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JOLLICODE: A KIOSK FOOD ORDERING SYSTEM

In Partial Fulfilment of the Requirement in

IT 211 – Database Management System

By:

ALOCILLO, MELVIN DARYLL

JOSE, PRINCESS MIKHAELA R.

MACATANGAY, KEITH CARLO P.

VELASQUEZ, KEN ANGELO D.

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Introduction

In the dynamic landscape of the 21st century, the winds of change are propelled by the relentless march of evolving technology. As the digital era unfolds, businesses find themselves at the crossroads of tradition and innovation, compelled to navigate this transformative journey. In this intricate dance between progress and tradition, emerges Jollicode—an innovative Kiosk Food Ordering System that seamlessly integrates into the fabric of modern dining.

The 21st century is characterized by the unprecedented pace of technological evolution. From the birth of the internet to the rise of smartphones, the way we live, work, and interact has undergone a profound metamorphosis. It is within this digital crucible that Jollicode finds its roots, a product of the ever-expanding capabilities of technology.

As businesses embark on a quest for efficiency and enhanced customer experiences, technology becomes their beacon. The utilization of cutting-edge solutions has become not just a choice but a necessity in an era where customer expectations are continually reshaped by digital advancements. Jollicode stands as a testament to this paradigm shift, a Kiosk Food Ordering System meticulously crafted to fulfill the needs of enterprises that acknowledge the crucial influence technology wields in shaping the trajectory of their respective industries.

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Background Information

In the realm of fast-food chains, a set of persistent challenges has long plagued the efficiency of their operations. One prominent issue revolves around the prolonged queues and time-consuming nature of the traditional order placement process. Customers often find themselves waiting in extensive lines, leading to a suboptimal dining experience and, consequently, impacting customer satisfaction.

Moreover, the conventional method of taking orders manually is prone to daily errors. The manual entry of orders, often hurried in high-paced environments, increases the likelihood of inaccuracies. This not only compromises the quality of service but also introduces an element of frustration for both customers and staff.

Another notable challenge lies in the requirement for manual labor to process simultaneous orders. In fast-food chains, where the demand for quick service is paramount, the reliance on manual execution can lead to bottlenecks. Coordinating multiple orders concurrently through manual means can be inherently challenging, resulting in delays, order mix-ups, and an overall decrease in operational efficiency.

Addressing these challenges has become a critical imperative for the fast-food industry. The need for a streamlined and technologically advanced solution is evident, paving the way for innovations such as Jollicode—a Kiosk Food Ordering System designed to revolutionize the traditional ordering process, mitigating queuing issues, minimizing manual errors, and optimizing the utilization of manual labor in a fast-paced dining environment.

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Solution

Jollicode, positioned as a transformative solution, is poised to ameliorate the persistent challenges prevalent in fast-food chains. This innovative Kiosk Food Ordering System has been meticulously designed to address the multifaceted problems inherent in traditional ordering processes.

One of the core strengths of Jollicode lies in its effectiveness and precision. By functioning as a digital ordering system, Jollicode significantly reduces the occurrence of manual errors that are commonplace in the traditional, paper-based order-taking methods. The transition to a digital interface ensures that customer orders are accurately recorded, eliminating the potential for mistakes caused by hurried manual entries.

Moreover, Jollicode brings about a paradigm shift in the utilization of manual labor. With the ability to seamlessly handle simultaneous orders through a simple click, the system minimizes the requirement for extensive manual intervention. This not only streamlines the operational workflow but also enhances overall efficiency, allowing staff to focus on other aspects of service rather than being bogged down by the complexities of managing multiple orders manually.

In the realm of customer experience, Jollicode acts as a catalyst for change by reducing queues at the counter. Unlike traditional methods where customers are forced to wait in lengthy lines for both ordering and payment, Jollicode introduces a more streamlined approach. The queue is now reserved solely for the payment process, ensuring that customers can swiftly place their orders digitally, thereby minimizing wait times and enhancing the overall efficiency of the dining experience.

In essence, Jollicode emerges as a comprehensive solution, seamlessly integrating technology to tackle the challenges faced by fast-food chains. By ensuring accuracy, reducing manual labor dependency, and optimizing the queuing process, Jollicode represents a pivotal advancement in the quest to enhance operational efficiency and customer satisfaction in the fast-food industry.

IV. Scope

a. User Interface

- Customers can effortlessly explore a digital menu, customize orders to their liking, and securely choose a payment method. The system issues digital receipts, streamlining the payment process at the cashier for swift acknowledgment and official processing of orders. Jollicode combines customization and convenience, ensuring a seamless and satisfying dining journey.

b. Admin Interface

- The administrative interface of Jollicode provides an efficient set of capabilities for competent system management. Administrators have the flexibility to edit item prices and update availability with ease, ensuring that pricing information and item availability is always accurate. Additionally, the system empowers administrators to view and delete customer order records, offering a comprehensive overview of transaction history and enabling informed decision-making. This combination of item management and order records control equips administrators with the tools needed to maintain system accuracy and derive valuable insights for business enhancement.

V. Features of JOLLICODE: A Kiosk Food Ordering System

- **Loading Interface -** The loading interface of Jollicode serves as the gateway to a responsive and dynamic platform, setting the stage for a smooth and enjoyable user experience from the moment the application is launched.

- **Welcome Interface –** The welcome interface of Jollicode extends a warm and inviting introduction to users, setting the tone for a positive and user-centric experience. Users are greeted with an aesthetically pleasing screen that often includes the brand's logo and a friendly greeting.

- **Main Login Interface -** The primary login interface of Jollicode serves as the entry point for a secure and personalized user experience. This interface provides two buttons, each corresponding to distinct login options, allowing users to specify whether they are a customer or an admin user.

- **Customer Interface**

  - **Login Interface -** The customer login interface of Jollicode is crafted to provide a seamless and secure entry point for users. Upon reaching this interface, customers encounter a user-friendly design that facilitates easy input of login credentials typically a combination of their name, address and phone number.

  - **Menu Interface -** The interface offers an aesthetically pleasing and user-friendly experience. Users can effortlessly navigate and personalize their orders across three categories: main dish, side dish, and beverages. The interface includes a section for item quantities, providing customers with information on the quantity and total cost of selected items. Additionally, two buttons are present – the void button allows order cancellation, while the view order button enables customers to review their order tray.

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o **Item Order Interface -** This interface emerges when a menu item is selected. It showcases details like the item's name, price, and description, with a section for customers to input the desired quantity using add and minus buttons. Additionally, the interface displays the total cost of the selected items, and users can exit the interface using the "done" button when finished.

o **Cancelled Order Interface** - If a customer chooses to cancel an order, they can click the "void order" button in the menu interface. This interface includes features to ensure a positive customer experience, prominently displaying a clear status indicating the successful cancellation of the order.

o **View Order Interface -** Jollicode's customer view order interface is a user-friendly platform that ensures transparency and order control for customers. After placing an order, users can use this interface to examine a thorough summary of their selections, encompassing items, quantities, and prices. Furthermore, they have the option to edit their orders by selecting the specific item they wish to modify.

o **Edit Order Interface -** The customer edit order interface is a versatile and user-friendly platform crafted to give customers the flexibility and control to modify their orders. In case adjustments are needed after placing an order, users can easily use this interface to change the quantity of selected items and view the corresponding total meal.

o **Payment Interface -** Jollicode's customer payment order interface is a secure and effective platform created to simplify the payment process for a smooth and convenient transaction. After customers have confirmed their orders, they are directed to this interface to select their preferred payment method.

- Cash Payment Interface - The cash payment interface is user-friendly, providing a seamless transaction experience for customers who prefer paying in cash. After choosing this mode of payment, users opting for cash payments are directed to this straightforward interface, showcasing Jollicode's commitment to diverse customer preferences and ensuring a smooth dining experience.

- E-Payment Interface - Jollicode's e-payment interface is a sophisticated platform for digital payments, featuring a QR code for transactions and displaying the total amount due. It reflects Jollicode's commitment to providing a seamless, secure, and technologically advanced dining experience for modern consumers.

- Receipt Loading Interface - The Jollicode receipt loading interface displays to users that their receipt is currently in the process of being printed.

- Receipt Interface - The customer receipt interface plays a crucial role in improving the entire ordering process, presenting users with a detailed and easy-to-navigate summary of their transactions. Various elements contribute to the functionality of the customer receipt interface, including order ID, customer details (name, address, phone number), ordered items (quantity, price), date and time of the order, payment method, and total amount paid along with change.

- Thank You Interface - The thank-you interface is a crucial component in concluding positive customer interaction and fostering brand loyalty. This interface incorporates various elements designed to express gratitude and encourage ongoing engagement, featuring a sincere and personalized thank-you message to convey genuine appreciation.

- **Admin Interface**
  - Login Interface - The admin login interface is a vital element of systems requiring

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secure entry for administrators or authorized personnel. It integrates features that emphasize security, efficiency, and user-friendly access to administrative.

functionalities. The interface includes fields for entering the username and password, along with a "forgot password" feature**.**
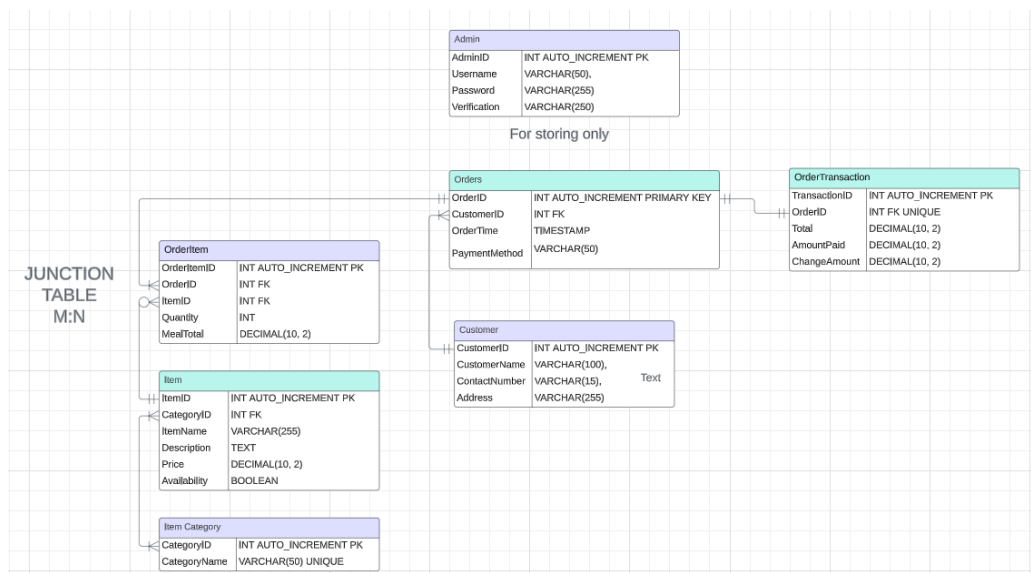
o **Password Verification Interface -** The admin password verification interface is essential for securing administrative access in a system. By integrating this feature, the system can establish a strong authentication process, safeguarding sensitive information and minimizing the threat of unauthorized access. The interface presents a text prompt, requiring the admin to provide the correct code to access password changes.

o **Homepage Interface -** The admin main homepage interface acts as the central hub for administrators, providing access to critical tools and functionalities essential for efficient management. This encompasses buttons for updating items, viewing records, logging out, and shutting down the system.

o **Update Price Interface -** The update price interface is designed to empower administrators with the tools needed to efficiently manage and modify product prices within the system. This interface incorporates various features tailored to streamline the process of updating prices effectively, such as selecting products and customizing price adjustments.

o **Main Records Interface -** The main records interface is a centralized platform designed to streamline record management for administrators. It includes tools for navigating records, providing detailed views, deleting a customer record, and maintaining an audit trail with version history.

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- o **Customer Records Interface -** The customer records interface is found within the main records interface and appears when a specific customer record is clicked. It reveals the details of transactions made by the customer at a particular date and time.

- o **Logout Interface -** The admin logout interface is a fundamental, yet crucial element crafted to ensure a secure and smooth logout process for administrators in a system. Clicking the logout option prompts a message box confirming the admin's intent to logout. Upon confirmation, the interface returns to the welcome interface.

- o **Shutdown Interface –** The shutdown interface equips administrators with vital tools to initiate a complete system shutdown securely and efficiently. Clicking the shutdown option prompts a message box to confirm the administrator's intent, and upon confirmation, the entire system shuts down.

VI.   Database Schema

Admin
AdminID	INT AUTO_INCREMENT PK
Username	VARCHAR(50),
Password	VARCHAR(255)
Verification	VARCHAR(250)

For storing only

Orders
OrderID	INT AUTO_INCREMENT PRIMARY KEY
CustomerID	INT FK
OrderTime	TIMESTAMP
PaymentMethod	VARCHAR(50)

OrderTransaction
TransactionID	INT AUTO_INCREMENT PK
OrderID	INT FK UNIQUE
Total	DECIMAL(10, 2)
AmountPaid	DECIMAL(10, 2)
ChangeAmount	DECIMAL(10, 2)

JUNCTION TABLE M:N

OrderItem
OrderItemID	INT AUTO_INCREMENT PK
OrderID	INT FK
ItemID	INT FK
Quantity	INT
MealTotal	DECIMAL(10, 2)

Customer
CustomerID	INT AUTO_INCREMENT PK
CustomerName	VARCHAR(100),
ContactNumber	VARCHAR(15),
Address	VARCHAR(255)

Item
ItemID	INT AUTO_INCREMENT PK
CategoryID	INT FK
ItemName	VARCHAR(255)
Description	TEXT
Price	DECIMAL(10, 2)
Availability	BOOLEAN

Item Category
| CategoryID | INT AUTO_INCREMENT PK |
| CategoryName | VARCHAR(50) UNIQUE |

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VII.   UI/UX

Loading Interface

Welcome Interface

Customer Login Interface

*Customer Login Interface
(Error Message Box)*

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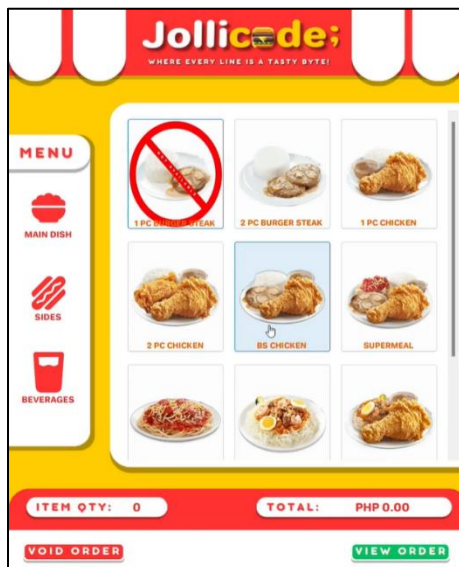
Customer Menu Interface
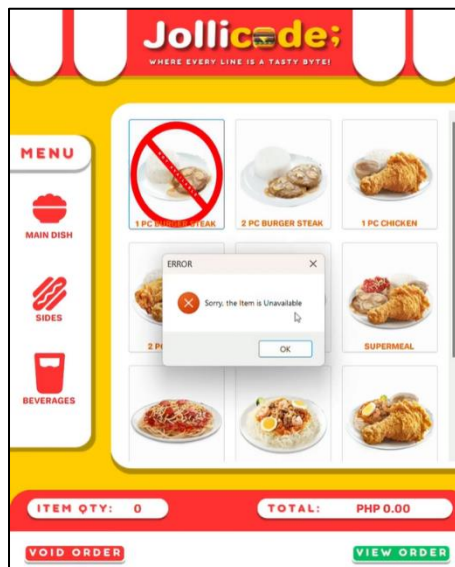
Customer Menu Interface
(Error Message Box)
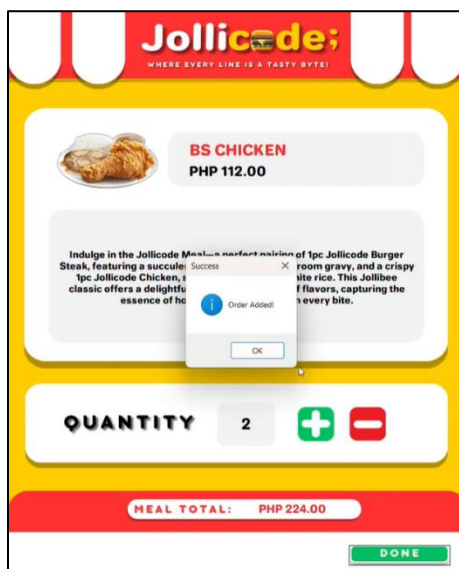
Customer Item Order Interface
(Success Message Box)

