**Project Document: eCommerce Database (EcommerceDB)**

**Project Title:**

ECommerceDB – Online Retail Sales Database

**Objective:**

The objective of this project is to design and implement a relational database schema for an eCommerce platform that manages customers, products, categories, orders, payments, and sales reports in a normalized and efficient manner.

**Tools Used:**

* **DBMS**: MySQL
* **Language**: SQL
* **Tool**: MySQL Workbench / phpMyAdmin / CLI

**Entity Relationship Overview:**

**1. Customers**

* Stores customer information.

**2. Categories**

* Stores product category information.

**3. Product**

* Stores product details and links to category.

**4. Orders**

* Captures customer orders.

**5. OrderItems**

* Maps products to orders with quantities and prices.

**6. Payments**

* Tracks payments made for orders.

**ER-Diagram**

**Database** **Schema (DDL)**

-- Create Database

CREATE DATABASE ecommerceDB;

USE ecommerceDB;

-- Customers Table

CREATE TABLE customers (

cust\_id INT AUTO\_INCREMENT PRIMARY KEY,

cust\_name VARCHAR(100) NOT NULL,

Email VARCHAR(50) UNIQUE,

Phone VARCHAR(50),

Address TEXT

);

-- Categories Table

CREATE TABLE categories (

category\_id INT AUTO\_INCREMENT PRIMARY KEY,

category\_name VARCHAR(50) NOT NULL

);

-- Product Table

CREATE TABLE product (

product\_id INT AUTO\_INCREMENT PRIMARY KEY,

product\_name VARCHAR(100) NOT NULL,

Description TEXT,

price DECIMAL(10,2) NOT NULL,

stock INT NOT NULL,

category\_id INT,

FOREIGN KEY (category\_id) REFERENCES categories(category\_id)

);

-- Orders Table

CREATE TABLE orders (

order\_id INT AUTO\_INCREMENT PRIMARY KEY,

cust\_id INT,

Total\_amount DECIMAL(10,2),

status VARCHAR(30),

FOREIGN KEY (cust\_id) REFERENCES customers(cust\_id)

);

-- Order Items Table

CREATE TABLE orderitems (

order\_id INT,

product\_id INT,

quantity INT,

price DECIMAL(10,2),

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

FOREIGN KEY (order\_id) REFERENCES orders(order\_id),

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

);

-- Payment Table

CREATE TABLE payment (

pay\_id INT AUTO\_INCREMENT PRIMARY KEY,

order\_id INT,

pay\_date DATETIME DEFAULT CURRENT\_TIMESTAMP,

Amount DECIMAL(10,2),

Paymentmethod VARCHAR(50),

FOREIGN KEY (order\_id) REFERENCES orders(order\_id)

);

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