**Peer to Peer Delivery System**

**Description**

The main objective of this project is to create a peer to peer delivery system and design a database on SQL.

**List of Entities**

(1)    Customer

The Customer entity table consists of important information such as Customer ID (Primary key), Customer Name, Phone Number, Email Address, Social Security Number, Card No, CVV, Expiry Date and Residence Address. The Customer table has mandatory one to many relationships with the Order entity table and Payment entity table and has a mandatory one to one relationship with the Customer Feedback entity table.

(2)    Employee

The Employee entity table consists of important information such as Employee ID (Primary key), Employee Name, Phone Number, Email Address, Social Security Number, Residence Address, License Number and Medical Insurance Number. The Employee entity table has a mandatory one to one relationship with the Salary entity table and Vehicle Entity table. The Employee entity table has mandatory one to many relationships with the Order entity table and Product Safety entity table.

Information such as Social Security Number, License Number and Medical Insurance Number is recorded to get a background check for traffic violations/criminal activities.

(3)    Order

The Order entity table consists of vital information such as Order ID (Primary Key), Customer ID (Foreign Key), Employee ID (Foreign Key), Product ID (Foreign Key), Payment ID (Foreign Key), Ordered Date, Time of Order, Time of Delivery, From Address, To Address, Total Distance, Order Amount, Received By (Includes Name and Number of the person receiving the shipment)

The Order entity table has a mandatory one to one relationship with the Payment entity table and the Customer Feedback entity table. The Order entity table has a one to many relationships with Product entity table and Product Safety entity table.

(4)    Payment

The Payment entity table consists of vital information such as Payment ID (Primary Key), Customer Name, Order Total and Customer ID (Foreign Key). The Payment entity table has a mandatory one to one relationship with the Order entity table and Customer entity table.

(5)    Salary

The Salary entity table consists of information such as Employee ID (Foreign Key), Bank Name, Account Number (Primary Key), Account Type, Routing Number, Amount and Number of Orders. The Salary entity table has a mandatory one to one relationship with the Employee entity table.

We record the number of orders to track the work done per Employee and decide commission to be paid on the basis of this to make this an attractive job.

(6)    Product

The Product entity table consists of Product ID (Primary Key), Product Name and Product Category.

The Order entity table has a one to many relationship with the Product entity table.

(7)    Safety Box

The Safety Box entity table consists of important information such as Box ID (Primary Key), Box Size, Employee ID (Foreign Key) and Order ID (Foreign Key). The Employee entity table and the Order entity table has a mandatory one to many relationship with the Safety box entity table.

Our company will be using a smart box system with a dynamic pin code set by the user. This smart box will also have a GPS tracking system. Each employee will be handed a personal box inside which the customer can place n number of products (If it fits)

(8)    Vehicles

The Vehicle entity table consists of vital information such as Registration Number (Primary Key), Insurance Number, Type, Make, Model and Employee ID (Foreign Key). The Vehicle entity table has a one to one relationship with the Employee entity table.

(9)    Customer Feedback

The Customer Feedback table consists of important information such as the Customer ID (Foreign Key) and Order ID (Foreign Key), Company rating and Employee Rating. The Customer Feedback entity table has a mandatory one to one relationship with the Order entity table. The Feedback ID is the Primary Key.

We will record two different ratings, one exclusively for the Company and one for the Employee assigned to that respective order.

**ER Diagram**