Customer View Order Interface

A. Tanco Drive, Marawoy, Lipa City, Batangas, Philippines, 4217

+63 43 980 – 0385; 980-0387; 980-0392 to 94 loc. 3130

Customer Edit Order Interface

www.batstate-u.edu.ph

cics.lipa@g.batstate-u.edu.ph

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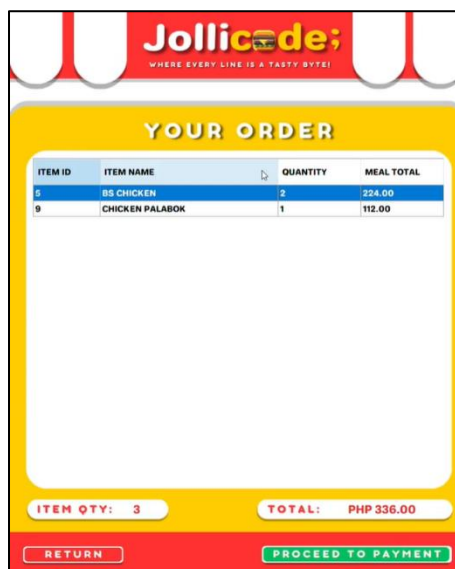
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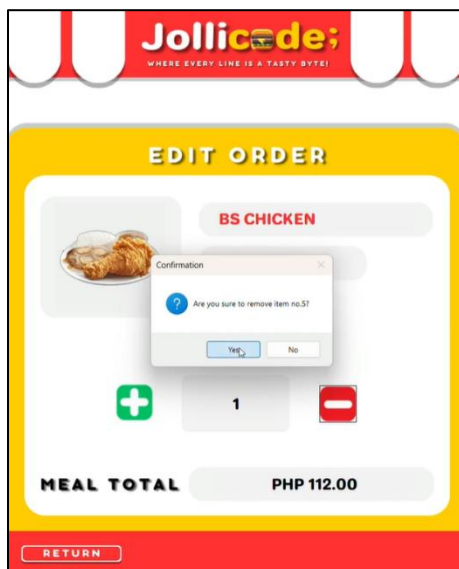
Customer Item Order Interface
(Confirmation Message Box)
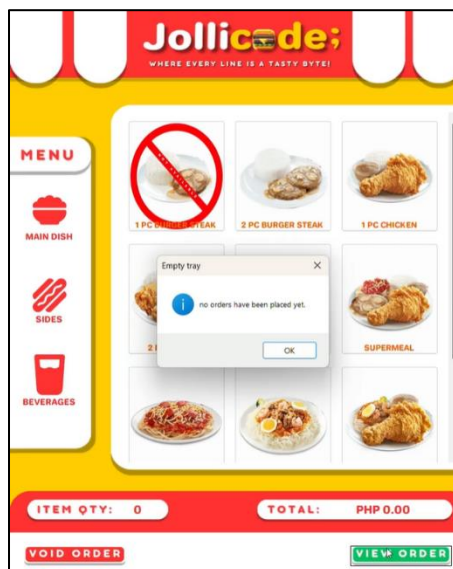
Customer View Order Interface
(Empty Tray Message Box)
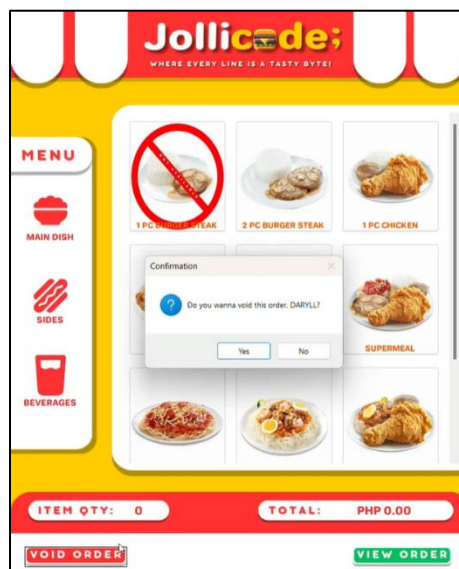
Customer Menu Interface
(Void Order Confirmation
Message Box)

