GROUP PROJECT

OUR TEAM

- MARYAM
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INTRODUCTION

- What is the IMS?

a. A robust WPF-based application integrated with SQL Server.
b. Simplifies inventory, order, and user management.

PROBLEM STATEMENT

- Why was this project developed?

  - Inefficiencies in manual inventory tracking.
  - Challenges in managing orders and user roles.
  - Lack of real-time insights and reporting.

OBJECTIVES

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- Centralized inventory and order management.
- Role-based secure user management.
- Real-time dashboards and actionable insights.
- Scalable and maintainable architecture.

FEATURES

- Core Features:
  - Inventory tracking and updates.
  - Purchase and sales order management.
  - User role-based authentication.
  - Data-driven reports and audit logs.

TECHNOLOGY STACK

- Technologies Used:
  - Frontend: WPF (Windows Presentation Foundation).
  - Backend: C#.NET for logic.
  - Database: SQL Server for robust data management.
  - Development Tools: Visual Studio.

DATABASE DESIGN

- Overview of Tables:
  - Products: Tracks inventory and stock.
  - Orders: Manages purchases and sales.
  - Users: Stores roles and credentials.
  - Audit Logs: Tracks user activity.

DATABASE TABLES EXPLAINED

Products Table:

Columns: ProductID, Name, Quantity, Price, Category.
Purpose: Tracks inventory items and stock levels.

Orders Table:

Columns: OrderID, ProductID, Quantity, OrderDate, Status.
Purpose: Manages sales and purchase orders.

Users Table:

Columns: UserID, Username, Password, Role.
Purpose: Manages system access through role-based security.

Audit Logs Table:

Columns: LogID, Action, UserID, Timestamp.
Purpose: Records all user actions for accountability.

USER INTERFACE

- Main UI Components:
  - Welcome Page with Login/Signup options.
  - Dashboard for real-time inventory insights.
  - Modules for managing inventory, orders, and reports.

SYSTEM ARCHITECTURE

- Overview:
- Modular WPF design connected to SQL Server.
- CRUD operations for real-time updates.
- Secure role-based access control.
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DEVELOPMENT PROGRESS

- Database schema created and tested.
- UI design for Login, Dashboard, and Main Menu.
- Integration of SQL Server for CRUD operations.
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FUTURE ENHANCEMENTS

- Planned Features:
- Advanced analytics and reporting dashboards.
- Notifications for low stock or order updates.
- Multi-user support with real-time collaboration.
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CONCLUSION

- The IMS is a scalable and secure solution for managing inventory and orders.
- Future upgrades will improve user experience and functionality.
- Ready for deployment and further customization.
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QNA SESSION

THANK YOU