Banking Kiosk

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ABSTRACT:

This development presents a user-friendly kiosk application designed to enhance customer convenience in bank branches by providing a self-service solution that reduces reliance on in-branch staff. The application focuses on delivering informational services, guiding customers through various banking procedures without facilitating actual transactions. Key features include the display of account information, comprehensive details on bank services and loan options, as well as step-by-step guidance of procedures, including bank notices, announcements, and promotional offers. Built using React.js for the frontend, Node.js for the backend, and PostgreSQL for dynamic updates, the kiosk features a touchscreen-friendly and intuitive interface that ensures easy navigation for users. By offering essential banking information in a structured and accessible manner, the kiosk modernizes branch operations and empowers customers to independently explore and understand banking services, ultimately enhancing their overall banking experience.

Keywords: Kiosk, Self-Service, Banking, Customer Convenience, Informational Services, Modernization.

Introduction:

The user-friendly banking kiosk application enhances customer convenience in bank branches by providing a self-service solution that reduces reliance on staff. It provides a Home Module with quick-access buttons for Account Information, Banking Services, Loans, and Customer Support, allowing users to easily navigate essential banking information and procedures without facilitating actual transactions. The Account Information Module offers insights into account types, while the Banking Services Module details information about various services like checkbook requests. The Loan Services Module outlines various loan options, and the Customer Support Module assists with inquiries about branch locations. With a touchscreen-friendly interface designed for ease of use, the kiosk empowers customers to independently explore banking services. Additionally, the kiosk supports multiple languages, allowing users to select their preferred language, and features an audio voice read-aloud function that provides auditory guidance for better comprehension, making it accessible for individually.

Review of Literature:

In our literature review, we conducted a survey using Google Forms to gather insights on user preferences and experiences related to the banking kiosk application. The survey included questions about familiarity with kiosk technology, desired features, and security concerns. Distributed to a diverse group of participants, the collected data was analyzed and presented in graphical format, revealing strong interest in features like account balance inquiries and step-by-step guidance for banking procedures. Participants also emphasized the importance of robust security measures. This feedback informed the design and functionality of the kiosk, ensuring it meets user needs and enhances overall satisfaction and adoption rates. By incorporating user insights, we aim to develop a more effective and user-friendly banking kiosk solution.
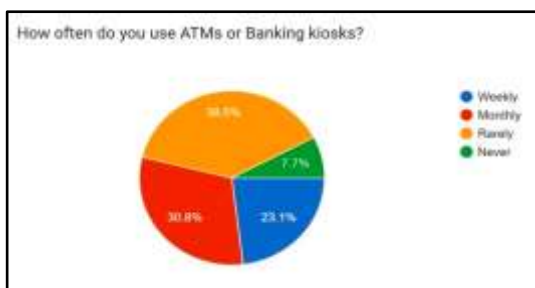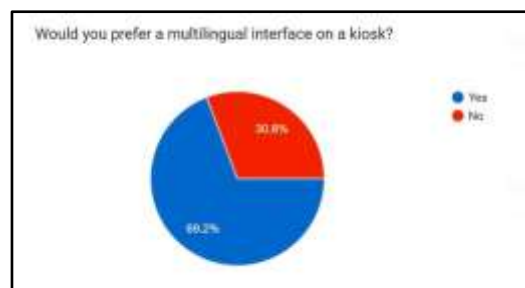

Fig:1

Fig:2

Methodology:

The kiosk application was developed using a combination of technologies:

- **Frontend**: React.js was chosen for its component-based architecture, allowing for a responsive and dynamic user interface.

- **Backend**: Node.js was utilized to handle server-side logic and API requests.

- **Database**: PostgreSQL was selected for its robustness and ability to handle queries.

Key Features:

Account Information Display: Users can view different types of account related information.

Bank Services Information: Comprehensive details on various banking services, loan options, and interest rates are provided.

Guided Procedures: Step-by-step instructions for procedures.

Bank Announcements: Display of notices, announcements, and promotional offers.

