NORTHEASTERN UNIVERSITY

COLLEGE OF ENGINEERING

DAMG 6210

DATABASE MANAGEMENT AND DATABASE DESIGN (DMDD)

(UNDER PROFESSOR NAVEEN KURAGAYALA)

Project Topic- Order Fulfilment Database Management System

TEAM-5

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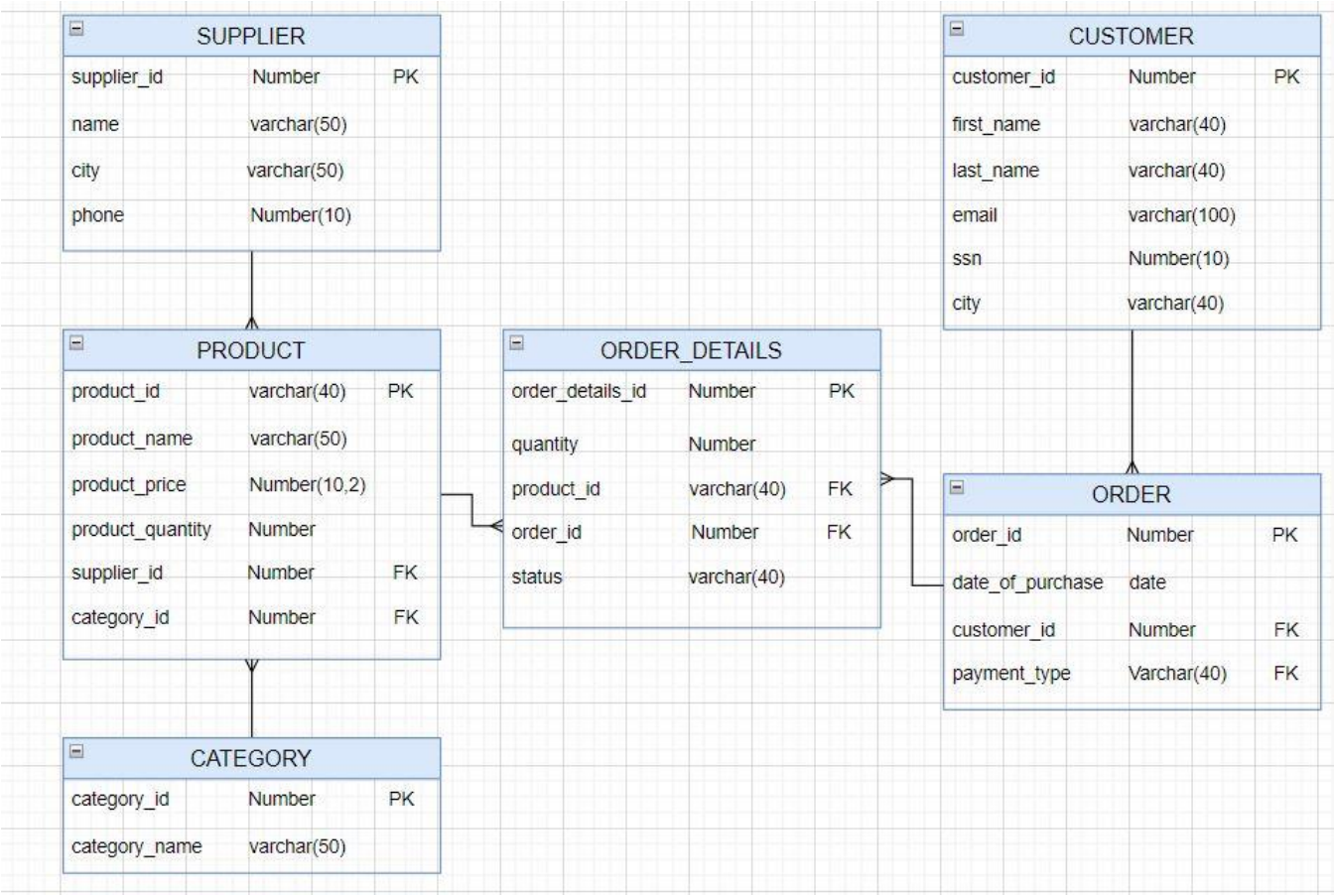
1. Revised ERD (Final Version)



2. Buisness Rules-

The three users for this database system are:

1. Administrators.
2. Customer: End user of the order fulfilment system who places orders.
3. Supplier: External entity supplying products to the order fulfilment system.

