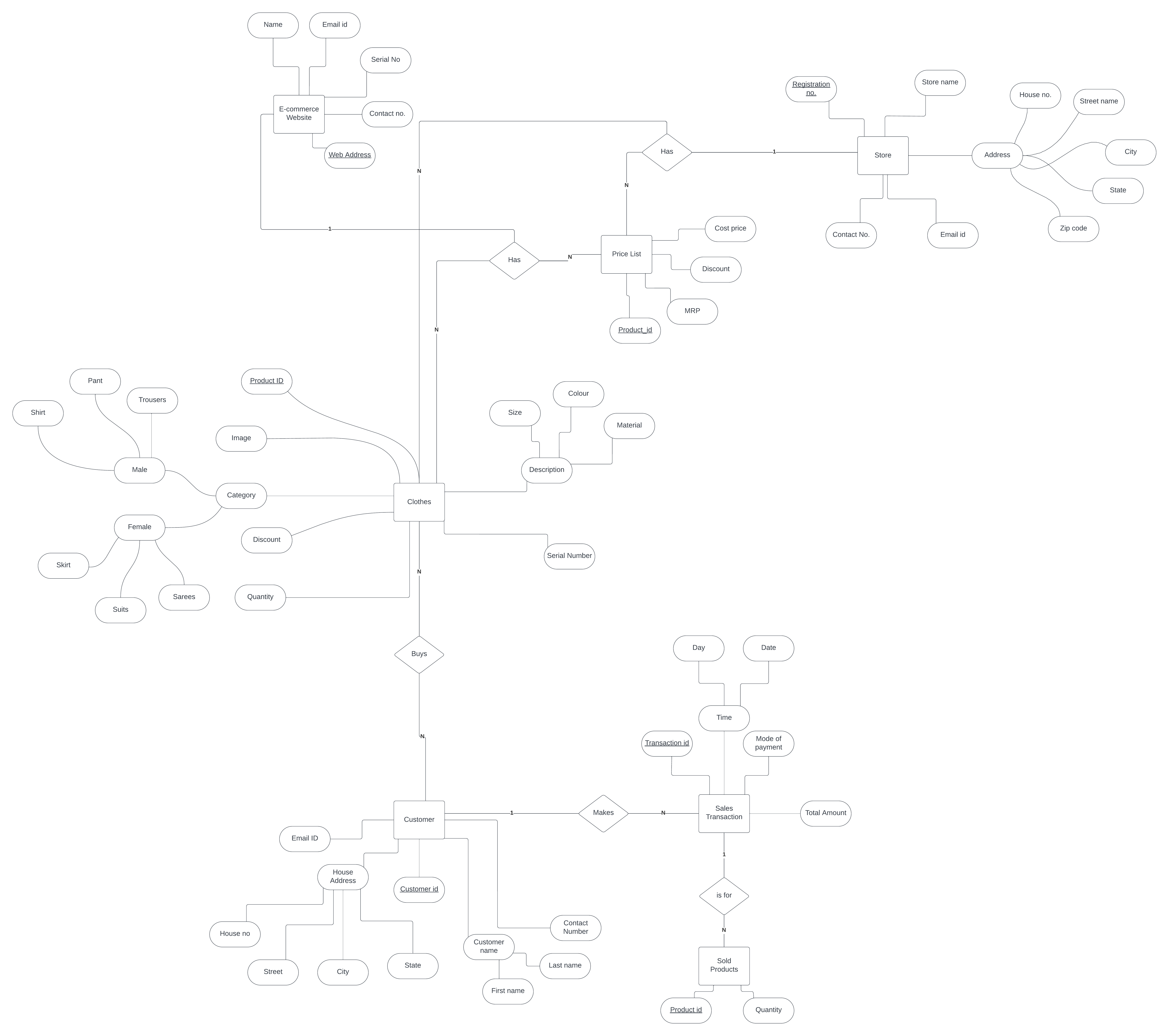
DBMS PROJECT PART 1

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We have created the Entity Relationship diagram of **Clothing (Apparel) Industry.**



This ER (Entity Relationship) Diagram represents the model of Clothing (Apparel) Industry. The entity-relationship diagram of Clothing (Apparel) Management System shows all the visual instrument of database tables and the relations between Clothes, Delivery, Transactions, Brands, Discounts, Sales etc. It uses structure to define the relationships between data groups of Clothing Management System functionalities. The main entities of the Clothing (Apparel) Industry are Customers, Stores, Clothes, Sales Transaction and E- Commerce Website.