Security Features: In a banking kiosk where employee's login first. After the employee logs in, customers can use the kiosk. Without the employee's login, customers cannot access the system.
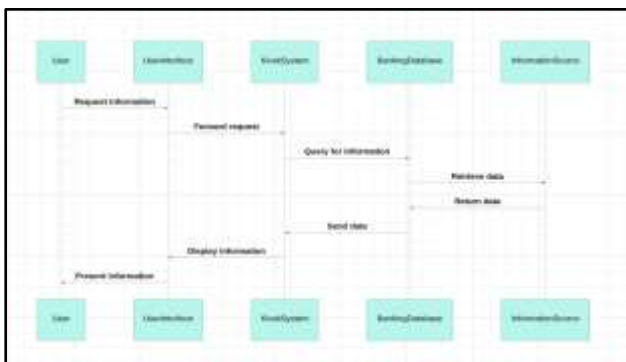
Diagrams:
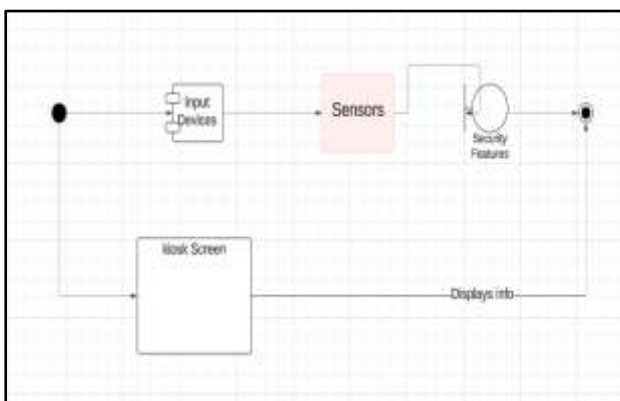

