

## Group <43> Data Strategists

### -SandKart-



#### Team members

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# Brief Description

We as a group have decided to create the project around a large retail store like Amazon. We feel that the field of e-commerce is a broad service that could with the help of a database communicate with all its stakeholders. As the field of e-commerce is rising the mode of shopping online is gaining a lot of attention. The transaction of money that takes place is quite easy in the mode of shopping online and in the case of refunds as well.



# Stakeholders

1. Customers ( Buyers)
2. Customers (Who sell)
3. Delivery Executives
4. Sandkart Employees
5. Customer Service
6. Advertisers(Optional)
7. Owners/Investors



# Role of Stakeholders:

- ★ Buyers would buy the products
- ★ Suppliers/SandKart Executives put products for sale
- ★ Delivery Executive would deliver the product to the Buyer based on their location
- ★ Sandkart Employees would make sure the store works and add their functionalities and also interact with the advertisers.
- ★ Advertisers are other companies that want to use the store as a platform for advertising their products.
- ★ Owners would manage the pay and other aspects of the Sandkart Store and its employees.

# Constraints:

- Price Range cannot be negative
- The age of the person should be greater than 16
- Constraint of the location of the user with regard to the delivery executive
- 10 Days refund period



# Relationships:

- ★ Customer Service -> Buyer (Many to many)
- ★ Delivery Executive -> Buyer (Many to many)
- ★ Product -> Supplier (Many to many)
- ★ Product -> Buyer (Many to Many)
- ★ Supplier -> Delivery Executive (obtains) (Many to Many)
- ★ Sandkart employee -> Supplier
- ★ Owners -> Sandkart employee (One to many)
- ★ Product -> Buyers (Many to many)
- ★ Customer Care -> Supplier (Many to Many)

## Entities:

- ★ Customers(Buyer)
- ★ Customer(Sell)
- ★ Products
- ★ Sandkart Employees
- ★ Delivery Executives
- ★ Customer Service
- ★ Owners/Investors
- ★ Advertisers\*

## Weak Entities:

- ★ Tier for the seller
- ★ Account type for Buyer

# **KEY QUESTIONS**

## **For the Customer who is a buyer**

- What products are being sold?
- What are the prices of the product?
- What is the product rating?
- How many people have reviewed/bought the product?
- How long will the delivery take?
- Who can I ask queries from?

## **For the Customer who is a seller**

- What are the already existing prices of the product I want to sell?
- What is the rating they have given my product?
- How many people have bought my product?
- Where is it being shipped to?
- The queries they have posted on the site?
- The reviews they have given my product?

## **For the Sandkart Employee**

- To view the number of working days.
- To check their increment/bonus per annum.
- To whom are they answerable for their work.
- To know the source of communication among various departments.
- The statistics of the entire store



## **For the Delivery Executive**

- To find the number of remaining order deliveries to be done by him on any day.
- To view the list of the scheduled shipments to be done on a particular day. This includes (type of product, destination address, phone number of the buyer, mode of payment, ETC) for each product.
- To view the total wallet balance. (including tips and salaries earned by him. )
- To view his ratings given by the customers.
- To cancel the order if any of the orders can not be delivered due to any reason.
- for example, if the provided information is wrong, the Buyer denies receiving it. ETC.

## **For the Customer Service**

- Wrong order delivered.
- Payment related queries.
- Damaged/used product delivered.
- Tracking of the order.
- Delivery executive misbehaving.(bad service)
- Coupon/cashback related queries.

## **For the Owners/Investors**

- What products are in demand?
- What category of products is most profitable.
- Which locations are important for business.
- Which age demographic buys which products.
- Which suppliers are trustworthy.

## For the Advertisers

- How much will the company help promote their products?
- Which products are worth advertising.
- What locations the company can reach.
- What is the age demographic of the buyers?
- What kind of products should the company develop?

