Database Systems Laboratory
Project Idea

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Title: Cafe Menu & Order Tracker with Ratings

Description: The Cafe Menu & Order Tracker with Ratings is a web-based database project that allows customers to view a café's menu, place orders, and rate items. Additionally, an Admin Panel is included to manage the database efficiently. The system demonstrates SQL queries, CRUD operations, relational modeling, and database integrity with five interconnected tables.

Project Details: The Cafe Menu & Order Tracker with Ratings is designed to highlight the core features of a database-driven application:

- Customers can browse the menu, place orders, and rate menu items.
- The Admin Panel allows café staff to manage customers, menu items, orders, and feedback effectively.
- The project demonstrates relational database integrity through primary keys, foreign keys, and many-to-many mappings (Orders ↔ Menu, Customers ↔ Ratings).
- CRUD operations are showcased both from the customer side (placing orders, giving ratings) and the admin side (managing data in the system).

This ensures the project is both minimal and practical for academic and real-world contexts.

Database Schema:

Customers (<u>cust_id</u>, name, contact, email)
Menu (<u>item_id</u>, item_name, category, price)
Orders (<u>order_id</u>, cust_id, order_date, total_amount)
Order_Items (order_id, item_id, quantity)
Ratings (<u>rating_id,</u> cust_id, item_id, rating, comment)

Admin Panel Functionalities: The Admin Page will include options to manage all database tables through CRUD operations:

1. Customer Management
   - View all registered customers
   - Add new customers
   - Update customer info
   - Delete customers
2. Menu Management
   - Add new menu items
   - Update items
   - Remove items
3. Order Management
   - View all orders
   - Track details and amounts
   - Cancel/remove invalid orders
4. Ratings Management
   - View customer feedback
   - Delete inappropriate ratings
5. Database Integrity Tools
   - Ensure valid foreign key references
   - Manage deletions with CASCADE/SET NULL
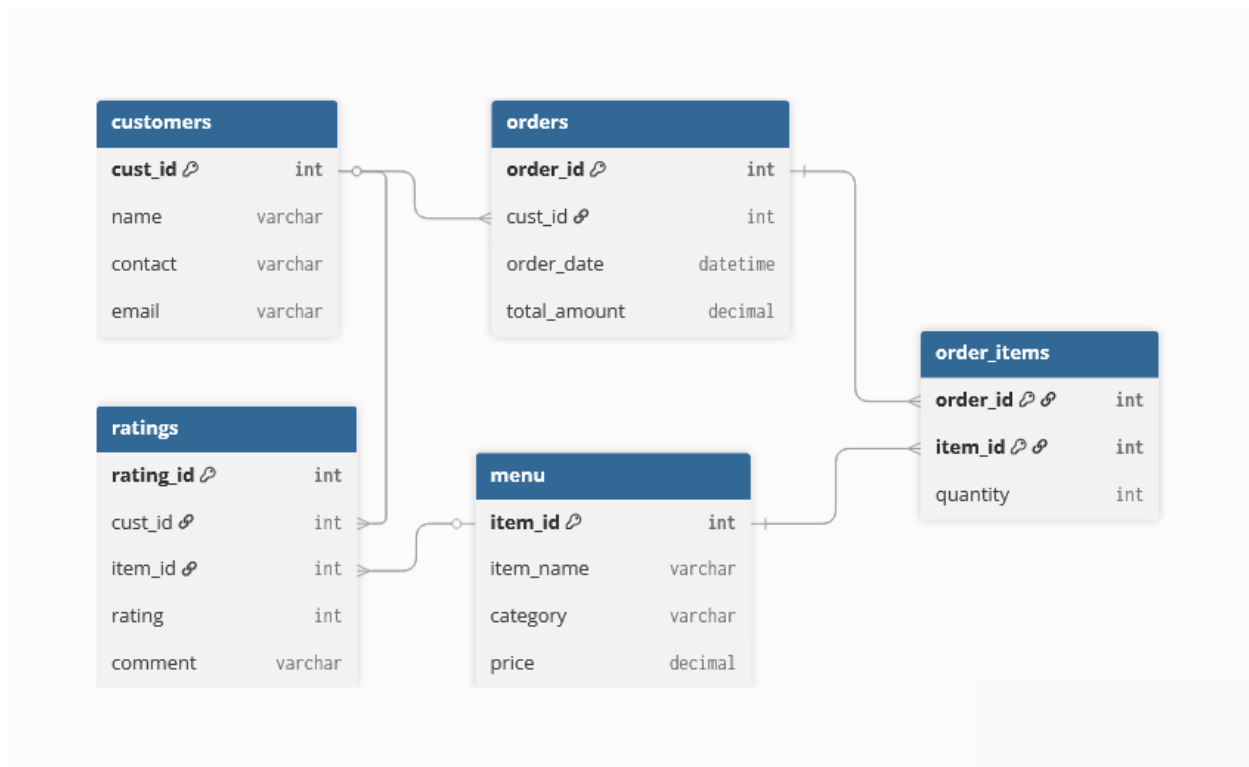
Database Schema Diagram:
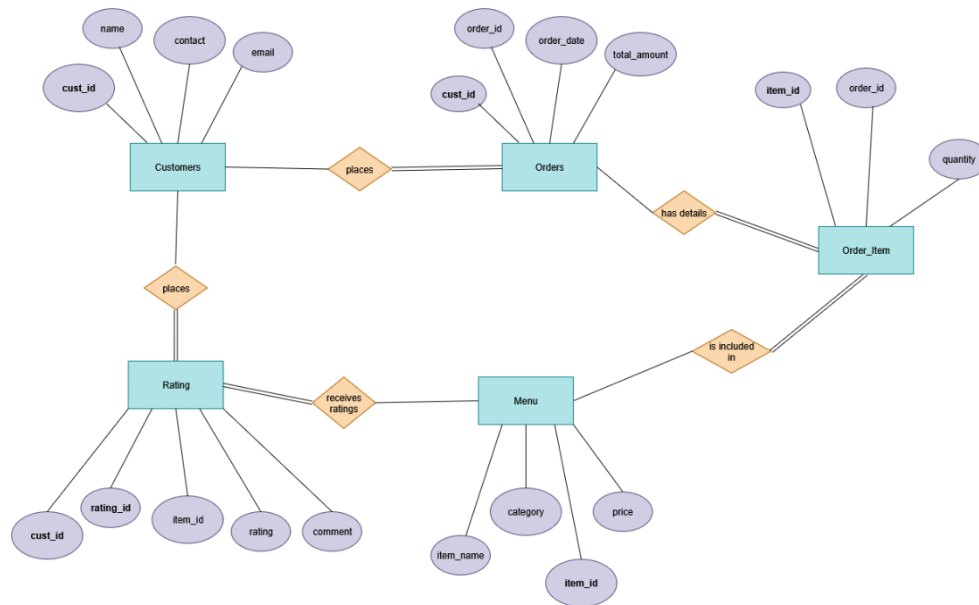

Fig-1: Schema Diagram

ER Diagram:

Fig-2: ER Daigram

Conclusion: The addition of an Admin Page makes this project more realistic and practical. It ensures that both customer-facing functionality (menu browsing, ordering, and ratings) and backend management (admin control over data) are covered. This approach provides a complete demonstration of database concepts, CRUD operations, referential integrity, and web integration.