**Case Study**

**Database Design & Development for E-commerce Platform (Swiftcart)**

**Name:** Keval Patel

**Course:** Data concepts

**Enrollment No**: 000970231

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**Introduction:-**

Swiftcart is a global e-commerce leader, known for its customer-first approach, vast product selection, and competitive prices. By leveraging technology and innovation, it ensures fast delivery, efficient logistics, and a seamless shopping experience.

**Mission**:

To provide a seamless, user-friendly e-commerce platform connecting buyers with a wide range of products globally.

**Objective:**

➢ Customer-Centric Excellence:- To be the most customer-focused company in the world, offering a seamless, personalized shopping experience with the widest selection of products at competitive prices.

➢ Operational Efficiency and Innovation:- To continually improve operational efficiency by leveraging technology and innovation, ensuring fast delivery, streamlined logistics, and superior user experiences

➢ Global Market Leadership:- To expand its global presence, making products and services accessible worldwide while supporting sellers and empowering businesses through platforms like Amazon Marketplace and AWS.

**4. Database Design**

**List of Tables:**

**1. Customers & Orders Management Tables:**

* Customers Table
* Orders Table
* Reviews Table

**2. Product & Seller Tables:**

* + - Products Table
    - Sellers Table

**3. Transaction & Shipping Tables:**

* + - Payments Table
    - Shipping Table

1. **Tables and Fields**
2. **Customers Table:**

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1. **Shipping Information Table:**

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1. **Payment Method Table:**

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1. **Order Table:**

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1. **Review Table:**

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1. **Product Table:**

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1. **Seller Table:**

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1. **Possible Relationships:**

The relationships between the tables are vital to understanding the flow of information across different modules in our system. The primary relationships are as follows:

1. **One to many relationship:-**
   * + - Sellers-products - (1:Many)
       - customers-orders - (1:Many)
       - orders-shipping - (1:Many)
       - orders-reviews - (1:Many)
2. **Many to one relationship:-**
   * + - products-orders - (Many:1)
       - reviews-products - (Many:1)
       - orders-payments - (Many:1)

**5. Entity-Relationship Diagram (ERD):-**

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# Join Types in Database

**VIEW 1:- Top-Selling Products Revenue:**

## The Top Selling Products view identifies the best-selling products by total revenue and order count, helping sellers understand which products generate the most sales on your Amazon-style platform.

**INNER JOIN** :-The Product Ratings view uses INNER JOINs to connect the Products, Orders, and Reviews.

# Query:

Output:-

**VIEW 2:- Customer Purchase History:**

This view tracks customers' total orders and total spending, helping understand customer purchasing behavior.

**INNER JOIN :-** The CustomerPurchaseHistory view uses an INNER JOIN between the Customers and Orders tables.

# Query:

# 

**Output:-**

**VIEW 3:- ProductRatings:-**

The ProductRatings view helps track the average rating and total reviews for each product, providing insights into customer satisfaction and product performance.

**Inner join:-**

The ProductRatings view uses INNER JOINs to connect the Products, Orders, and Reviews.

**Query:**

**Output:**

**SUMMARY**

Swiftcart is a global leader in e-commerce, known for fast delivery, a wide range of products, and focusing on customer satisfaction. Its success is driven by smart use of technology, strong logistics, and a marketplace that connects buyers and sellers. While it faces challenges like competition and regulations, Swiftcart keeps growing by innovating and enhancing the shopping experience, ensuring it remains a top player in the industry.