**Names: klinsman kengne**

**ID:24042**

Web Technology Final Project Guideline

**Title: E-COMMERCE System Application**

**Introduction**

The E-Commerce System Application is designed to facilitate the buying and selling of grocery products online. It serves as a platform for users to explore, select, and purchase various grocery items from different categories.

**Project Requirements for E-Commerce System Application**

**Purpose:** The E-Commerce System Application aims to establish an online platform for purchasing grocery products. The primary objective is to create a user-friendly and secure environment that enables users to browse, select, and buy groceries conveniently. The project seeks to enhance the traditional grocery shopping experience by leveraging web technologies to provide a seamless and efficient online solution.

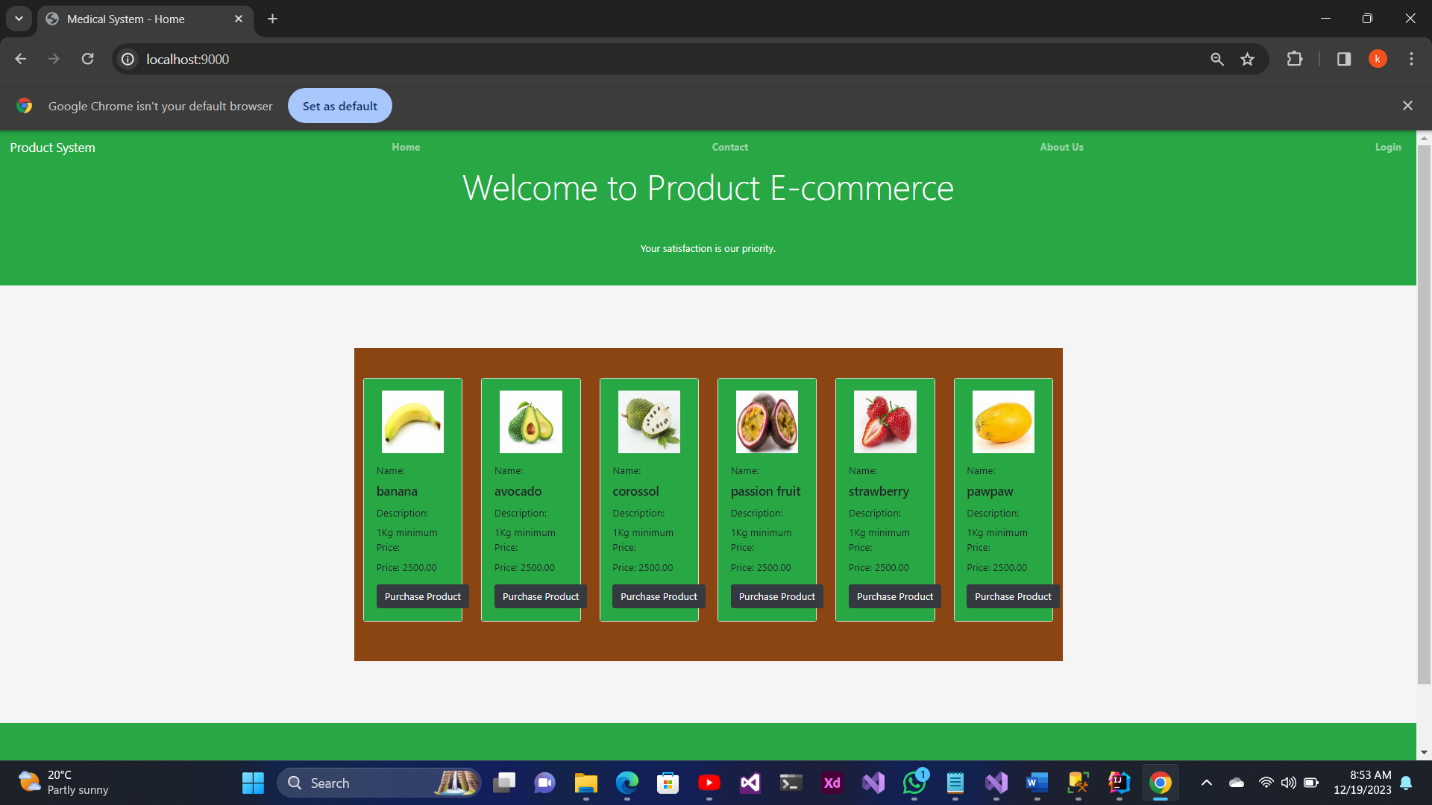
**Expected Outcomes:**

1. **User Account Management:** Users can sign up, log in securely, and experience personalized shopping through role-based dashboards.
2. **Admin Operations:** Administrators have functionalities to manage users, products, orders, and product categories, ensuring efficient control and organization.
3. **Password and Email Validation:** Robust validation mechanisms during registration enhance security and prevent input errors.
4. **Real-Time Email Notifications:** Users receive timely email notifications for essential activities such as order confirmations, providing transparency and keeping them informed.
5. **Enhanced User Experience:** The project focuses on creating an intuitive and visually appealing interface, making online grocery shopping enjoyable and accessible.
6. **Utilization of Latest Web Technologies:** Leveraging Java, HTML, CSS, JavaScript, Spring Boot, and MySQL ensures a modern, responsive, and scalable e-commerce system.
7. **Database Entities for Seamless Operations:** Well-designed database entities manage critical aspects like user data, product information, and order details, ensuring smooth and reliable system operations.
8. **Accessible Open-Source Solution:** Hosted on GitHub, the project serves as an open-source solution, encouraging collaboration, transparency, and easy access for developers and contributors.

**Constraints and Limitations:**

1. **Security Concerns:** Ensure robust security measures to protect user data, transactions, and sensitive information.
2. **Compatibility:** The application should be compatible with various devices and browsers to ensure a broad user base.
3. **Scalability:** Design the system to handle a growing number of users, products, and transactions to accommodate potential future expansion.
4. **Regulatory Compliance:** Adhere to relevant regulations and standards, especially concerning user data and online transactions.
5. **Performance Optimization:** Implement strategies to optimize the application's performance, minimizing load times and ensuring a smooth user experience.
6. **Documentation:** Comprehensive documentation is essential for developers, users, and administrators to understand the system's functionalities, setup, and maintenance.