Fig:1 Sequence Diagram

Fig:2 Use Case Diagram

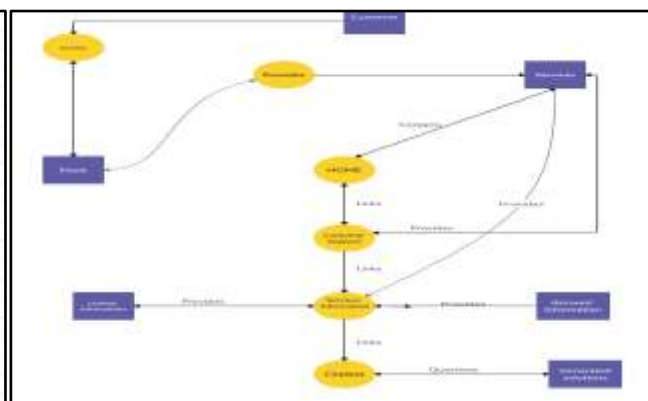Fig:3 DFD level-0 Diagram

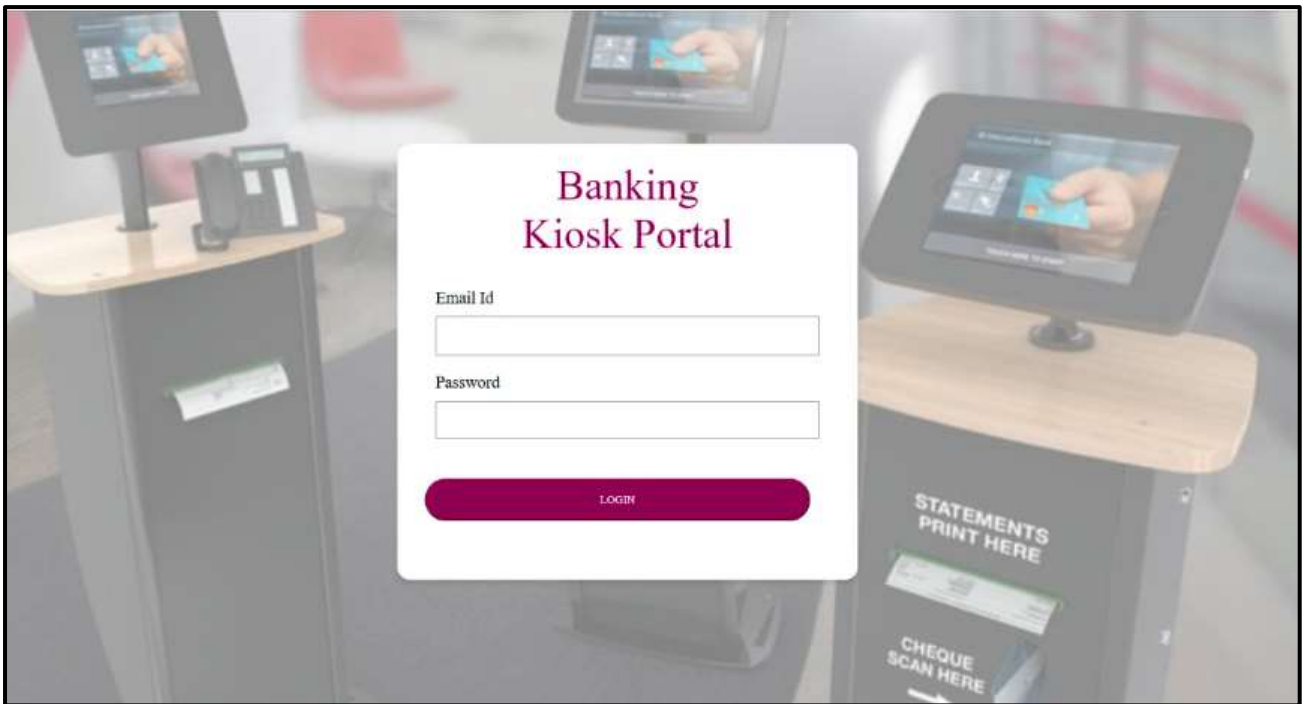Fig:4 DFD level-1 Diagram
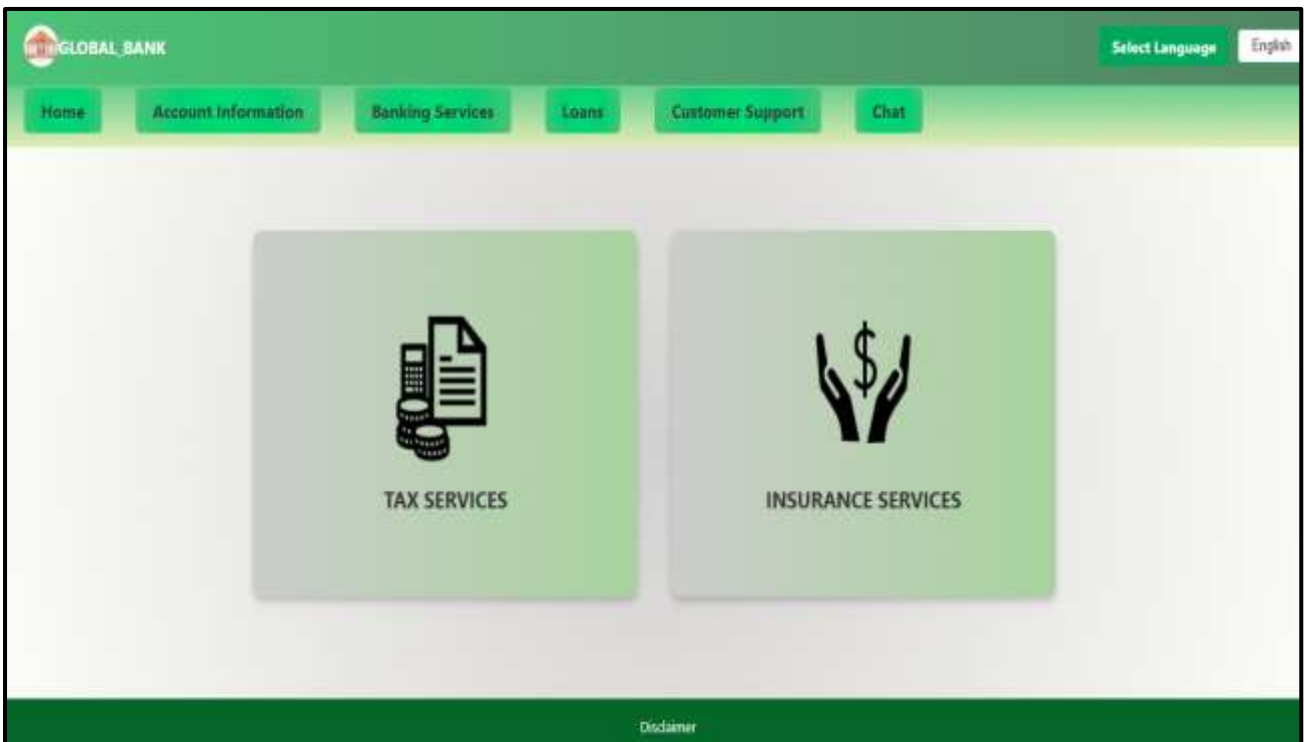
Results:

Fig:1 Login Page

Fig:2 Home Page of Banking Services

Fig:3 Home Page of Banking SE with Multilanguage Support

Fig:4 Banking Services inner page Locker Service with Multilanguage Support and read aloud option.

Conclusion:

The development of the kiosk application represents a significant step towards modernizing banking services. By offering a user-friendly interface and essential information, the application not only enhances customer convenience but also reduces the workload on in-branch staff. Future work may involve expanding the application's capabilities to include transaction processing and further integration with banking systems.

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