

DMDD Project

E-Commerce database Management systems

Business Rule:

Ecommerce businesses can include always offering competitive prices, providing clear and concise product descriptions, ensuring the database is easy to navigate and search, offering multiple payment options, and providing excellent customer service.

1. To perform best-in-class Search Engine Optimization (SEO), so that potential customers can easily find us.
2. Applying discount codes should be well documented, since people are likely to spend more when they get a discount.
3. Making the buying process as simple and streamlined as possible.
4. Staying up to date with the latest trends and technologies so that you can offer your customers a cutting-edge experience.
5. Always be prepared to adapt and change as the ecommerce landscape evolves.
6. Routing the Customer Service, so that customers don't have to repeat their problem while talking to a different executive.
7. Assigning Company assets to employees, like phones and computers based on their roles, so that if anyone leaves it becomes easy to recover and revoke their access to sensitive information.

Entities and Its Attributes

1. Customer

Customer ID
Name
Address
Phone
Email

2. Admin

Name
Password
ID

3. Product Catalogue

Catalogue ID
Category ID
Catalogue Name
Description

4. OrderItems

OrderItems ID
Customer ID
Order ID
Quantity

5. Order Details

Customer ID
Order ID
Total
Created Time
Modified Time

6. Product Category

Category ID
Name
Description

7. Payments - *Associative Entity*

Category ID
Order ID
Transaction Order Status

8. Merchant/Sellers

Merchant ID
Product ID
Merchant Name
Address

9. Product

Product ID

Product Name

Catalogue ID

Stock

Quantity

10. Product Line

ProductLine Id

ProductLine Name

11. Delivery

Customer ID

Product ID

Price

Name

Address

Phone

Relationships between Entities:

1. One Customer has many orderItems or may not have any order items conversely each order items has to have only one customer associated with it.
2. One orderItem has to have one mandatory order details which includes order details of the product which are placed by the customers, conversely an order detail is mandatorily associated with one or many orderItems.
3. In the E-commerce ER Diagram payment is an Associative entity which relates both customer and order details. Every customer makes a payment to place an order for a product i.e One Customer makes one or many payments and conversely Each payment is made by one customer.
4. Every order detail includes one or many products and a product may or may not be included in the order details.
5. Each product is mandatorily associated with product catalogue and each product catalogue may or may not contain any product.
6. Each Product line is mandatorily associated with many products, conversely Every product is included in the product line.

7. Each Merchant can sell one or many products or not at all any product, A product has to have mandatorily one merchant associated with it.
8. Admin and product category have many to many relationships between them i.e admin may add one or many items or not at all any items in the product category.
9. A product category contains optional one or many product catalogues conversely each product catalogue has to have one product category.
10. A product catalogue has optional many one or many products, every product is mandatorily associated with a single product catalogue.
11. A Customer receives mandatorily one delivery for their ordered items/products that customer has placed and for every delivery there has to be mandatorily one or many customers.

E-Commerce ER Diagram:

