Online Food Ordering Database

Database purpose:

The purpose of the database is to maintain the data for an online food ordering application. It includes functionality of checking out the restaurants and related menu, filtering based on price, cuisine and ratings, ordering. This database will be used by online food ordering application that acts as an interface between the customers and the restaurants.

Business problems addressed:

- Allow the online application administrative staff, application development staff and restaurant administrative staff to generate descriptive reports.
- Provide insight for restaurants to enhance their business (e.g. improve quality of food based on customer reviews, customize the food menu based on customer preferences)
- Provide insight for application development staff to improvise the application.

Business Rules:

- Each customer can place one or multiple orders from many restaurants.
- Each restaurant will have many food items.
- Each order will have one delivery staff assigned.
- Each customer will have option to make payment by cash or by card.
- Each customer will have an option to use promocode if applicable.
- Each customer will have an option to provide ratings/reviews for the restaurant and the food items.

Design Requirements:

- Use Crow's Foot Notation.
- Specify primary key fields in each table by specifying PK beside the fields.
- Draw a line between tables to show the relationships between them. This line should be pointed directly to the fields in each table that are used to form the relationship.
- Specify which table is on the one side and many side of the relationship by placing a crows foot notation next to the field where the line ends.

Design Decisions:

Entity Name	**Why entities are included**	**How entities are related**	
Customer	Customer entity contains the data related to the customer such as CustomerID, Customer's first and last name, Customer's address,	Each Customer is uniquely identified by CustomerID. This entity is connected to LoginDetails via one to one	

	Customer's contact number.	relationship as each Customer has one Login. Customer entity is connected to Cards via one to many relationship as each customer can have one or many Cards. Customer entity is connected to Payment entity via one to many relationship as one Customer can have many payments. Customer entity is connected to Ratings and Reviews entity via one to many relationship as each customer can have multiple Ratings and Reviews.	
LoginDetails	Login Details entity contains the data related to a user's login details such as user name, password and email id.	Each Login is uniquely identified by User Name. This entity is connected to Customer entity via one-to-one relationship as each Customer can have only one Login.	
Ratings And Reviews	Ratings and Review entity contains ratings of restaurants and food items. Customer can review and rate food items and restaurants. This entity also contains the date of the feedback provided by the customer. It is connected to customer via customer Id,	Ratings and Reviews entity is uniquely identified by FeedbackID. This entity is connected to customer via many to one as each customer can give multiple ratings and reviews to restaurants and food items. This entity is	

	connected to restaurant via restaurant id and connected to fooditems via foodID.	connected to Restaurant and Food items via many-to-one relationships.	
Restaurant	Restaurant entity contains all the details about the restaurant like restaurant name, address, city, state, zip code, operating hours of the restaurant.	Restaurant entity is uniquely identified by RestaurantID. This entity is connected to Food Items via one-to-many relationships as each restaurant will have multiple food items. It is also connected to order header via one to many relationship as each reastaurant will have various orders by various customers.	
Food Items	Food Items entity contains all the details of the food items of a particular restaurant like the name of the food item for example “Buffalo chicken pizza”, the price of the food item, quantity of the food item, description of the food items like the ingredients it contains, calories of the food item, and the category that particular food item belongs to like appetizers, Lunch etc.	Food Items entity is uniquely identified by FoodItemID. This entity is connected to Order Details via one to one as each Order detail will have details of a particular food item. Its is also connected to the Ratings and Reviews via one to many as customers can rate the food items multiple times.	
OrderHeader	OrderHeader entity will contain the basic order details like OrderID, CustomerID, RestaurantID, OrderDate,	Each Order is uniquely identified by an OrderID. This entity is connected to OrderDetail entity via one to many	

	OrderAmount, DeliveryID and OrderStatus	relationship, Customer entity via many to one relationship, Restaurant entity via many to one relationship, Delivery entity via one to one relationship and Bills entity via one to one relationship.	
OrderDetail	OrderDetail entity will contain specific details of an order like, OrderID, OrderDetailID, FoodItemID, Quantity, FoodItemAmount and OrderInstructions	Each OrderDetail is uniquely identified by the combination of OrderID and OrderDetailID. This entity is connected to OrderHeader via many to one relationship and FoodItems entity via one to one relationship.	
Billing	This entity contains all the attributes required to calculate bill amount i.e Order Id, tax amount, tip amount, promo code. The amount in TotalAmount column is calculated by adding the order amount from OrderHeader table, tip amount, tax amount and promo code discount if applicable. This entity will generate a total bill associated to each order.	Each bill is uniquely identified by a Bill Id, so this is the primary key for this entity. This entity is connected to order via one-to-one relationship as each order will have one bill. It is further connected to promo code having zero-to-one relationship because only one promo code can be applied to a single bill. It is possible that bill may not have any	

		promo code applied to it. This entity is also connected to payments via one-to-one relationship.	

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