**Clothing (Apparel) Industry entities and their attributes:**

1. Customer Entity: Attributes of customer are customer\_id, customer\_name(first name, last name), email\_ID, house address (house no., street, city, state).
2. Sales Transaction: Attributes of Transaction are transaction\_id , time (day, date), mode of payment, total amount.
3. Store: Attributes of Store are registeration\_no, store name, contact no., email ID, contact no. Address (house\_no, street name, city, state, pin\_code)
4. E- Commerce Website: Attributes of E- Commerce Website are name, Serial No., Email, Contact No., Web Address
5. Clothes Entity: Attributes of Clothes are product\_id, image, category (Male (Shirts, pants,trousers), Female(skirts,suits,saree)), discount, quantity, serial no., Description (material, colour, size),
6. Price List Entity: Attributes of Price List are cost price, MRP, Discount, Product\_ID.
7. Sold Product Entity: Attributes of Sold Product are product\_id , and quantity.

Here, Sold Product is a weak entity.

**Description of Clothing Industry-**

1. One Store can have multiple Price Lists (1: N relation: Store to Price List).
2. One E-Commerce Website can offer multiple Branded Clothes (1: N relation: E-Commerce Website to Branded Clothes).
3. Clothes can be associated with multiple Price Lists, and each Price List can have multiple Clothes (N: N relation: Clothes and Price List).
4. Customers can purchase multiple Clothes, and each Cloth can be purchased by multiple Customers (N: N relation: Customers and Clothes).
5. Each Customer can be associated with multiple Sales Transactions (1: N relation: Customer to Sales Transaction).
6. Each Sales Transaction can consist of multiple Products sold (1: N relation: Sales Transaction to Sold Product).

These entity-relationship representations offer a structured and professional overview of the entities, their attributes, and the relationships between them within the Clothing (Apparel) Industry context, helping to design an effective database schema for the industry.

Here's the relational schema for the Clothing (Apparel) Industry:

Entity: Customer

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute | Data Type | Description |  |
| customer\_id | INT | Unique identifier for each customer |  |
| first\_name | VARCHAR(50) | Customer's first name |  |
| last\_name | VARCHAR(50) | Customer's last name |  |
| email | VARCHAR(50) | Customer's email address |  |
| house\_no | VARCHAR(20) | Customer's house number |  |
| street\_name | VARCHAR(50) | Customer's street name |  |
| city | VARCHAR(50) | Customer's city |  |
| state | VARCHAR(50) | Customer's state |  |

Entity: Sales\_Transaction

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute | Data Type | Description |  |  |
| transaction\_id | INT | Unique identifier for each sales transaction |  |  |
| day | DATE | Date of the sales transaction |  |  |
| time | TIME | Time of the sales transaction |  |  |
| mode\_of\_payment | VARCHAR(20) | Mode of payment (e.g., cash, credit card, debit card) |  |  |
| total\_amount | DECIMAL(10,2) | Total amount of the sales transaction |  |  |

Entity: Store

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute | Data Type | Description |  |
| registration\_no | INT | Unique registration number for each store |  |
| store\_name | VARCHAR(50) | Store's name |  |
| contact\_no | VARCHAR(20) | Store's contact number |  |
| email | VARCHAR(50) | Store's email address |  |
| house\_no | VARCHAR(20) | Store's address: house number |  |
| street\_name | VARCHAR(50) | Store's address: street name |  |
| city | VARCHAR(50) | Store's address: city |  |
| state | VARCHAR(50) | Store's address: state |  |
| pin\_code | VARCHAR(6) | Store's address: pin code |  |

Entity: E\_Commerce\_Website

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute | Data Type | Description |  |  |
| website\_name | VARCHAR(50) | E-commerce website's name |  |  |
| serial\_no | INT | Unique serial number for each e-commerce website |  |  |
| email | VARCHAR(50) | E-commerce website's email address |  |  |
| contact\_no | VARCHAR(20) | E-commerce website's contact number |  |  |
| web\_address | VARCHAR(50) | E-commerce website's web address |  |  |

Entity: Clothes

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Description |
| product\_id | INT | Unique identifier for each product (clothing item) |
| image | VARCHAR(255) | Path to the product image |
| category | ENUM('Male', 'Female') | Category of clothing (Male or Female) |
| discount | DECIMAL(10,2) | Discount applicable to the product |
| quantity | INT | Quantity of the product available |
| serial\_no | VARCHAR(20) | Unique serial number for each product |
| material | VARCHAR(50) | Material of the product |
| color | VARCHAR(20) | Color of the product |
| size | VARCHAR(5) | Size of the product (e.g., S, M, L, XL) |

Entity: Price\_List

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Description |
| cost\_price | DECIMAL(10,2) | Cost price of the product |
| mrp | DECIMAL(10,2) | Maximum retail price of the product |
| discount | DECIMAL(10,2) | Discount applicable to the product |
| product\_id | INT | Foreign key referencing the 'product\_id' in the 'Clothes' entity |

Entity: Sold\_Product

|  |  |  |
| --- | --- | --- |
| Attribute | Data Type | Description |
| product\_id | INT | Foreign key referencing the 'product\_id' in the 'Clothes' entity |
| quantity | INT | Quantity of the product sold |

Relationships:

* One Store can have multiple Price Lists (1: N relation: Store to Price List)
* One E-Commerce Website can offer multiple Branded Clothes (1: N relation: E-Commerce Website to Branded Clothes)
* Clothes can be associated with multiple Price Lists, and each Price List can have multiple Clothes (N: N relation: Clothes and Price List)
* Customers can purchase multiple Clothes, and each Cloth can be purchased by multiple Customers (N:N)

IN SQL-

CREATE TABLE Customer (

customer\_id INT PRIMARY KEY,

first\_name VARCHAR(50),

last\_name VARCHAR(50),

email VARCHAR(50),

house\_no VARCHAR(20),

street\_name VARCHAR(50),

city VARCHAR(50),

state VARCHAR(50)

);

CREATE TABLE Sales\_Transaction (

transaction\_id INT PRIMARY KEY,

day DATE,

time TIME,

mode\_of\_payment VARCHAR(20),

total\_amount DECIMAL(10,2)

);

CREATE TABLE Store (

registration\_no INT PRIMARY KEY,

store\_name VARCHAR(50),

contact\_no VARCHAR(20),

email VARCHAR(50),

house\_no VARCHAR(20),

street\_name VARCHAR(50),

city VARCHAR(50),

state VARCHAR(50),

pin\_code VARCHAR(6)

);

CREATE TABLE E\_Commerce\_Website (

website\_name VARCHAR(50) PRIMARY KEY,

serial\_no INT UNIQUE,

email VARCHAR(50),

contact\_no VARCHAR(20),

web\_address VARCHAR(50)

);

CREATE TABLE Clothes (

product\_id INT PRIMARY KEY,

image VARCHAR(255),

category ENUM('Male', 'Female'),

discount DECIMAL(10,2),

quantity INT,

serial\_no VARCHAR(20),

material VARCHAR(50),

color VARCHAR(20),

size VARCHAR(5)

);

CREATE TABLE Price\_List (

price\_list\_id INT PRIMARY KEY,

cost\_price DECIMAL(10,2),

mrp DECIMAL(10,2),

discount DECIMAL(10,2),

product\_id INT,

FOREIGN KEY (product\_id) REFERENCES Clothes(product\_id)

);

CREATE TABLE Sold\_Product (

product\_id INT,

quantity INT,

PRIMARY KEY (product\_id),

FOREIGN KEY (product\_id) REFERENCES Clothes(product\_id)

);

CREATE TABLE Store\_Price\_List (

store\_id INT,

price\_list\_id INT,

PRIMARY KEY (store\_id, price\_list\_id),

FOREIGN KEY (store\_id) REFERENCES Store(registration\_no),

FOREIGN KEY (price\_list\_id) REFERENCES Price\_List(price\_list\_id)

);

CREATE TABLE Website\_Branded\_Clothes (

website\_name VARCHAR(50),

product\_id INT,

PRIMARY KEY (website\_name, product\_id),

FOREIGN KEY (website\_name) REFERENCES E\_Commerce\_Website(website\_name),

FOREIGN KEY (product\_id) REFERENCES Clothes(product\_id)

);

CREATE TABLE Customer\_Purchased\_Clothes (

customer\_id INT,

product\_id INT,

quantity INT,

PRIMARY KEY (customer\_id, product\_id),

FOREIGN KEY (customer\_id) REFERENCES Customer(customer\_id),

FOREIGN KEY (product\_id) REFERENCES Clothes(product\_id)

);

This relational schema establishes tables for each entity, considering their attributes and primary/foreign keys to maintain relationships. Relationships such as one-to-many and many-to-many are represented through linking tables like **Store\_Price\_List**, **Website\_Branded\_Clothes**, and **Customer\_Purchased\_Clothes**. This schema aligns with the described entities and their relationships within the Clothing (Apparel) Industry context.

DATASETS:

The datasets provided offer a comprehensive overview of the clothing industry, encompassing customer information, sales transactions, store details, e-commerce website information, product characteristics, pricing structures, and sales records. These datasets provide valuable insights into customer behavior, sales trends, product performance, and overall industry dynamics. They can be utilized for various analyses, including customer segmentation, market research, product optimization, and sales forecasting. The datasets' comprehensive nature and versatility make them a valuable resource for researchers, data analysts, and business professionals in the clothing industry.

This dataset provides valuable insights into the clothing industry, encompassing customer information, sales transactions, store details, e-commerce website particulars, clothing attributes, price lists, and sold product details. The customer entity captures customer identification, contact details, and address. The sales transaction entity records transaction details, including transaction ID, date, payment mode, and total amount. The store entity documents store registration, name, contact information, and address. The e-commerce website entity provides website name, serial number, email, contact number, and web address. The clothing entity details product ID, image, category, discount, quantity, serial number, description, cost price, MRP, discount, and product ID. The price list entity specifies cost price, MRP, discount, and product ID. The sold product entity records product ID and quantity. This comprehensive dataset enables in-depth analysis of customer behavior, sales trends, and product performance within the clothing industry.