**\*The key questions for investors and advertisers are similar, but they are asked for different purposes, for example:-**

**For investors, location information will be used to improve customer service in areas with high number/cost buyers.**

**For advertisers, location information will help them decide if it's worth advertising their product, as an expensive product will not perform well in an economically weaker location.**

## How will it help us answer these questions:

### ● For Customer Service :

- Customer name,id,email,phone number.
- product name,id,size,color,discount
- transaction no. , transaction method
- mode of payment,payment id.
- Queries of the customers, chat with customers, refund/return.
- Time and date of order placed and delivered.

### ● For Owners/Investors :

- No. of sales, product rating

- Price(seller), Price(buyer), No. of sales
- Customer location, Price(buyer), No. of sales
- Customer age, Product type, Price(buyer), No. of sales
- Supplier rating, No. of sales

## ● For Advertisers :

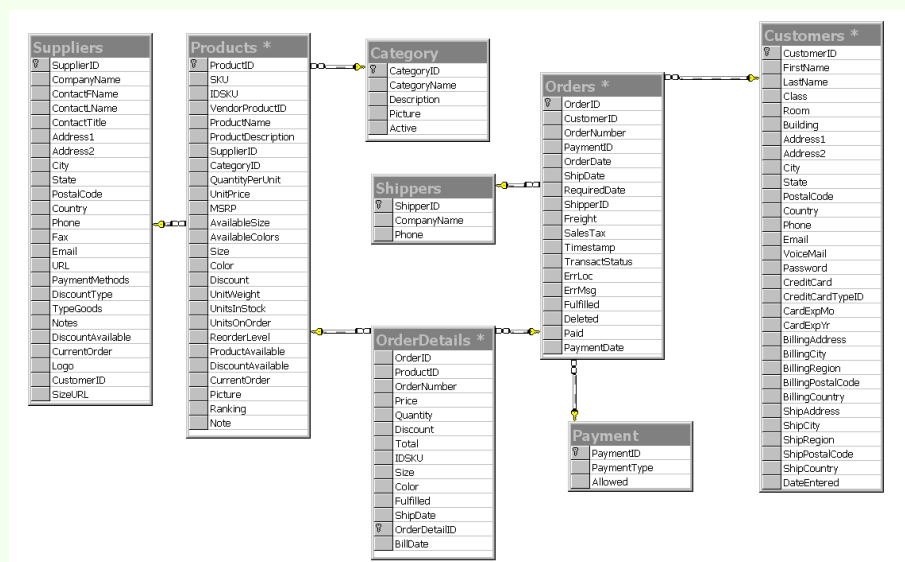
- No. of sales, Customer location
- No. of sales, Price(buyer), Price(seller)
- Customer location, No. of sales
- Customer age, Price(buyer), product type
- Product rating, No. of sales, Price(buyer), Price(seller)

## ● For Sandkart Employees :

- Company hierarchy
- Employee Salary, Increments, Bonus

**FOR  
REFERENCE**

**\*Credits -  
sales layer**



## **IDEAS :**

- Collaborate and promote artist designs through custom clothing.
- Higher cut bonus out of the earnings.
- Adding how discounts are provided by the Sandkart company
- Refunds

# **DATABASE SCHEMA**

### CUSTOMERS (BUYER)

Buyer_ID	int NOT NULL
Name	varchar(50) NOT NULL
Age	int NOT NULL
Contact	varchar(50) NOT NULL
Address	int NOT NULL
Category	varchar(50) NOT NULL

**Primary Key: Buyer\_ID**

**Foreign Key: NONE**

### CUSTOMERS (SELLER)

Supplier_ID	int NOT NULL
Name	varchar(50) NOT NULL
Contact Information	varchar(50) NOT NULL
Location_ID	int NOT NULL
Product_ID	int NOT NULL

**Primary Key: Supplier\_ID**

**Foreign Key: NONE**

### PRODUCTS

Product_Name	int NOT NULL
Product_ID	int NOT NULL
Supplier_ID	varchar(8) NOT NULL
Quantity_Available	int NOT NULL
Price	int NOT NULL

Discount	int NOT NULL
Warranty	varchar(50) NOT NULL
Refund_Period	int NOT NULL
Rating	int NOT NULL

**Primary Key: Product\_ID**

**Foreign Key: Supplier\_ID**

## ORDER TABLE

Order_ID	int NOT NULL
Product_ID	varchar(9) NOT NULL
Buyer_ID	varchar(8) NOT NULL
Order_Date	varchar(10) NOT NULL
Quantity	int NOT NULL