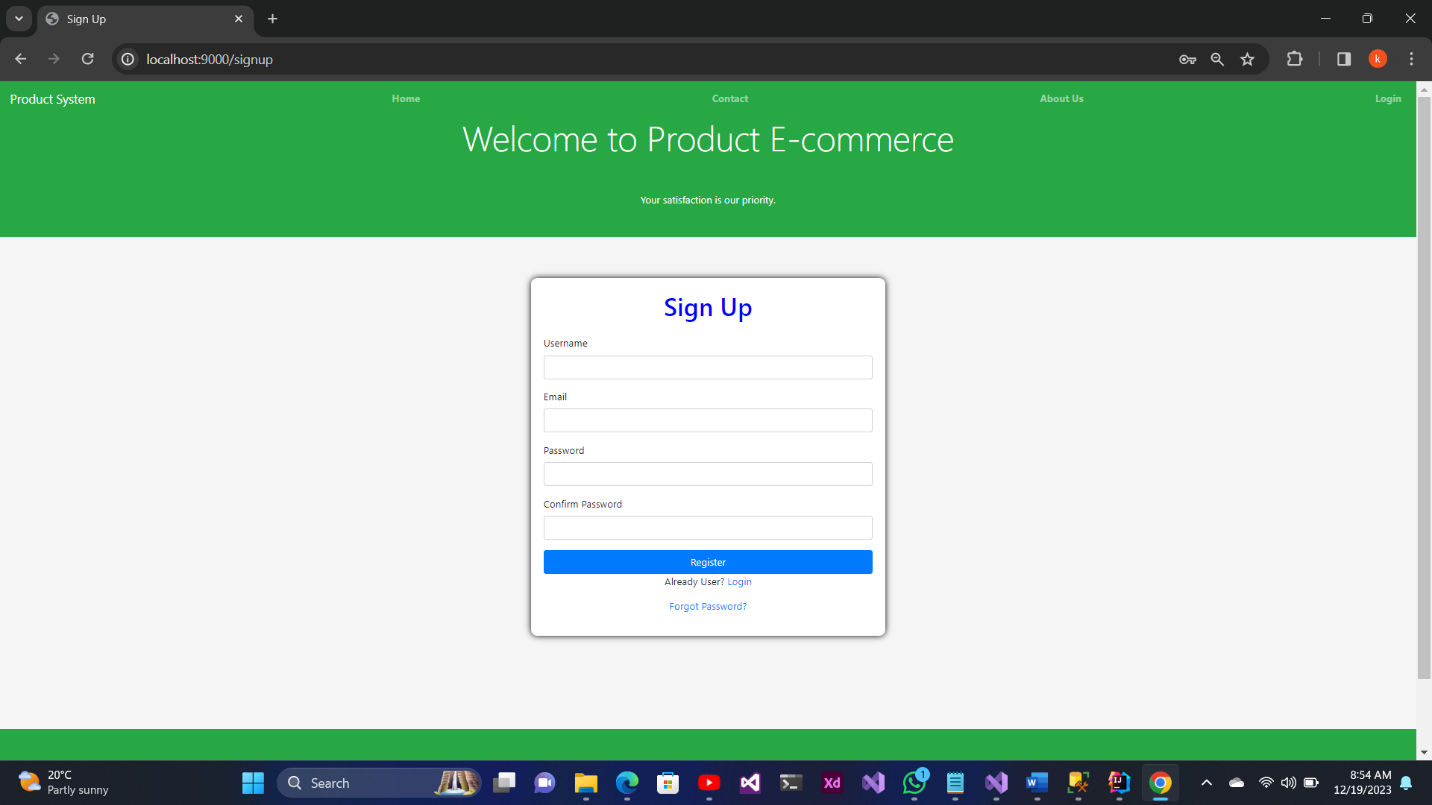
The successful completion of this project will result in a fully functional and secure e-commerce platform for grocery products, providing a valuable and efficient service to users.



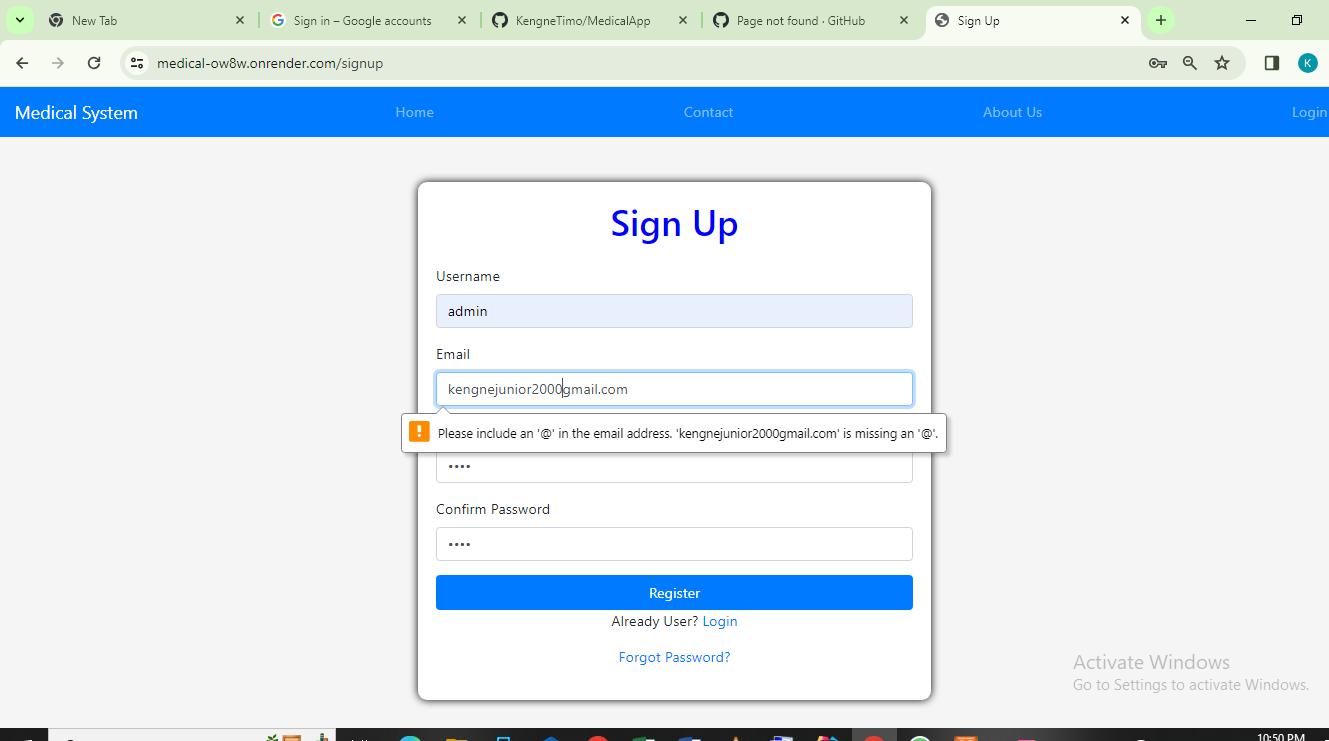
**Project requirement**

1)User Account Management:

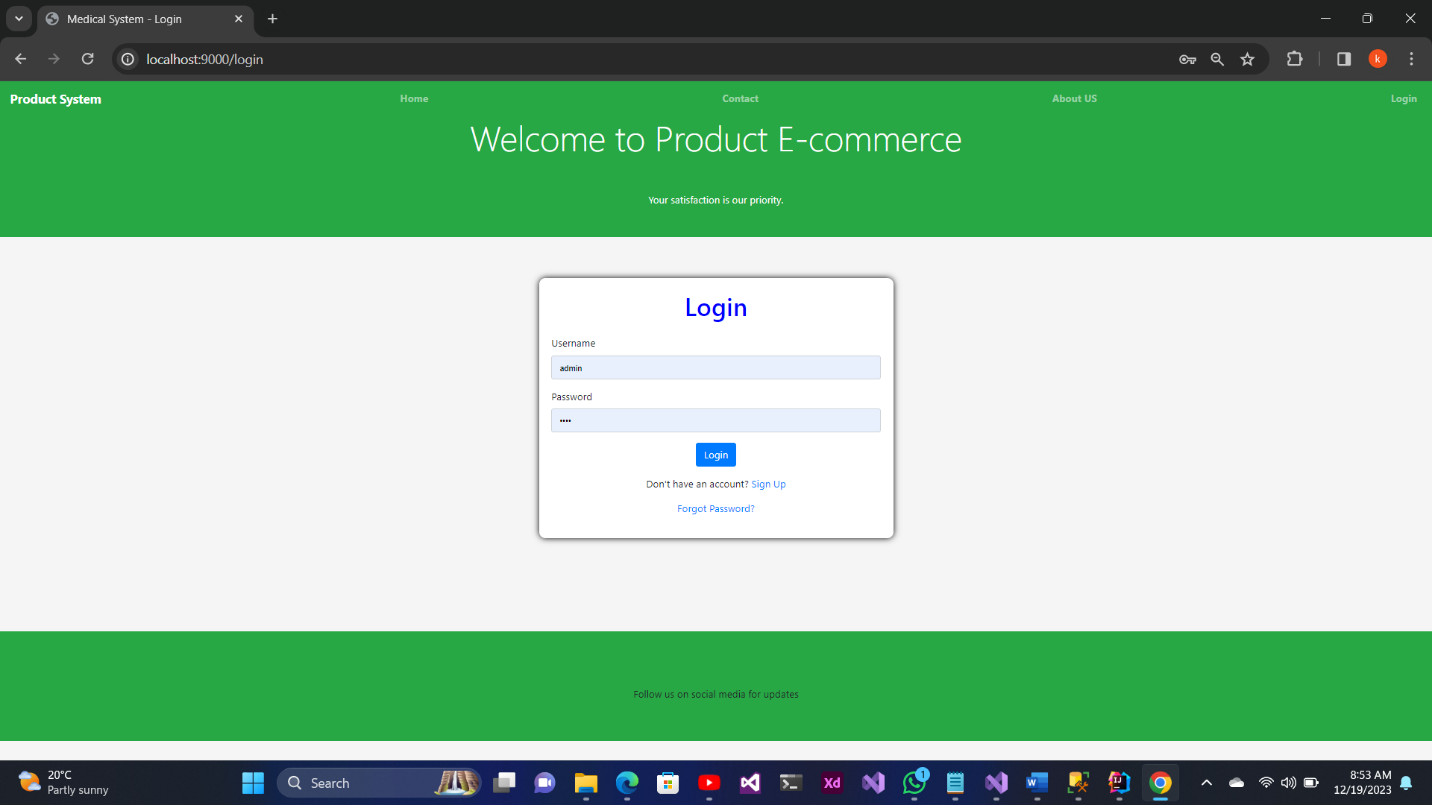
a)Users must sign up to use the system.

