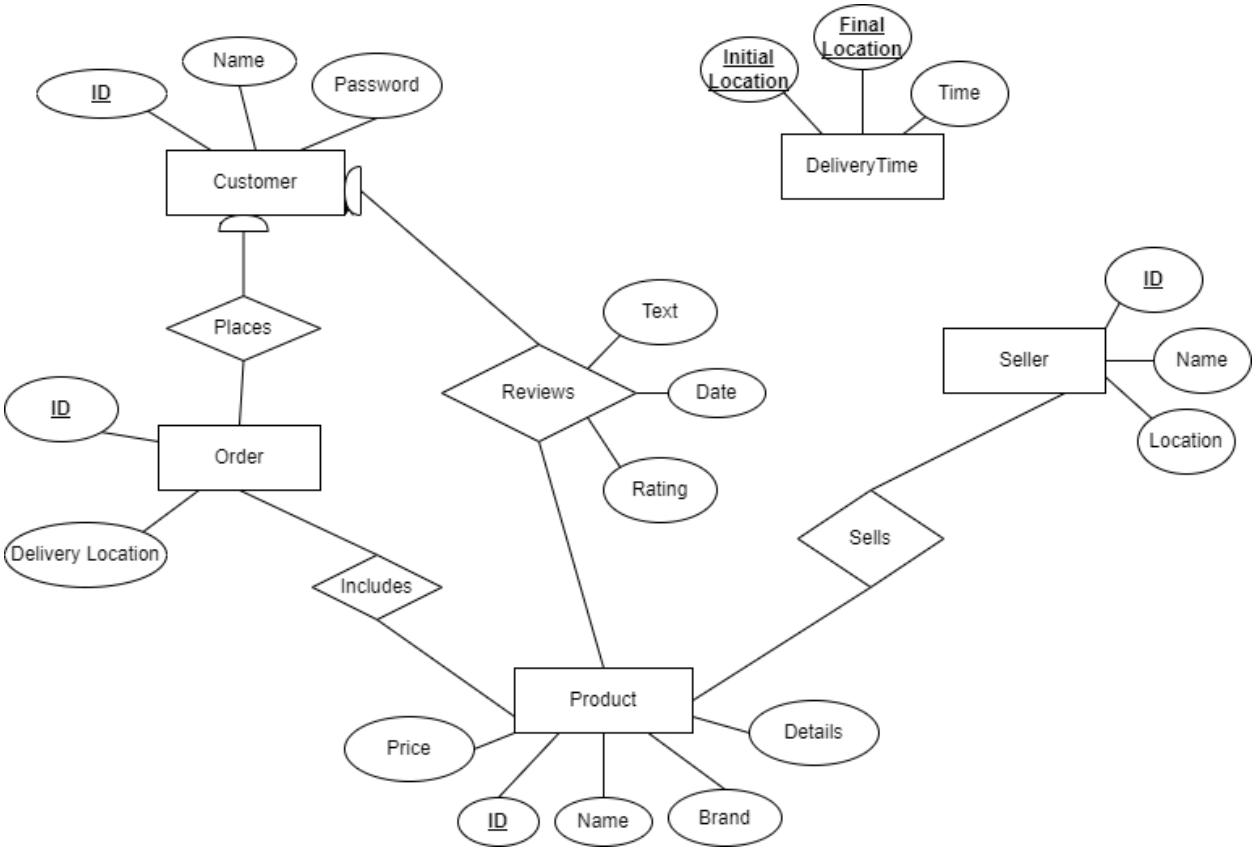
Conceptual and Logical Database Design

The ER Diagram for our database is shown below:



The relational schema for our database is as follows:

1. Customer(ID: INT(PK), Name: VARCHAR(255), Password: VARCHAR(30))
2. Orders(ID: INT(PK), deliveryLocation VARCHAR(100))
3. Product(ID: INT(PK), Name: VARCHAR(255), Brand: VARCHAR(255), Price: INT, Details: VARCHAR(255))
4. Seller(ID: INT(PK), Name: VARCHAR(255), Location: VARCHAR(100))
5. DeliveryTime(iLocation: VARCHAR(100), fLocation: VARCHAR(100), time: INT, PK(iLocation, fLocation))
6. Places(custId: INT(FK to Customer.ID), orderId: INT(FK to Orders.ID), PK(custId, orderId))
7. Includes(orderId: INT(FK to Orders.ID) , productId: INT(FK to Product.ID), PK(orderId, productId))

8. Sells(sellerId: INT(FK to Seller.ID), productId: INT(FK to Product.ID), PK (sellerId, productId))
9. Reviews(custId: INT(FK to Customer.ID), productId: INT(FK to Product.ID), date: DATE, text: VARCHAR(255), rating: INT, PK(custId, productId))

Our core assumptions are the following:

- For each customer, they can only provide one review per product
- Each order should have at one and only one customer placing it
- Each order can include multiple products. The same product can be included in multiple orders
- Each seller can sell multiple products. Each product can be sold by multiple sellers