

Queries to Create tables

USE drop_24;

- **Customers table**

```
CREATE TABLE Customers (  
    customer_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
    customer_name VARCHAR(100) NOT NULL,  
    customer_email VARCHAR(100) UNIQUE NOT NULL,  
    customer_Phone_number VARCHAR(20) NOT NULL,  
    customer_password VARCHAR(100) NOT NULL,  
    customer_DOB DATE,  
    customer_age INT  
);
```

- **Customer Address table**

```
CREATE TABLE Customer_Addresses (  
    address_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
    customer_id INT NOT NULL,  
    address_line VARCHAR(255) NOT NULL,  
    city VARCHAR(100) NOT NULL,  
    state VARCHAR(100),  
    postal_code VARCHAR(20),  
    country VARCHAR(100),  
    FOREIGN KEY (customer_id) REFERENCES Customers(customer_id)  
);
```

- **Categories table**

```
CREATE TABLE Categories (  
    category_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
    category_name VARCHAR(100) NOT NULL,  
    category_description VARCHAR(300) NOT NULL
```

);

- **Admins table**

```
CREATE TABLE Admins (  
  admin_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
  admin_name VARCHAR(100) NOT NULL,  
  admin_password VARCHAR(100) NOT NULL  
);
```

- **Products table**

```
CREATE TABLE Products (  
  product_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
  product_name VARCHAR(100) NOT NULL,  
  product_price NUMERIC(10, 2) NOT NULL,  
  category_id INT NOT NULL,  
  product_quantity INT NOT NULL,  
  FOREIGN KEY (category_id) REFERENCES Categories(category_id)  
);
```

- **Vendors table**

```
CREATE TABLE Vendors (  
  vendor_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
  vendor_name VARCHAR(100) NOT NULL,  
  vendor_email VARCHAR(100) UNIQUE NOT NULL,  
  vendor_password VARCHAR(100) NOT NULL,  
  vendor_phone_number VARCHAR(20) NOT NULL  
);
```

- **Product Inventory table to track individual products and quantities**

```
CREATE TABLE Product_Inventory (  
  product_inventory_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
  product_id INT NOT NULL,
```

```
category_id INT NOT NULL,  
quantity INT NOT NULL,  
vendor_id INT NOT NULL,  
FOREIGN KEY (product_id) REFERENCES Products(product_id),  
FOREIGN KEY (vendor_id) REFERENCES Vendors(vendor_id),  
FOREIGN KEY (category_id) REFERENCES Categories(category_id)  
);
```

- **Orders table**

```
CREATE TABLE Orders (  
order_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
customer_id INT NOT NULL,  
order_date DATE NOT NULL,  
order_status VARCHAR(20),  
FOREIGN KEY (customer_id) REFERENCES Customers(customer_id)  
);
```

- **Order_details table**

```
CREATE TABLE Order_details (  
order_details_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
order_id INT NOT NULL,  
product_id INT NOT NULL,  
product_quantity INT NOT NULL,  
FOREIGN KEY (order_id) REFERENCES Orders(order_id),  
FOREIGN KEY (product_id) REFERENCES Products(product_id)  
);
```

- **Delivery Agents table**

```
CREATE TABLE Delivery_Agents (  
agent_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,  
agent_name VARCHAR(100) NOT NULL,  
agent_phone VARCHAR(20) NOT NULL,  
agent_age INT,  
agent_DOB DATE,  
order_id INT NOT NULL,  
FOREIGN KEY (order_id) REFERENCES Orders(order_id)  
);
```

- **Tracking Details table**

```
CREATE TABLE Tracking_Details (
  tracking_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
  order_id INT NOT NULL,
  agent_id INT NOT NULL,
  tracking_status VARCHAR(50) NOT NULL,
  FOREIGN KEY (order_id) REFERENCES Orders(order_id),
  FOREIGN KEY (agent_id) REFERENCES Delivery_Agents(agent_id)
);
```

- **Discounts table**

```
CREATE TABLE Discounts (
  discount_id INT NOT NULL AUTO_INCREMENT PRIMARY KEY,
  discount_name VARCHAR(100) NOT NULL,
  category_id INT,
  product_id INT,
  discount_amount NUMERIC(5, 2) NOT NULL,
  FOREIGN KEY (category_id) REFERENCES Categories(category_id),
  FOREIGN KEY (product_id) REFERENCES Products(product_id)
);
```

- **Website table**

```
CREATE TABLE website (
  URL VARCHAR(100) NOT NULL,
  name VARCHAR(40) NOT NULL
);
```