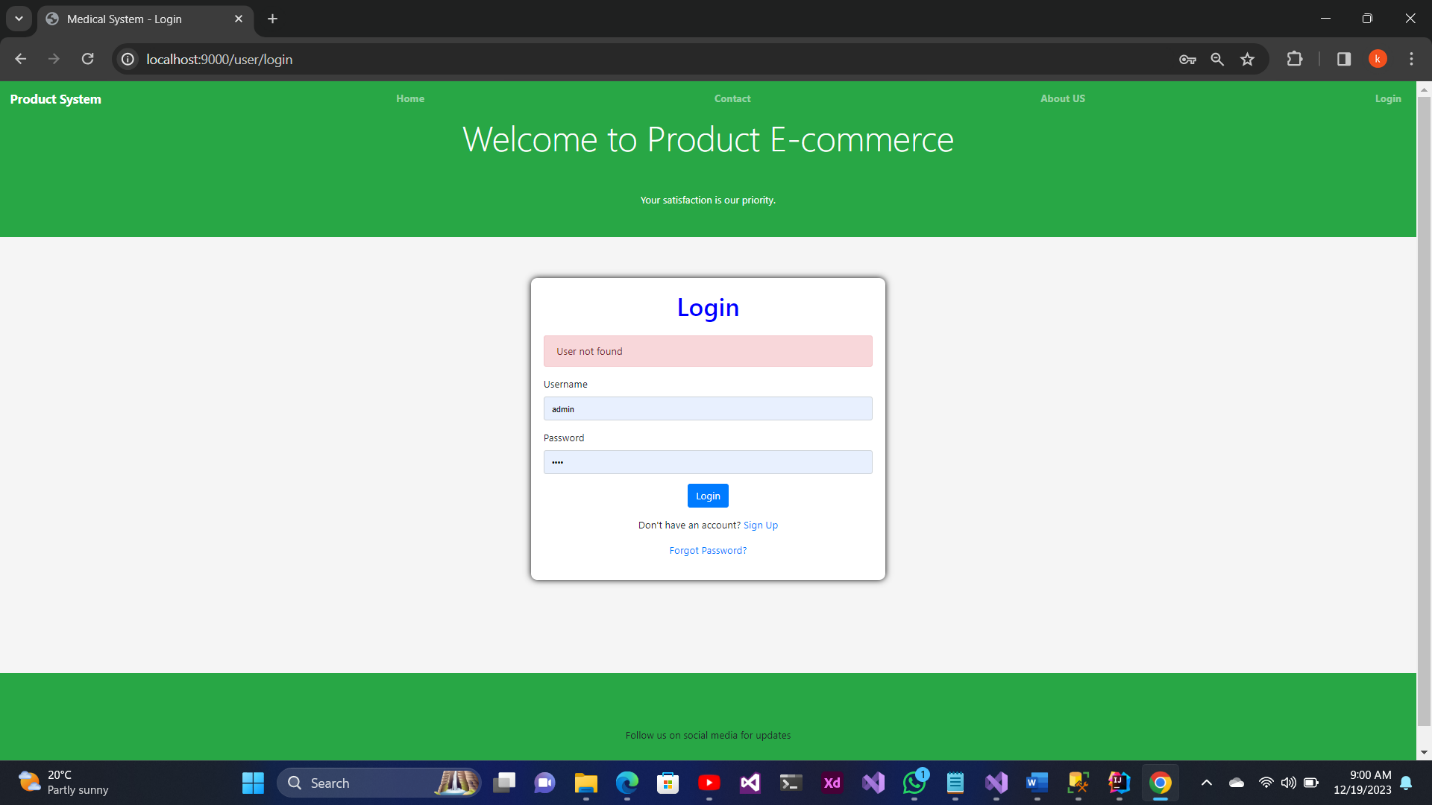


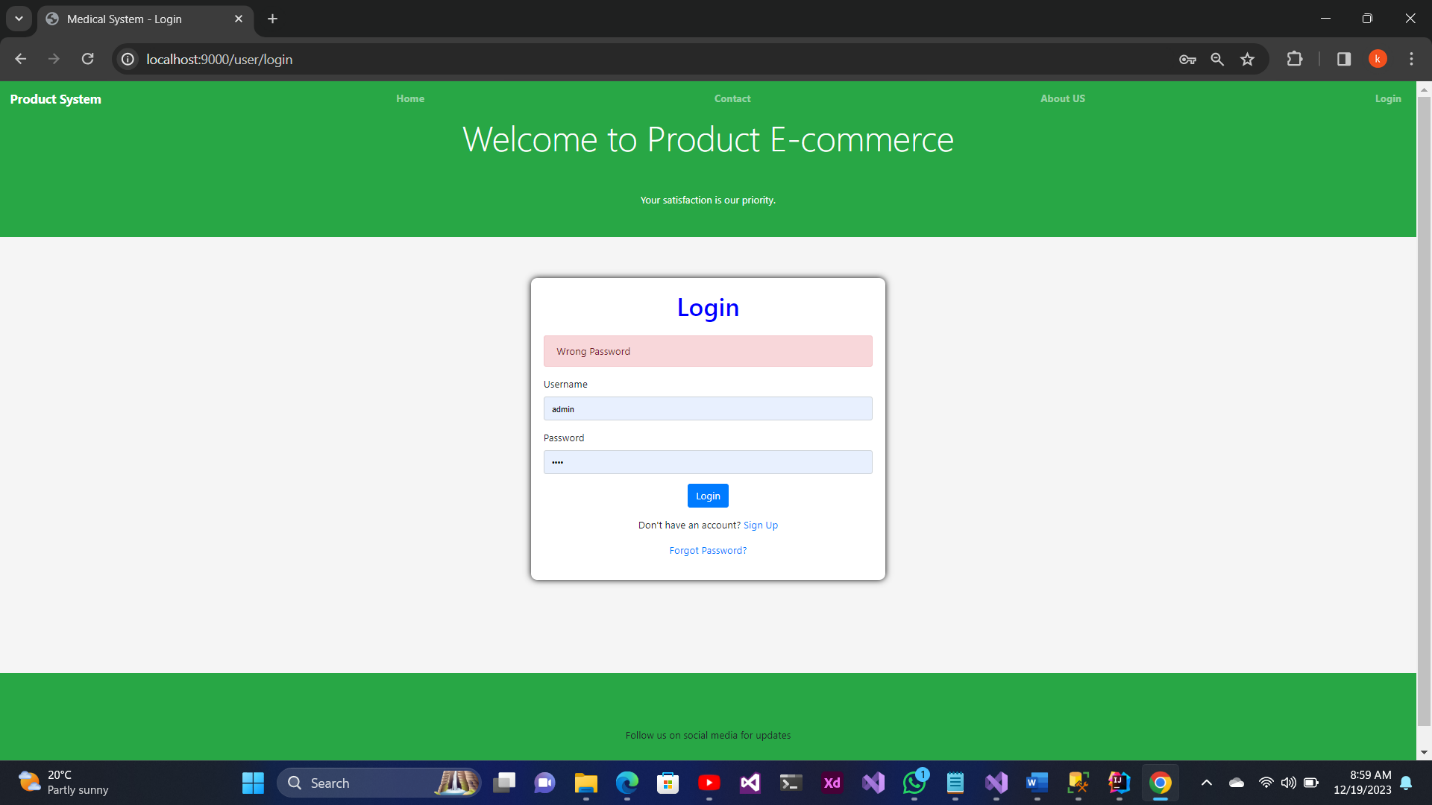
* When signing up password is validated that it and its confirmation must match otherwise the error message is raised showing a one what should be done.



