Day_8

SQL Database –

Assignment 1: Analyze a given business scenario and create an ER diagram that includes entities, relationships, attributes, and cardinality. Ensure that the diagram reflects proper normalization up to the third normal form.

To create an Entity-Relationship (ER) diagram for the given business scenario, we need to first understand the entities involved, their relationships, attributes, and cardinality. Let's break it down step by step:

Entities:

1. Customers
2. Orders
3. Products
4. Suppliers

Relationships:

- Customers place Orders
- Orders contain Products
- Suppliers provide Products

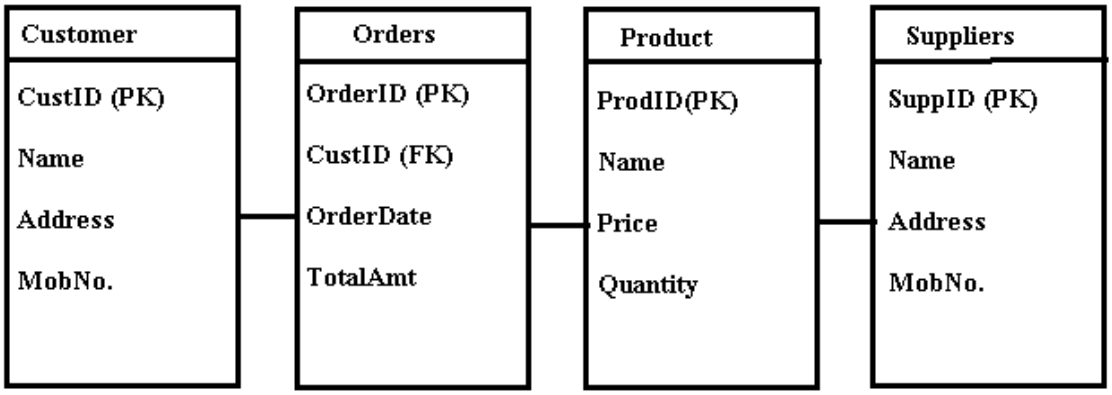
Attributes:

1. Customers entity may have attributes like CustomerID, Name, Address, Email, Phone.
2. Orders entity may have attributes like OrderID, OrderDate, TotalAmount.
3. Products entity may have attributes like ProductID, Name, Price, Quantity.
4. Suppliers entity may have attributes like SupplierID, Name, Address, Email, Phone.

Cardinality:

- A Customer can place many Orders (1 to Many relationship).
- An Order can contain multiple Products (1 to Many relationship).
- A Product can be supplied by multiple Suppliers (Many to Many relationship).

ER Diagram –



Normalization:

To ensure proper normalization up to the third normal form, we need to eliminate any repeating groups and ensure that each attribute is fully dependent on the primary key.

After analyzing the business scenario and understanding the entities, relationships, attributes, and cardinality, you can create an ER diagram that represents these components and reflects proper normalization up to the third normal form.