Database Table Description :

The database structure of our Omnichannel inventory management system is designed to provide an integrated view of inventory data across multiple sales channels and locations. Our system uses normalized tables to ensure data accuracy and consistency, while also providing insight into stock movements, sales trends, and other key performance indicators. The various tables are organized to track product information, customer data, and order details, allowing businesses to make informed decisions about their inventory management strategies.

Our database consists of Product, Customer, Inventory, Store, Purchase Order Item, Purchase Order, Supplier, and Order Tables, each one serving a unique purpose and providing valuable insights into inventory management. With these tables, users can keep track of the availability of products in different warehouses and stores, analyze customer behavior, identify trends, and personalize marketing efforts. Our system also allows users to identify which items are running low and need to be restocked and to manage promotions and special displays in physical stores.

We hope that this comprehensive database structure helps make inventory management streamlined and efficient, allowing businesses to better serve its customers.

Product Table:

The Product table is an essential component of an inventory management system as it allows for efficient tracking of product inventory, reordering, and stock management.

This table stores information about the inventory items in an Omnichannel inventory management system. It contains attributes such as the Product ID (**primary key**), Supplier ID (**foreign key**), Product Name, Description, Category, Price, Selling Price, Quantity in Stock, Minimum Stock, Maximum Stock, Reorder Level, Last Order Date, Last Received Date, and Location.

Field Name	Data Type	Description
PRODUCT_ID (PK)	VARCHAR (50)	A unique identifier for the product.
SUPPLIER_ID (FK)	VARCHAR (50)	A unique identifier for the supplier of the product.
PRODUCT_NAME	VARCHAR (255)	Name of the product
DESCRIPTION	TEXT	Brief description of the product
CATEGORY	VARCHAR (50)	Brief description of the product category
PRICE	DECIMAL (10,2)	The cost of acquiring the product
SELLING_PRICE	DECIMAL (10,2)	The price at which the product is sold to customers
QTY_IN_STOCK	INT	The number of units of the product available in stock
MIN_STOCK	INT	The minimum quantity of the product that should be kept in stock.
MAX_STOCK	INT	The maximum quantity of the product that should be kept in stock.
REORDER_LVL	INT	The quantity of the product that should trigger a reorder.
LAST_ORDER_DATE	DATE	The date when the product was last ordered.
LAST_RECEIVED_DATE	DATE	The date when the product was last received.
LOCATION	VARCHAR (10)	The location within the inventory where the product is stored.

Customer Table:

The customer table is an important component of an inventory management system as it allows for efficient tracking of customer information, sales records, and order history. This table information can be used to analyze customer behavior, identify trends, and personalize marketing efforts considering their ORDER_HISTORY.

The table includes attributes such as Customer ID (**primary key**), First Name, Last Name, Email, Contact Number, Billing Address, Shipping Address, Total Amount Spent, Reward Points, Last Purchase Date, and Order History.

Field Name	Data Type	Description
CUSTOMER_ID (PK)	INT	A unique identifier for the customer
FIRST_NAME	VARCHAR (50)	The name of the customer
LAST_NAME	VARCHAR (50)	The last name of the customer
EMAIL	VARCHAR (50)	The email address of the customer
CONTACT_NUM	NUMBER	The phone number of the customer
BILLING_ADDRESS	VARCHAR (50)	The customer billing address.
SHIPPING_ADDRESS	VARCHAR (50)	The product shipping address.
TOTAL_AMT_SPENT	DECIMAL (10,2)	The total amount of money that the customer has spent on purchases.
REWARD_PTS	INT	Total reward points are collected by the customer after each order is processed.
LAST_PURCHASE_DATE	DATE/TIME	The date of the customer's last purchase.
ORDER_HISTORY	VARCHAR (50)	A record of all the purchases made by the customer.

Inventory Table:

The Inventory table is a part of the Omnichannel inventory management system and stores information about the quantity of products available in warehouses and stores. It contains attributes such as INVENTORY_ID (**primary key**), PRODUCT_ID (**foreign key**), WAREHOUSE_ID (**foreign key**), STORE_ID (**foreign key**), QTY_IN_STOCK, EXPECT_DELIVERY_DATE, and UNITS_ON_ORDER. This table allows users to keep track of the availability of products in different warehouses and stores, as well as the expected delivery date and quantity of products on order.

In this Omnichannel system, the inventory table is updated in real-time as sales and shipments occur.

Field Name	Data Type	Description
INVENTORY_ID (PK)	INT	Unique identifier for each product in the inventory.
PRODUCT_ID (FK)	INT	Unique identifier for each product in the inventory.