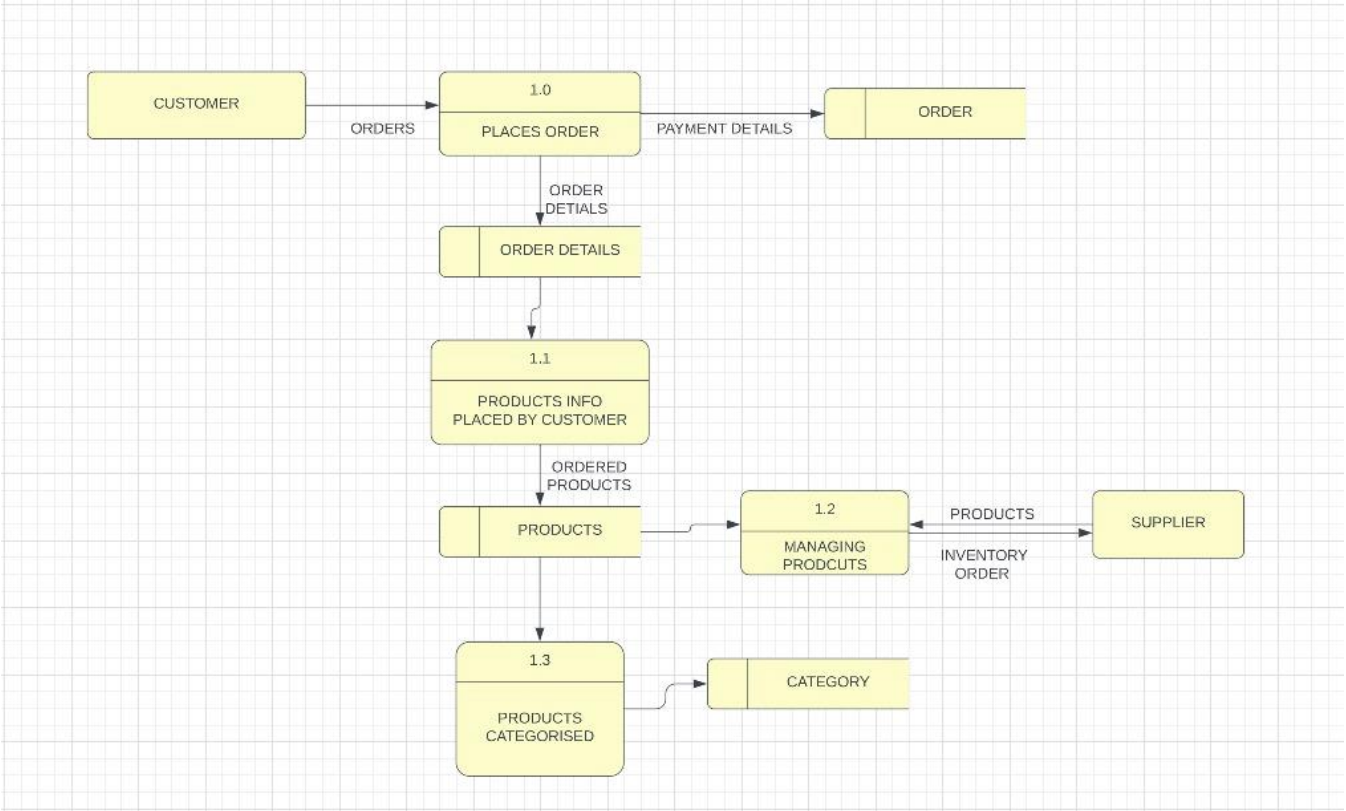
With the help of this database system:

- An admin can track order details or order history of a customer through Order table.
- Payment type of a customer can be tracked through Order table by the admin.
- Product specifications of an order can retrieved through Product table by an admin or a customer.
- A product is supplied by Supplier.
- An admin can access providers or retailers information of a product through Supplier table.
- Customer table does not have direct access to Supplier table.
- An admin can use Category table to understand the category the product.

3. Views Created

No.	View Name	View Description
1.	Top_Customers	This view provides a list of the top customers based on their total order value.
2.	Orders_Summary	This view aggregates information from the order and order_details tables to provide a summary of all orders and their associated products.
3.	Out_of_stock_products	This view lists all products that are currently out of stock.
4.	Product_sales_by_supplier	This view shows the total sales for each supplier in the inventory, sorted by descending order of sales volume.
5.	Sales_by_payment_type	This view shows the total revenue generated by each payment method.
6.	Average_order_value:	This view provides the average order value over the last week

4. DFD (Data Flow Diagram)



5. Security

There are three roles in our project:

1. **Administrator-**
   The security role of the administrator in ensuring security within an Order Fulfillment Database Management System is critical. As the highest level of access, the administrator has the ability to view and manage all aspects of the system, including sensitive information such as product details to payment of the orders.
2. **Customer-**
   Customers have limited access within an Order Fulfillment Database Management System, their role in maintaining security is still important. As the end user, primary security concerns for customers is the protection of their payment information. While customers can only access information about the orders they have made, this information still includes payment details such as credit card numbers and billing addresses.
3. **Supplier-**
   The security role of suppliers within an Order Fulfillment Database Management System is critical to maintaining the integrity and safety of the products sold on the platform. As suppliers have access to information about the products and categories they supply, they have a responsibility to ensure that their products are safe, high-quality, and compliant with any relevant regulations or standards.