* When logging in to the system also inputs are validated and authorized





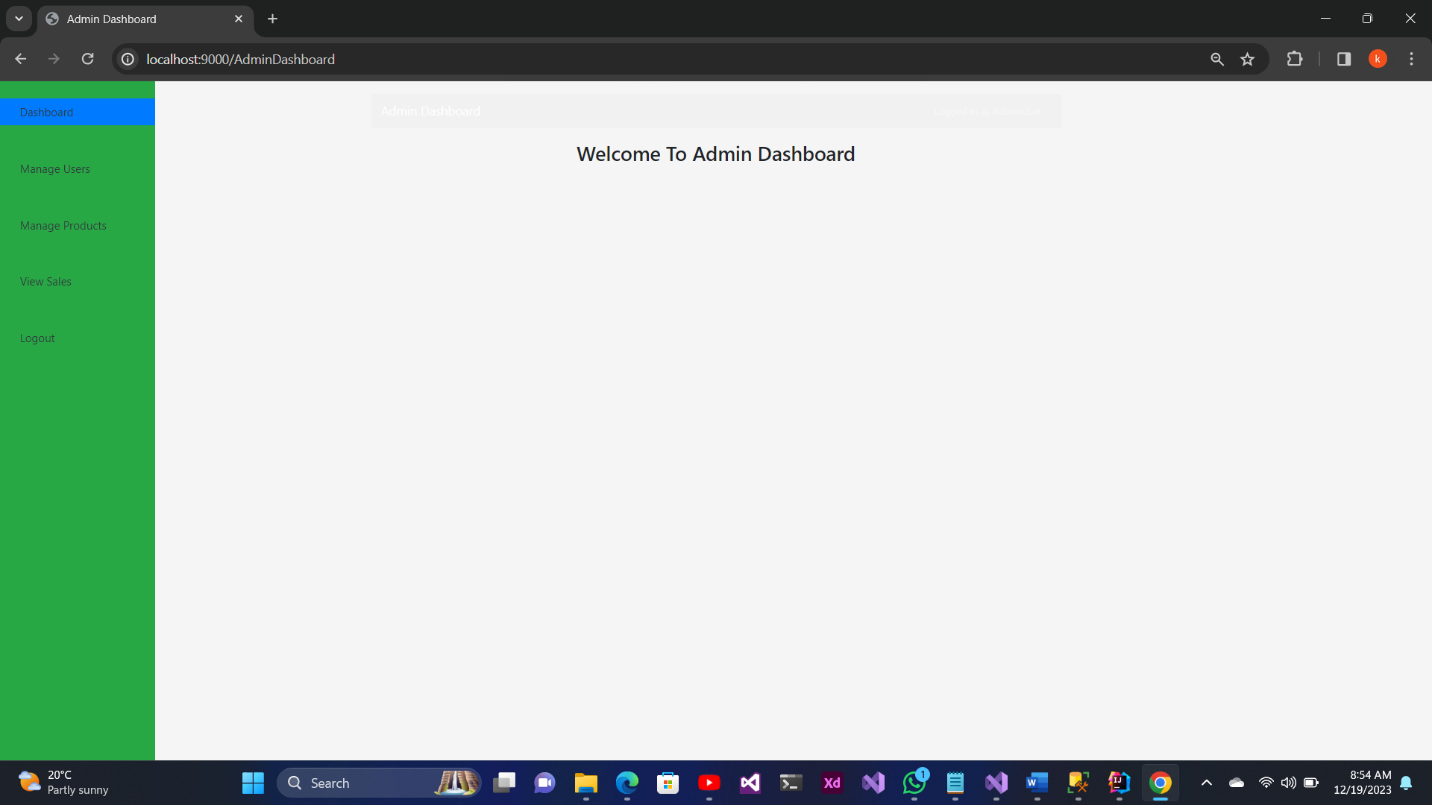


* When a user has signed in and after logging in the system redirect them to the dashboard according to role.
* Email Notifications:

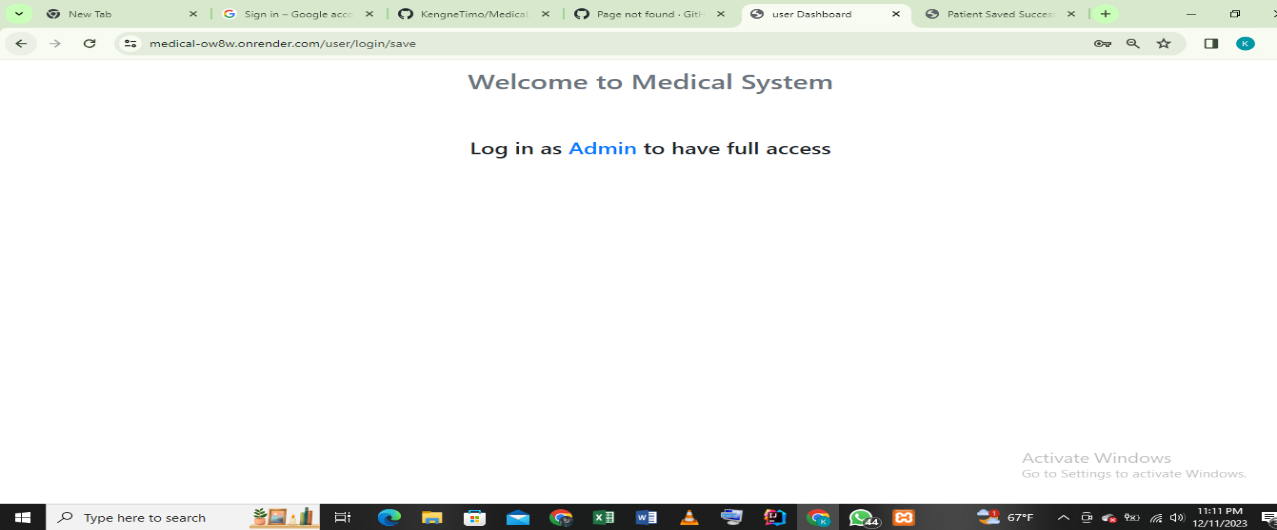
Users receive email notifications after every significant activity, such as order placement, order confirmation, etc.

