

Assignment - 2

Designing an ER diagram for an online Shopping Portal Scenario :

You have been tasked with designing a database for an online shopping portal. This portal allows customers to browse and purchase a wide variety of products. The system needs to manage user accounts, product inventory, orders and payments ensuring a seamless shopping experience for customers and efficient management for the portal administrators.

Entities and Attributes :-

1. Customer

- Customer ID (Primary Key) : Unique identifier for each customer
- 'Full name' : Full name of the customer
- 'Email' : Email address of the customer
- 'Password' : Password for account authentication
- 'Contact number' : Contact number
- 'Shipping address' : Shipping address of the customer
- 'Date joined' : Date the customer joined the portal

2. Product :-

- Product ID (Primary Key) : Unique identifier for each Product.
- 'Product Name' : Name of the Product
- 'Product description' : Detailed description of the Product
- 'Price' : Price of the Product
- 'Stock Quantity' : number of items available in stock
- 'Category ID (foreign Key)' : The Product belongs to

3. Category :-

- Category ID (Primary Key) : Unique identifier for each category
- 'Category name' : Name of the category

4. Order

- 'Order ID' (Primary Key) :- Unique identifier for each order
- 'Order Date' : Date when the order was placed
- 'Order Status' :- Current status of the order
- 'Customer ID' (foreign Key) :- ID of the customer who placed order

5. Order detail

- 'Order detail ID' (Primary Key)
- 'Order ID' (Foreign Key)
- 'Product ID' (Foreign Key)
- 'Quantity'
- Price Order

6. Payment

- Payment ID (Primary Key)
- Order ID (Foreign Key)
- Payment Date
- Amount
- Payment method

Relationships :-

1. customer to order :- A customer can place multiple orders
 - Relationship type : one-to-many
 - 'customer ID' in order references 'customer ID' in customer
2. Order to order detail :- An order can consist of multiple order details each detailing a specific product and its quantity
 - Relationship type : one-to-many
 - 'Order ID' in order detail references 'Order ID' in order

3. Product to Order Details:- Order details specifies a Product
- Relationship type : many - to - one
 - 'Product ID' in Order Details references 'Product ID' in Product

4. Category to Product:- A Product belongs to a specific category
- Relationship type : many - to - one
 - 'Category ID' in Product References 'Category ID' in category

5. Order to Payment:- Each order is associated with single payment
- Relationship type : One to - one
 - 'Order ID' in Payment references 'Order ID' in Order

ER- Diagram Representation:-