Indexes

```
CREATE INDEX idx_customer_email ON Customers(customer_email);
CREATE INDEX idx_product_category_id ON Products(category_id);
CREATE INDEX idx_order_customer_id ON Orders(customer_id);
CREATE INDEX idx_delivery_agent_order_id ON Delivery_Agents(order_id);
CREATE INDEX idx_order_details_order_id ON Order_details(order_id);
CREATE INDEX idx_order_details_product_id ON Order_details(product_id);
CREATE INDEX idx_discounts_category_id ON Discounts(category_id);
CREATE INDEX idx_discounts_product_id ON Discounts(product_id);
CREATE INDEX idx_vendor_email ON Vendors(vendor_email);
```

Queries to populate the tables

- Insert sample data into Categories table

```
INSERT INTO Categories (category_name, category_description)
VALUES ('Electronics', 'Electronic devices and accessories'),
       ('Clothing', 'Apparel and fashion accessories'),
       ('Books', 'Books of various genres');
```

- Insert sample data into Admins table

```
INSERT INTO Admins (admin_name, admin_password)
VALUES ('Admin1', 'Hashed_admin_password1'),
       ('Admin2', 'Hashed_admin_password2');
```

- Insert sample data into Products table

```
INSERT INTO Products (product_name, product_price, category_id, product_quantity)
VALUES ('Smartphone', 599.99, 1, 100),
       ('T-shirt', 19.99, 2, 200),
       ('Headphones', 49.99, 1, 150);
```

- Insert sample data into Vendors table

```
INSERT INTO Vendors (vendor_name, vendor_email, vendor_password,
                    vendor_phone_number)
VALUES ('Vendor1', 'vendor1@example.com', 'Hashed_vendor_password1', '+1234567890'),
       ('Vendor2', 'vendor2@example.com', 'Hashed_vendor_password2', '+1987654321');
```

- Insert sample data into Product_Inventory table

```
INSERT INTO Product_Inventory (product_id, category_id, quantity, vendor_id)
VALUES (1, 1, 50, 1),
       (2, 2, 100, 2),
       (3, 1, 75, 1);
```

- Insert sample data into Customers table

```
INSERT INTO Customers (customer_name, customer_email, customer_Phone_number,
                    customer_password, customer_DOB, customer_age)
VALUES ('Naruto', 'naruto_uzumaki@gmail.com', '+919990875847', 'Hashed_password123',
        '1990-01-01', 32),
       ('Sasuke', 'Sasuke_uchiha@gmail.com', '+919810665049', 'Hashed_password456',
        '1995-05-15', 27);
```

- Insert sample data into Customer_Addresses table

```
INSERT INTO Customer_Addresses (customer_id, address_line, city, state, postal_code,
                                country)
```

```
VALUES (4, 'Vasant Vihar H-34', 'New Delhi', 'Delhi', '110020', 'India'),  
      (3, 'Malviye nagar', 'New Delhi', 'Delhi', '110057', 'India'),  
(4, 'Hauz Khas', 'New Delhi', 'Delhi', '110057', 'India');
```

- Insert sample data into Orders table

```
INSERT INTO Orders (customer_id, order_date, order_status)  
VALUES (1, '2023-01-15', 'Pending'),  
      (2, '2023-02-20', 'Shipped');
```

- Insert sample data into Order_details table

```
INSERT INTO Order_details (order_id, product_id, product_quantity)  
VALUES (1, 1, 2),  
      (1, 2, 3),  
      (2, 3, 1);
```

- Insert sample data into Delivery_Agents table

```
INSERT INTO Delivery_Agents (agent_name, agent_phone, agent_age, agent_DOB, order_id)  
VALUES ('Vinod Kumar', '+919865748392', 30, '1992-03-10', 1),  
      ('Rahul Jha', '+918574663728', 25, '1997-07-20', 2);
```

- Insert sample data into Tracking_Details table

```
INSERT INTO Tracking_Details (order_id, agent_id, tracking_status)  
VALUES (1, 1, 'Out for delivery'),  
      (2, 2, 'Delivered');
```

- Insert sample data into Discounts table

```
INSERT INTO Discounts (discount_name, category_id, product_id, discount_amount)  
VALUES ('Electronics Sale', 1, NULL, 10.00),  
      ('Summer Clearance', NULL, 2, 5.00);
```

- Insert sample data into Website table

```
INSERT INTO website (URL, name)  
VALUES ('https://drop24.com', 'Drop 24');
```