2)Role-Based Dashboard:

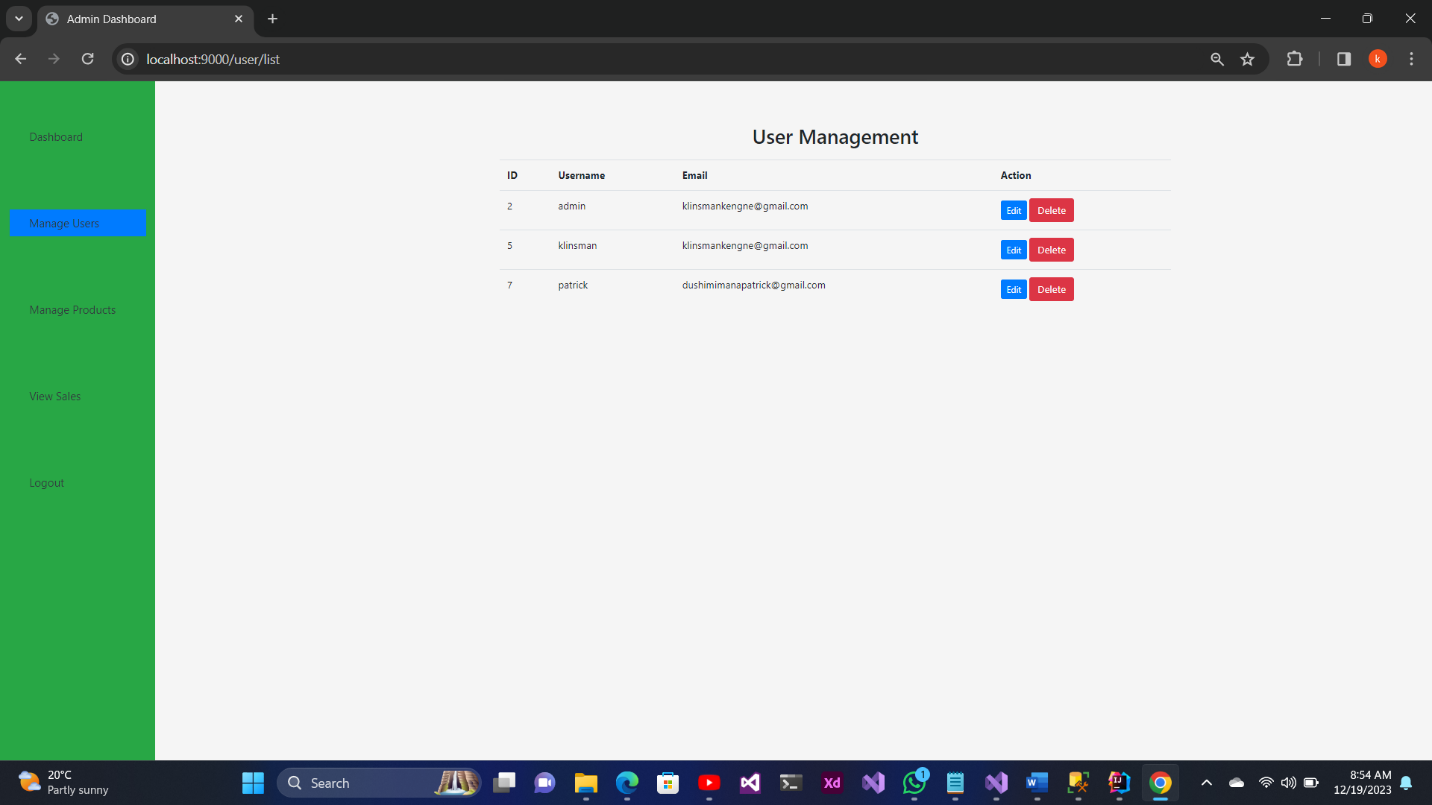
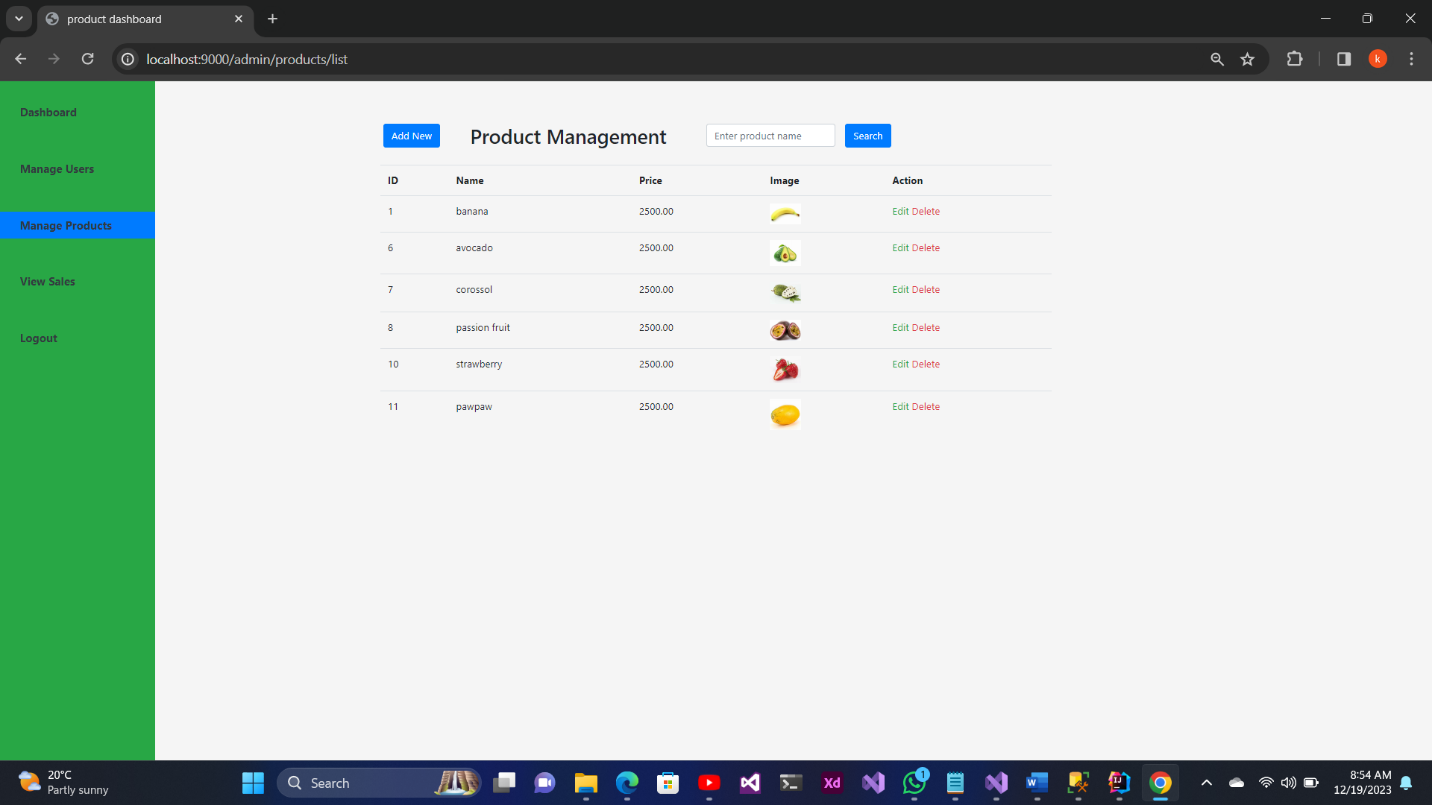
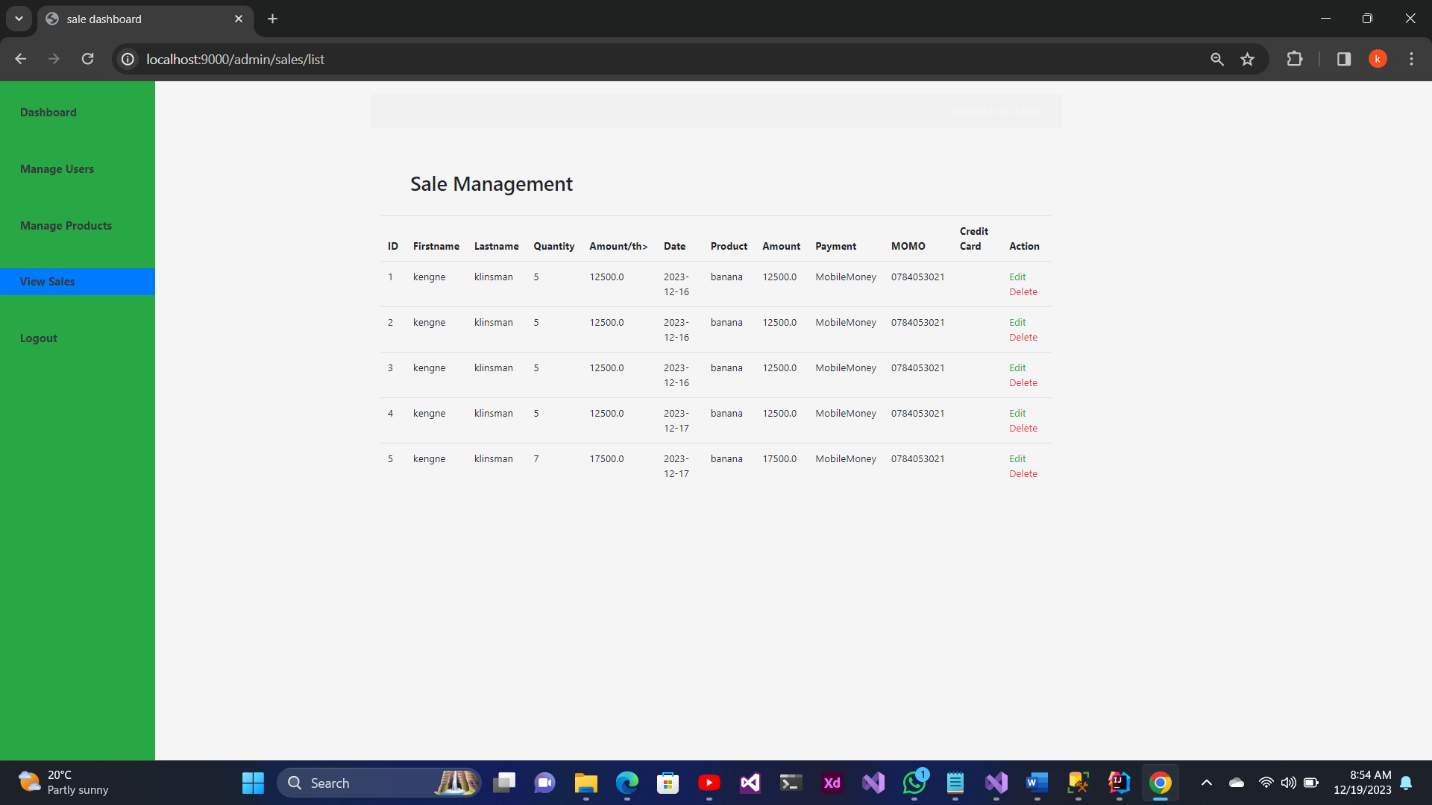
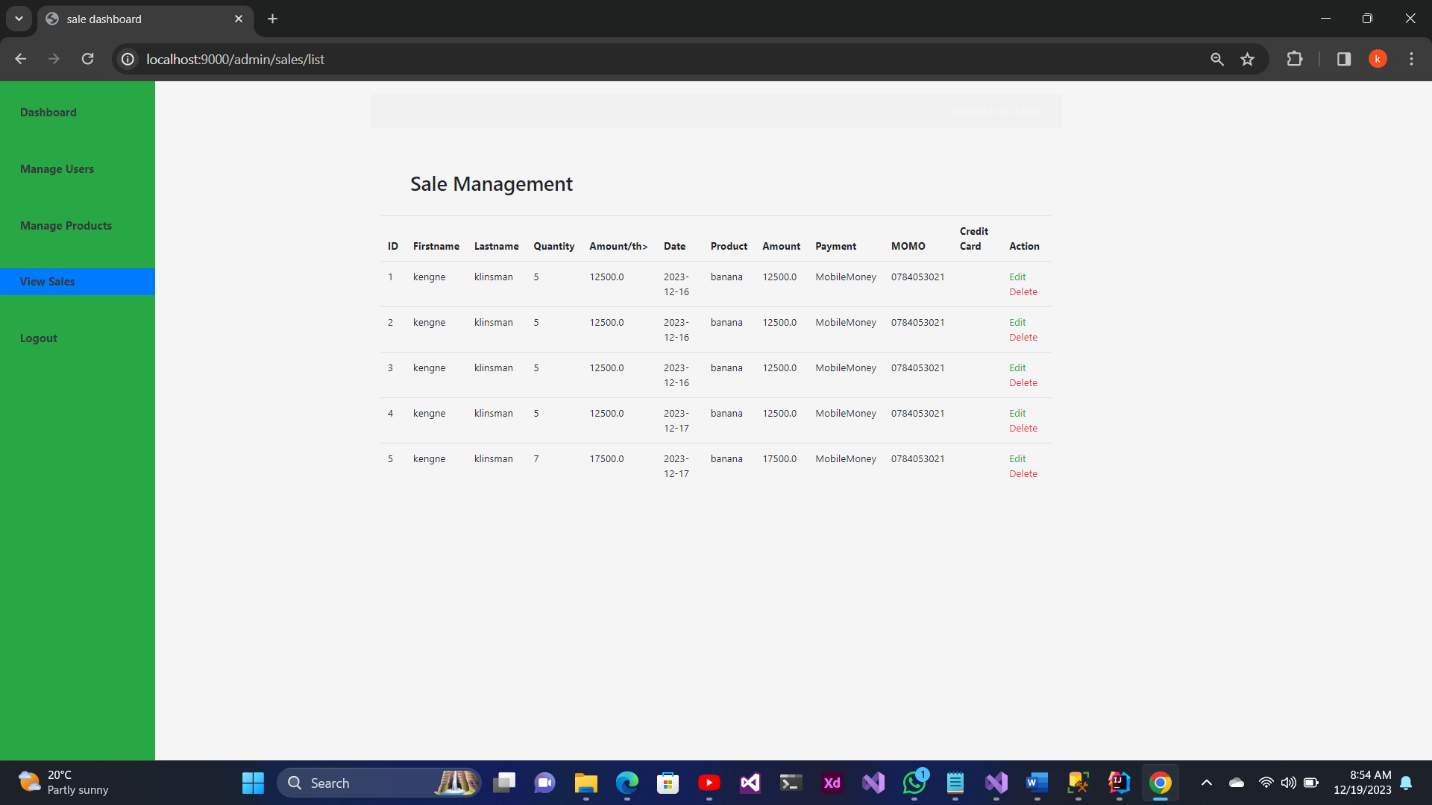
* After logging in, the system redirects users to a dashboard based on their role.
* If logged in as an "admin," redirect to the admin dashboard.