Customer Cancelled Order Interface
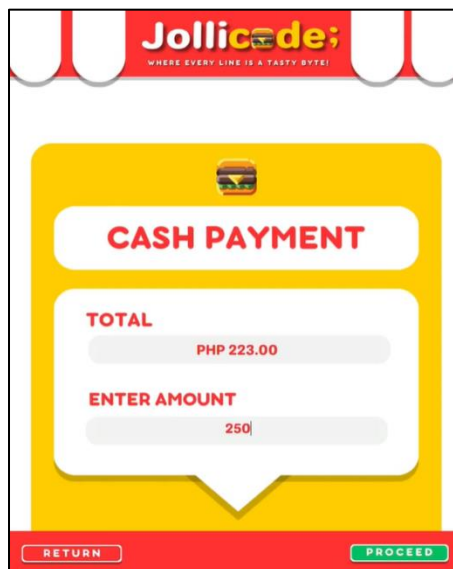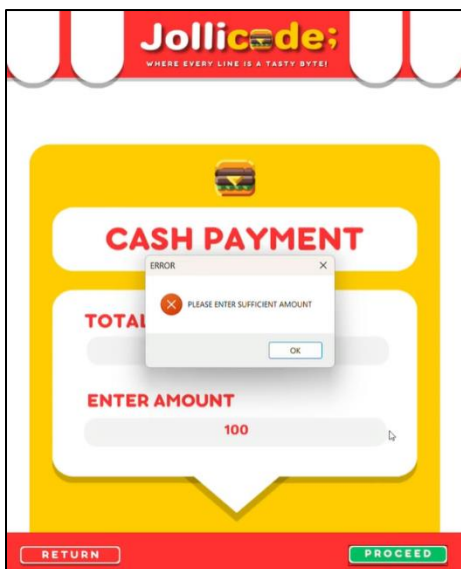
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Customer Payment Interface

Customer Cash Payment Interface

Customer Cash Payment Interface
(Error Message Box)

Customer E-Payment Interface

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Customer Receipt Loading Interface

Customer Receipt Interface

Customer Thank You Interface
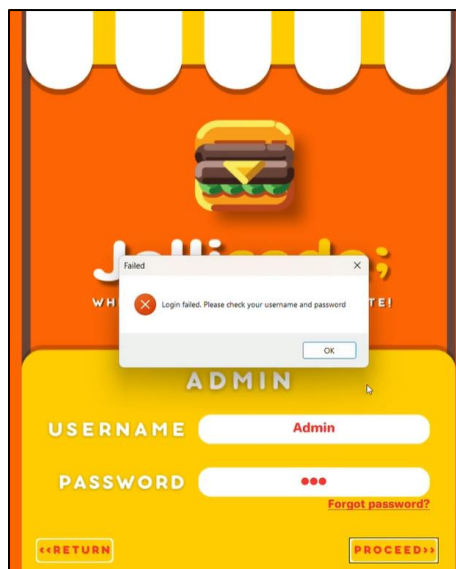
Admin Login Interface
(Login Failed Message Box)

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Admin Forgot Password
Verification Interface
(Success Message Box)
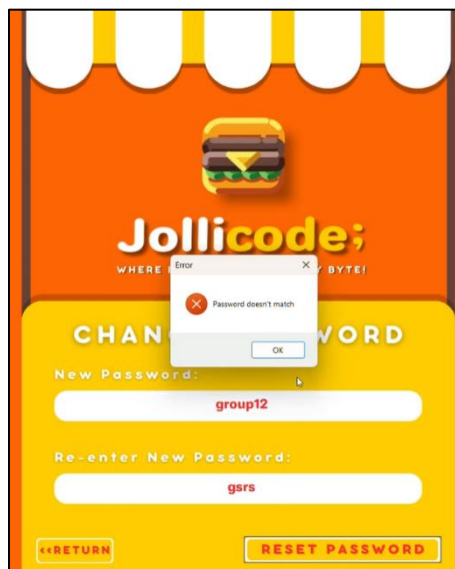
Admin Change Password Interface
(Error Message Box)

Admin Change Password Interface
(Success Message Box)
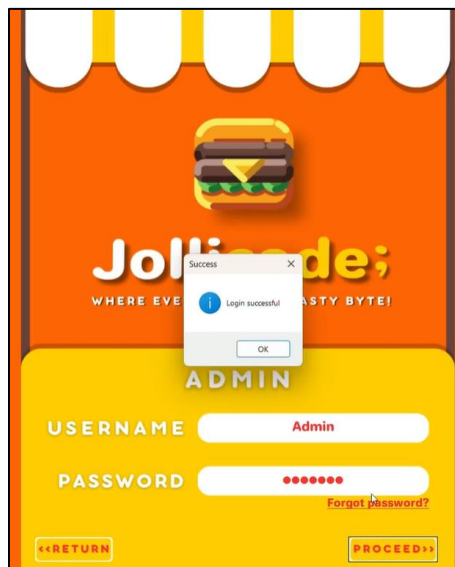
Admin Login Interface
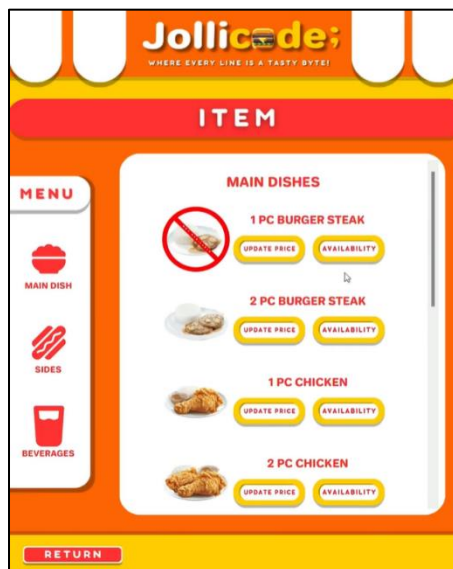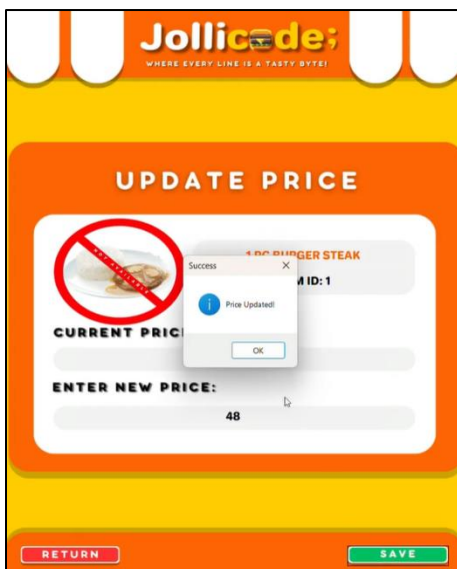*(Login Success Message Box)*

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Admin Homepage Interface

Admin Item Interface
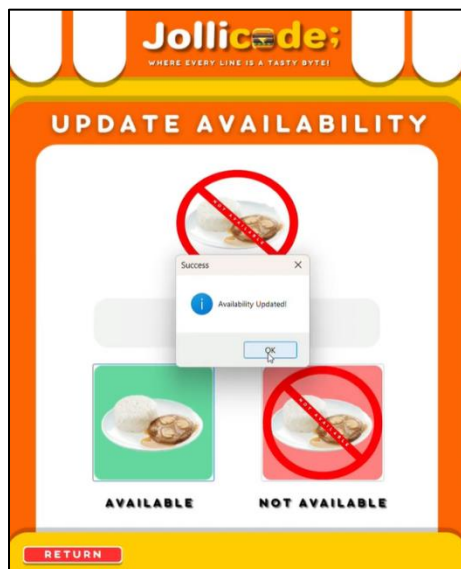

Admin Update Price Interface
(Success Message Box)
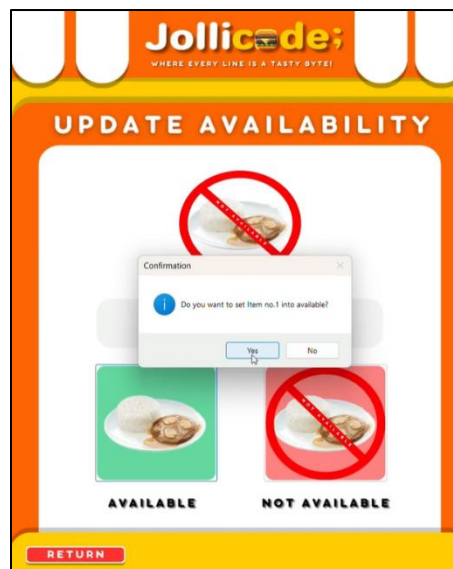
Admin Update Availability Interface
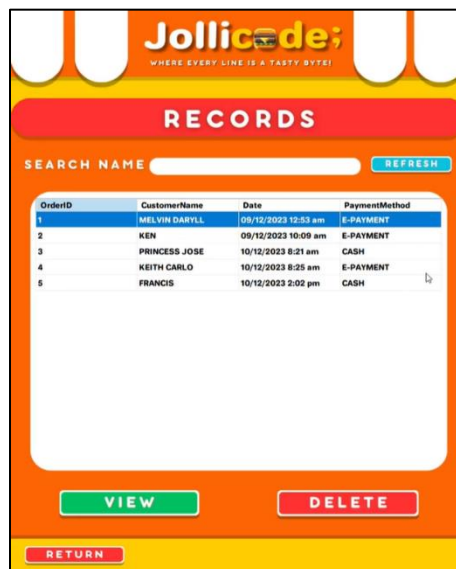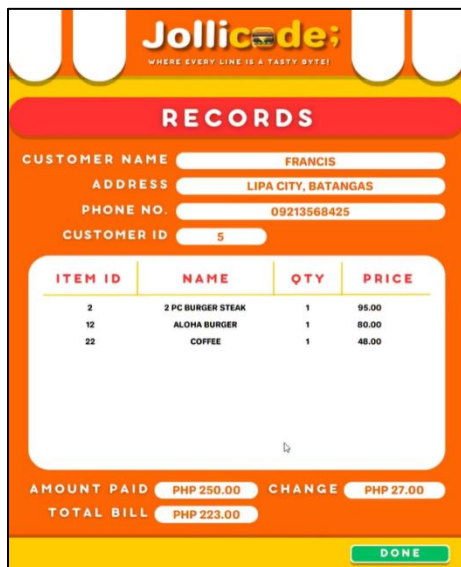*(Confirmation Message Box)*