**Primary Key: Order\_ID**

**Foreign Key: Product\_ID, Buyer\_ID**

## LOCATION

Product_ID	varchar(8) NOT NULL
Delivery_Charge	int NOT NULL
Buyer_ID	varchar(8) NOT NULL
Location_ID	varchar(8) NOT NULL

**Primary Key: Location\_ID**

**Foreign Key: Product\_ID , Buyer\_ID**

## SANDKART EMPLOYEES

Name	varchar(50) NOT NULL
Employee_ID	int NOT NULL
Role	varchar(50) NOT NULL
Salary	Int NOT NULL
Contact_Information	varchar(50) NOT NULL

**Primary Key: Employee\_ID**

**Foreign Key: NONE**

### **DELIVERY EXECUTIVES**

Executive_ID	int NOT NULL
Name	varchar(50) NOT NULL
Delivery_Company	varchar(50) NOT NULL
Order_Assigned	varchar(8) NOT NULL
Contact_Information	varchar(50) NOT NULL

**Primary Key: Executive\_ID, Order\_Assigned**

**Foreign Key: NONE**

### **CUSTOMER SERVICE**

Product_ID	varchar(9) NOT NULL
Name	varchar(50) NOT NULL
Employee_ID	int NOT NULL
Rating	int NOT NULL
Salary	int NOT NULL
Contact_Information	varchar(50) NOT NULL

**Primary Key: Employee\_ID**

**Foreign Key: Product\_ID**

### **OWNERS/INVESTORS**

Share_of_Company	int NOT NULL
Owner_Name	varchar(50) NOT NULL
Owner_ID	int NOT NULL
Role	varchar(50) NOT NULL
Contact_Information	varchar(50) NOT NULL



Number_of_Employees	int NOT NULL
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**Primary Key: Owner\_ID**

**Foreign Key: NONE**

## DISCOUNT

Product_ID	varchar(8) NOT NULL
Order_ID	varchar(8) NOT NULL
Order_Date	varchar(10) NOT NULL

**Primary Key: Order\_ID**

**Foreign Key: Product\_ID, Order\_ID**

## SUPPLIER PRIORITY

Cut_to_the_Company	int NOT NULL
Supplier_ID	varchar(8) NOT NULL
Total_Goods	int NOT NULL

**Primary Key: Supplier\_ID**

**Foreign Key: Supplier\_ID**

## REFUND

Within_Date	varchar(5) NOT NULL
Product_Returned	varchar(5) NOT NULL
Order_ID	varchar(8) NOT NULL

**Primary Key: Order\_ID**

**Foreign Key: NONE**

## PAYMENT

Payment_Method	varchar(50) NOT NULL
Payment_Received	varchar(50) NOT NULL

Order_ID	varchar(8) NOT NULL
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**Primary Key: Order\_ID**

**Foreign Key: Order\_ID**

## CATEGORY

Product_Category	varchar(20) not NULL
Product_Name	varchar(20) not NULL
Product_ID	varchar(9) not NULL

**Primary Key: Product\_ID**

**Foreign Key: NONE**

## CART

Product_ID	varchar(9) not NULL
Quantity	int not NULL
Customer_ID	varchar(8) not NULL
Price	varchar(9) not NULL

**Primary Key: Product\_ID, Customer\_ID**

**Foreign Key: NONE**

Products ID 1-2 mil

Supplier ID 2-3mil

Buyer ID 3-4mil

Executive ID 4-5mil

Order ID 5-6 mil

Customer Service ID 6-7mil

Employee ID 7-8 mill

Customer Service Employee ID 8-9 mil

Location ID - 1 - 10k

Owner ID - 10-20k

Delivery Company ID - 20k-30k

## LINKS TO :

### ★ ER diagram

[https://miro.com/app/board/o9J\\_IULTsX8=](https://miro.com/app/board/o9J_IULTsX8=/)

### ★ SQL Code

<https://github.com/resz2/dbms-online-store/blob/main/Sandkart.sql>