

USMAN RASHEED

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SKILLS

C++ | C# | Assembly Language | MY SQL | Visual Studio | SQL Server Management Studio | ASP.NET | ADO.NET | ERD Designing | Class Diagrams | UseCase Designing

PROJECTS

2048 Game

- Developed a text-based 2048 game in C++.
- Implemented core game mechanics, including tile movement, merging, and scoring.
- Designed a console-based interface for user interaction using keyboard inputs.
- Utilized arrays and pointers for dynamic grid management

Hotel and Restaurant Management System

- Developed a comprehensive Hotel and Restaurant Management System using C++ and Object-Oriented Programming (OOP) principles to streamline operations in the hospitality industry.
- Implemented core classes such as Hotel, Restaurant, Room, Customer, Reservation, and Order to encapsulate and manage various aspects of hotel and restaurant operations.
- Designed and utilized inheritance to create specialized classes, enhancing code reusability and maintainability (e.g., Room and Suite classes inheriting from a common Room base class).
- Applied encapsulation to secure and manage data, using private and protected access specifiers to control access to critical system information.
- Leveraged polymorphism to enable flexible interactions with various system components, such as processing different types of reservations and orders through a unified interface.
- Developed user-friendly interfaces for both hotel and restaurant management, allowing for the addition, modification, and deletion of bookings, orders, and customer profiles.
- Integrated exception handling to manage and respond to runtime errors gracefully, ensuring system stability and reliability.
- Utilized file handling for persistent data storage, enabling data to be saved and retrieved efficiently across system sessions.
- Tested and debugged the system to ensure robustness and accuracy, incorporating user feedback to refine functionalities and improve overall usability

Contact book Management System

- Developed a Contact Book Management System using assembly language to manage and organize contact information efficiently.
- Designed and implemented core functionalities including adding, searching, updating, and deleting contact entries with minimal system resources.
- Utilized low-level assembly instructions to perform operations such as memory management, data storage, and retrieval, demonstrating a deep understanding of hardware-software interactions.
- Conducted thorough testing and debugging to ensure accuracy and reliability of the system, addressing issues related to data corruption and system crashes.

Code Crust Pizza Management System

- Developed a Code Crust Pizza Management System utilizing a Database Management System (DBMS) to streamline pizza ordering, inventory management, and customer service processes.
- Designed and implemented a relational database schema with tables for Customers, Orders, Pizzas, Ingredients, and Staff, ensuring efficient data organization and retrieval.
- Created and optimized SQL queries for various operations including order processing, inventory tracking, customer management, and reporting.
- Implemented stored procedures and triggers to automate routine tasks such as updating inventory levels, calculating order totals, and managing order status changes.
- Developed user-friendly interfaces for order entry, customer management, and inventory control, leveraging DBMS capabilities to facilitate easy data manipulation and access.
- Conducted performance tuning and optimization of database queries and indices to improve system responsiveness and efficiency.
- Created a responsive web-based user interface using Visual Studio's drag-and-drop features, allowing users to interact with the system for ordering, inventory management, and reporting.
- Developed backend logic in C# to manage business rules, process orders, and handle inventory updates, integrating seamlessly with the SQL Server database.
- Utilized ADO.NET or Entity Framework to facilitate data access and manipulation between the C# application and the SQL Server database.
- Conducted testing and debugging to refine the application, ensuring functionality across various scenarios and devices.

EDUCATION

Bachelors of Science, Computer Science

IST University, KICSIT Campus Kahuta

2021 - Ongoing

Rawalpindi, Pakistan