**ANP-C7971**

STUDENT ID : AF0400951

STUDENT NAME: S. DEVIKA

PROJECT: E-COMMERCE MANAGEMENT

Database Design for

E-commerce management System

**E-Commerce Management System (EMS)**

An E-Commerce Management System (EMS) is software that helps run an online business smoothly by automating and organizing important tasks. Its main goals are to manage inventory efficiently, make shopping easy for customers, and handle orders and payments automatically. It helps businesses list products, process customer purchases, track orders, and manage payments. By keeping up with changes in technology and customer needs, EMS plays a key role in helping online stores grow and succeed.

The purpose of **e-commerce** is to facilitate buying and selling goods and services over the internet. It allows businesses to reach customers anywhere in the world, breaking geographical barriers.

**Relationships Overview:**

* **Customers** to **Orders**: One customer can place many orders (One-to-Many).
* **Products** to **Categories**: A product belongs to one category (Many-to-One).
* **Orders** to **Order Details**: One order can have many products (One-to-Many).
* **Payments** to **Orders**: One payment is linked to one order (One-to-One).
* **Inventory** to **Products**: One product is linked to one inventory record (One-to-One).

**Entities:**

* Customers
* Products
* Categories
* Order
* Order\_details
* Payments
* Inventory

**Entities and Attributes:**

1. **Customers**
   * customer\_id (Primary Key)
   * customer\_name
   * email
   * address
   * phone\_number
2. **Products**
   * product\_id (Primary Key)
   * product\_name
   * price
   * quantity\_in\_stock
   * category\_id (Foreign Key referencing categories.category\_id)
3. **Categories**
   * category\_id (Primary Key)
   * category\_name
4. **Orders**
   * order\_id (Primary Key)
   * customer\_id (Foreign Key referencing customers.customer\_id)
   * order\_date
   * total\_amount
5. **Order Details**
   * order\_details\_id (Primary Key)
   * order\_id (Foreign Key referencing orders.order\_id)
   * product\_id (Foreign Key referencing products.product\_id)
   * quantity
   * price
6. **Payments**
   * payment\_id (Primary Key)
   * order\_id (Foreign Key referencing orders.order\_id)
   * payment\_date
   * payment\_mode
   * amount\_paid
7. **Inventory**
   * product\_id (Foreign Key referencing products.product\_id)
   * quantity\_available
   * restock\_date

**Entity Relationship Diagram of E-Commerce Management System**

customers

Categories

**will**

**have**

**Based**

product

orders

**has**

**checks**

**consists**

Order\_details

Inventory

payments