* If logged in with a non-admin username, redirect to the user dashboard.

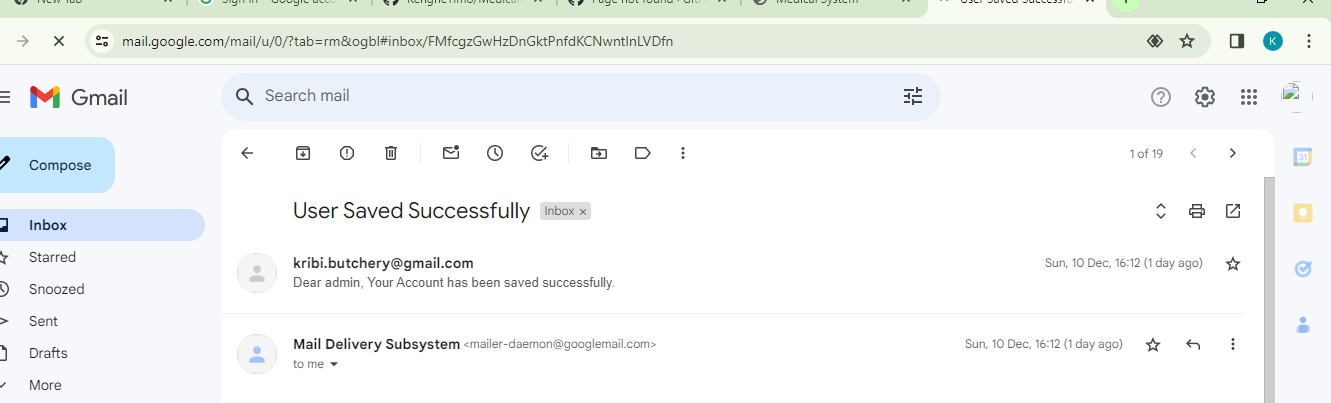


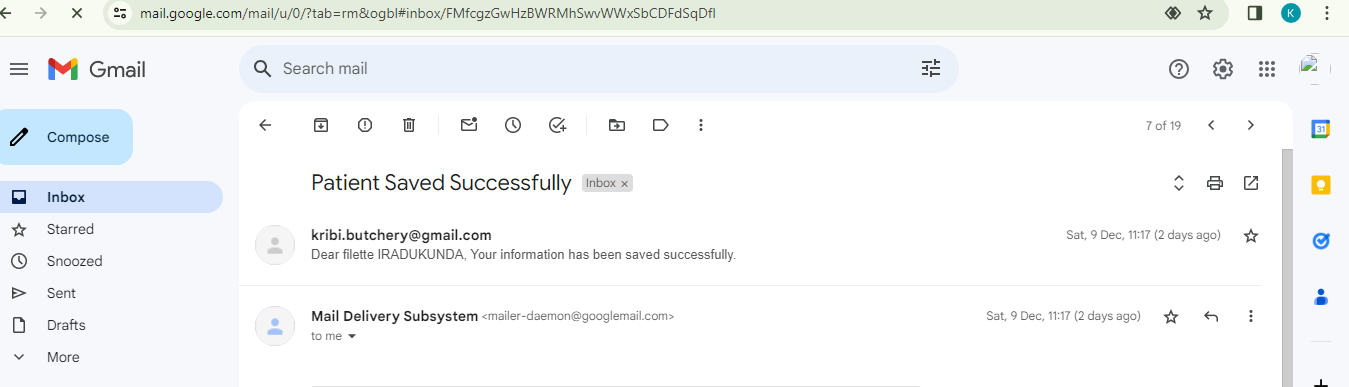
**3)Admin Operations:**

* Admins have additional operations, including:
  + Managing users.
  + 
  + Managing products.
  + 
  + Managing orders.
  + 
  + Managing product categories.
  + 

**4)Email Notifications:**

* Users receive email notifications after every significant activity, such as order placement, order confirmation, etc.





**DATABASE Entities**

**Languages**

* + - Java
    - HTML
    - CSS
    - Java Script
    - Spring boot
    - MySQL Database
    - Maven

**Project Source Codes**

**The project source codes can be found on GitHub: https://github.com/kengneklinsman/Webtech\_Final\_Exam.git**

**Functional System Access**

**THANK YOU!!!!!!**