**Analysis and Modeling-1**

**Food delivery Aggregate App**

Design the data model for a food delivery aggregate application.

Users will be identified by id and having properties: Display Name, Role, Location, Email and password. Restaurant will be identified by Id, Name, location, Minimum Order Value.

User with Owner role can own zero or more restaurants.

Menu Item is associated with a restaurant and having properties like: Id, Name, DishType (Veg/Non-Veg/Jain), price, Value for Unit (Ex: 200) and Units (Ex: Gms/Ml/Mtrs) and Available Quantity (Initially set to 10).

Each order carries the information about the restaurant details, customer details along with list of items ordered, Total price and discount applied (default zero).

With above structure, users should able to perform below actions:

1. App User should able to log-in into the system.
2. Admin should able to add new restaurant to the system.
3. Each restaurant will have its own menu.
4. Restaurant owner should able to add menu items to his restaurant.
5. **User can search for the restaurant based on the location.**
6. **User should filter the items based on his food preferences/dish.**
7. **User should able to place order for given items for a given restaurant.**
8. **Upon delivery, the status of the order must be set to ‘DELIVERD’.**

Analyze the above requirements and design and build the database and application

Entities:

1. User
2. Restaurant
3. MenuItem
4. Order

Attributes:

1. User:
   1. UId [Candidate key – Primary key]
   2. Name [Single Valued]
   3. Role [Single Value]
   4. Email [Single Valued]
   5. Password [Single Valued]
   6. Location [Single Valued]
2. Restaurant:
   1. RId [Primary key]
   2. Name [Single Valued]
   3. Location [Single Valued]
   4. MinOrderValue [Single Valued]
   5. Owner [Single Valued]
3. MenuItem
   1. MId [Primary key]
   2. DishName [Single Valued]
   3. UnitPrice [Single Valued]
4. Order
   1. OId [Single Valued]
   2. CustomerInfo [Single Valued]
   3. RestaurantInfo [Single Valued]
   4. ItemsOrdred [Multi Valued]
   5. Total [Derived]
   6. CouponDiscount [Single Valued]
   7. CouponNumber [Single Valued]

**Relationships:**

Restaurant (1) -> Owner (1)

Order (m) -> Menu Item (n)

User (1) -> Order (m)

Restaurant (1) -> Order (M)

Order – MenuItem Relation: M-N [With Attributes]

Entity: OrderLineItem [Intermediate table]

1. LIId
2. OrderId
3. MenuItemId

**Orders Table:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| OID | CustId | RestId | Order Date | Status | CID |
|  |  |  |  |  |  |

**CouponInfo Table:**

Attributes:

CID [Primary key]

CouponNumber [Single Valued]

CouponDiscount [Single Valued]

MenuItem Table:

|  |  |  |
| --- | --- | --- |
| MenuItemId | DishName | Unit Price |