Application Description

This application could be an E-commerce Sales and Customer Management System designed to handle online product sales, customer orders, reviews, seller management, and payment processes.

It could also include features for managing sales leads and business segments, making it suitable for a Business-to-Consumer (B2C) or Business-to-Business (B2B) platform.

This application will support an advanced e-commerce application capable of handling product listings, orders, payments, customer feedback, seller management, and even sales lead tracking. Its comprehensive business intelligence makes it adaptable for a variety of commercial and retail needs.

Background

1. *E-commerce Platform*

The application could be used as a full-scale e-commerce platform that supports multiple sellers, tracks orders, processes payments, and gathers customer feedback.

2. *Marketplace for B2B or B2C*

Given the lead management and seller details, the system could be adapted for a B2B marketplace where businesses can manage large transactions and leads, while also supporting regular consumer purchases.

3. *Logistics and Order Tracking*

Detailed order and shipping information combined with geolocation data could power a logistics platform, helping track deliveries and optimize shipping routes.

Features:

1. Product Management:

   The database system will store detailed information about each kind of product, including detailed dimensions, names, categories and product descriptions. Easier for customers and companies to use.

2. Seller Management:

   Sellers are tracked in a separate sellers table, including location details. This supports a multi-selling marketplace where different sellers can list and sell products.

3. Product Description:

   By using the table named as “product_category_name_translation”, our application will allow for the translation of product categories, suggesting that the platform may support multiple languages.

4. Customer Information:

   The customers table contains data on customer locations and unique identifiers. This could be used for personalized customer information, geographical analysis, or targeted marketing.

5. Order Handling:

   This application will track customer orders, including their status, items purchased, seller information, shipping limitation time and associated payments.

6. Payment Handling:

   Payments are tracked in detail, including the type, number of installments, and value, making it flexible for handling various payment methods.

7. Market Status Analysis：

   Use data calculations to display market sales data rankings to merchants or platform operators. Through data analysis, merchants can understand regional purchasing power to facilitate subsequent product distribution planning.

8. Regional Situation Analysis:

   Refine the scope of analysis to designated areas and analyze regional purchasing power and product sales. Corresponding data are obtained through calculations to facilitate macroeconomic analysis in designated areas.

9. User Payment Perference Analysis:

   Analyze user payment method preferences to help formulate corresponding preferential policies and promote sales.

10. Order Review:

    By analyzing users' evaluation scores for products, we can understand the overall evaluation of the corresponding product in the general direction. Then, help corresponding merchants provide product improvement suggestions.

Description of Data:

1. Table: orders
    a. order_id - CHAR(32): The unique id for each order
    b. customer_id - CHAR(32): The unique id for each customer account
    c. order_status – VARCHAR(20): Whether the order is delivered or not
    d. order_purchase_timestamp - TIMESTAMP: Precise purchase time and date for the

customer to place the order

e. order_approved_at - TIMESTAMP: Precise purchase time and date for the bank to approve the payment

f. order_delivered_carrier_date - TIMESTAMP: Precise time and date when the order handed to the shipping company

g. order_delievered_customer_date - TIMESTAMP: Precise time and date when the order was delivered to the customer

h. order_estimated_delivery_date – DATE: Estimated delivery date provided to the customer at the time of purchase

2. Table: order_payments

   a. order_id – CHAR(32) - Unique id for each order

   b. payment_sequential – INTEGER: Order in which each payment method was used to pay for an order

   c. payment_type – VARCHAR(20): Payment method, including credit card, boleto, voucher and so on.

   d. payment_installments – INTEGER: Installments chosen by the customer

   e. payment_value – FLOAT: Transaction value for this order

3. Table: cutomers

   a. customer_id – CHAR(32): Each order is assigned a unique customer account

   b. customer_unique_id – CHAR(32): Unique identifier for each customer, multiple customer accounts may belong to one customer.

   c. customer_zip_code_prefix – CHAR(5): First five digits of the customer's zip code

   d. customer_city – VARCHAR(64): Name of the customer's city

   e. customer_state – CHAR(2): Name of the customer's state

4. Table: products

   a. product_id – CHAR(32): unique id for each product

   b. product_category_name – VARCHAR(64): Main category for that product

   c. product_name_length – INTEGER: Length of the original product's name

   d. product_description_length – INTEGER: Number of the original product's description

e. product_photos_qty – INTEGER: Number of product images

f. product_weight_g – INTEGER: Product weight, in grams

g. product_length_cm – INTEGER: Product length, in centimeters

h. product_height_cm - INTEGER: Product height, in centimeters

i. product_width_cm - INTEGER: Product width, in centimeters

5. Table: order_items

    a. order_id – CHAR(32): Unique id for each order

    b. order_item_id – INTEGER: Sequential number identifying number of items included in the same order

    c. product_id – CHAR(32): unique id for each product

    d. seller_id – CHAR(32): unique id for each seller

    e. shipping_limit_date – TIMESTAMP: The seller's deadline to hand the package to the shipping company

    f. price – FLOAT: cost for the item

    g. freight_value – FLOAT: Item shipping cost

6. Table: order_reviews

    a. review_id – CHAR(32): unique id for each review

    b. order_id – CHAR(32): unique id for each order

    c. review_score – INTEGER: the score that customer gave to the order, varies from 1 to 5

    d. review_creation_date – DATE: the date that this review was created.

7. Table: sellers

    a. seller_id – CHAR(32): the unique id for each seller

    b. seller_zip_code_prefix – CHAR(5): First five digits of the seller's zip code

    c. seller_city – VARCHAR(64): the seller’s city

    d. seller_state – CHAR(2): the seller’s state

8. Table: geolocation

    a. geolocation_zip_code_prefix – CHAR(5): First five digits of the zip code

b. geolocation_lat – FLOAT: Latitude coordinate

c. geolocation_lng – FLOAT: Longitude coordinate

d. geolocation_city – VARCHAR(64): city name

e. geolocation_state – CHAR(2): state code