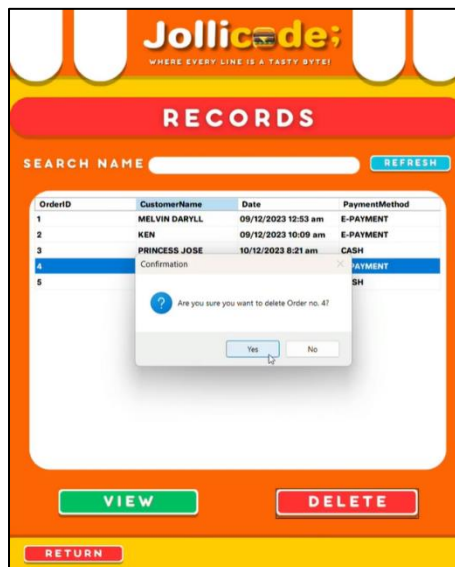## College of Informatics and Computing Sciences

Admin Update Availability Interface
(Success Message Box)

Admin Main Records Interface
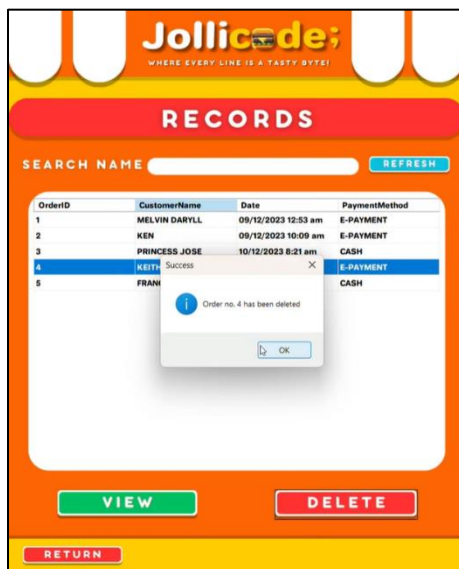

Admin Customer Records Interface

Admin Main Records Interface
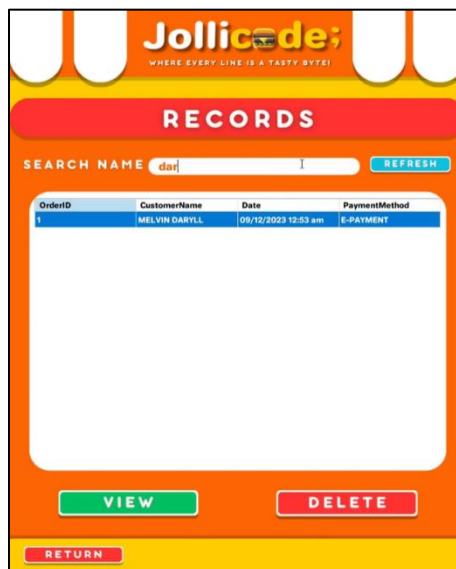*(Delete Confirmation Message Box)*

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*Admin Main Records Interface
(Delete Success Message Box)*

*Admin Main Records Interface
(Search & Refresh Feature)*

*Admin Homepage Interface
(Logout Confirmation Message Box)*

Admin Logout Interface

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Admin Homepage Interface
(Shutdown Confirmation Message Box)

Admin Shutdown Interface