# MILESTONE- 1

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#### Course: CS-631 Database Management System Design

## High-Level Design:

1. **User Interface:** A User will interact with a user-friendly web interface to browse restaurants, view menus, and place or view orders.
2. **Restaurant Interface:** Restaurant owners access an interface to manage their menus and view orders. It allows owners to easily update menu items, adjust price or availability, and track orders.
3. **Order Management:** A User has access to basic order management functionality to track, modify, or view orders.

1. **User Authentication and Authorization:** Implement a role-based user authentication to ensure secure access to the system. An Authorization mechanism restrict access to specific functionality based on user role.

## Project Proposal:

* **Title:** Online Food Ordering System
* **Objective:**

1. The Objective of the project is to design and implement a scalable, efficient database system to store information related to Users, Restaurants, Menus, Orders, and Delivery.
2. Optimize database queries to ensure fast retrieval of data for improved system performance, enhancing user experience.
3. Integrate the database system with a simplified user interface to facilitate easy data entry and retrieval, enhancing usability and accessibility.

## Schema Design:

###### Entities:

1. Users:
   1. UserID (Primary Key)
   2. Username
   3. Password
   4. Email
   5. Role
2. Restaurants:
   1. RestaurantID (Primary Key)
   2. Name
   3. Location
   4. Contact Number
   5. OwnerID (Foreign Key referencing Users)
3. Menu:
   1. MenuID (Primary Key)
   2. RestaurantID (Foreign Key referencing Restaurants)
   3. ItemName
   4. Description
   5. Price
   6. Calories
   7. Availability
4. Orders:
   1. OrderID (Primary Key)
   2. CustomerID (Foreign Key referencing Users)
   3. RestaurantID (Foreign Key referencing Restaurants)
   4. Status
   5. TotalAmount
   6. OrderTime
5. Delivery:
   1. DeliveryID (Primary Key)
   2. OrderID (Foreign Key referencing Orders)
   3. DeliveryPersonnelID (Foreign Key referencing Users)
   4. DeliveryStatus
   5. EstimatedDeliveryTime
   6. ActualDeliveryTime

## Purpose:

* In today’s fast-paced world, customers prefer to convenience of ordering food online rather than visiting restaurants physically. An Online food ordering system allows customer to order food from the comfort of their home or workplace. It also offers the customer a wide variety of cuisines and restaurants to choose something that suits their taste preferences.
* For restaurant owners, implementing an online food ordering system can streamline operations by automating order processing, enabling them to manage orders efficiently, and reduce error in order taking. This efficiency improvement can lead to cost savings, and increase the customer base and profitability for participating restaurants.
* Online food ordering system provides transparency in the ordering process, allowing customers to track their order in real-time and know the status of their delivery.
* The Scalability of the system can easily accommodate a larger user base and additional restaurants without significant changes to the core functionalities.