**
* **The cafeteria staff will receive adequate training to manage the system efficiently.**

# Future Expansion Opportunities

**While this version focuses on a static menu and M-Pesa integration, future updates could consider the following enhancements:**

* **Expanding payment options to include credit/debit cards and campus cards.**
* **Adding delivery services within the campus.**
* **Introducing dynamic menus based on real-time inventory.**