WAREHOUSE_ID (FK)	INT	Unique identifier for each warehouse in the inventory.
STORE_ID (FK)	INT	Unique identifier for each store in the inventory.
QTY_IN_STOCK	INT	The current quantity of the product available for sale.
EXPECT_DELIVERY_DATE	DATE	The date when new stock is expected to arrive.
UNITS_ON_ORDER	INT	The quantity of the product that has been ordered.

Store Table:

The Store table is part of an Omnichannel inventory management system, which stores detailed information about physical stores. The table contains the store's unique identifier (STORE_ID) as **primary key**, Franchise name (STORE_NAME), contact information (STORE_CONTACT), city (CITY), province (PROVINCE) and postal code (POSTAL_CODE). This table allows users to track and manage inventory across multiple physical stores through STORE_ID with the Product table.

This table provides an up-to-date view of the available stock levels of each product in the store and can be used to quickly identify which items are running low and need to be restocked. The store table can also be used to help manage promotions and special displays considering the store.

Field Name	Data Type	Description
STORE_ID (PK)	INT	The unique identifier for each store in the inventory
STORE_NAME	VARCHAR	Store name description
STORE_CONTACT	INT	The store’s contact information
CITY	VARCHAR	The city where the store is located
PROVINCE	VARCHAR	The province where the store is located
POSTAL_CODE	VARCHAR	The postal code of the store

Purchase Order Item Table:

The Purchase Order Item table is part of an Omnichannel inventory management system. It contains information about the items that have been ordered from suppliers. For each item, the table stores a unique ITEM_ID as the **primary key**, the PURCHASE_ORDER_ID as a **foreign key** referencing the parent purchase order, the PRODUCT_ID as **foreign key** referencing the specific product, the quantity of the item ordered, the price, the subtotal, and the amount of tax applied.

This table allows for easy tracking of purchases, cost associated with each item, and inventory.

Purchase Order Item table stores information about each item that is included in the purchase done through each supplier linking with foreign keys, PURCHASE_ORDER_ID and SUPPLIER_ID.

Field Name	Data Type	Description
ITEM_ID (PK)	INT	The unique identifier for each item in the purchase order
PURCHASE_ORDER_ID (FK)	INT	Unique identifier for the purchase order
PRODUCT_ID (FK)	INT	Unique identifier for the product being ordered.
QTY	INT	The quantity of the product being ordered.
PRICE	DECIMAL	The price of the product being ordered.
SUBTOTAL	DECIMAL	The total cost of the product.
TAX	DECIMAL	The tax amount for the product being ordered

Purchase Order Table:

Purchase Order table in our Omnichannel inventory management system is a database table that stores information regarding the purchase orders sent to suppliers, where PURCHASE_ORDER_ID serves as the **primary key** and SUPPLIER_ID as the **foreign key** referencing the SUPPLIER Table.

The purchase order table is used to track the items that have been ordered from each supplier and the estimated delivery date. The Purchase Order table can be used to quickly identify which items have been ordered and which items need to be ordered to restock the inventory. The purchase order table also stores information such as the supplier's tax, shipping, and total cost of the order.

Field Name	Data Type	Description
PURCHASE_ORDER_ID (PK)	INT	Unique identifier for the purchase order
SUPPLIER_ID (FK)	INT	Unique identifier for the supplier
PURCHASE_ORDERDATE	DATE	The purchase order date the product is being ordered.
DELIVERY_DATE	DATE	The delivery date product being ordered.
TAX	DECIMAL	The tax amount for the product being ordered
SHIPPING	DECIMAL	Shipping charges are associated with the purchase order.
TOTAL_COST	DECIMAL	The price of the product being ordered.

Supplier Table:

Supplier table in an inventory database management system is a database table that stores information about the suppliers of each item in the inventory.

The Supplier table is used to track the source of each item and the cost associated with each supplier. The Supplier table can be used to identify the most cost-effective supplier and ensure that the items in the inventory are purchased from the most reliable and cost-efficient supplier by connecting with the **primary key** SUPPLIER_ID.

Field Name	Data Type	Description
SUPPLIER_ID (PK)	INT	Unique identifier for the purchase order
SUPPLIER_NAME	VARCHAR (50)	The supplier's name
CONTACT_PERSON	VARCHAR (50)	The supplier contacts person details.
CITY	VARCHAR (50)	The city where the supplier is located.
PROVINCE	VARCHAR (50)	The state or province where the supplier is located
POSTAL_CODE	VARCHAR (50)	ZIP code of the supplier location.
PHONE	INT	The phone number of the supplier's primary contact person.
EMAIL	VARCHAR (50)	The email address of the supplier.

Warehouse Table:

The Warehouse table is part of an Omnichannel inventory management system and contains information about the physical warehouses that store inventory.

It contains attributes such as Warehouse ID (**primary key**), Warehouse Name, City, Province, Postal Code, Warehouse Phone, and Warehouse Email.

This table is used to track where inventory is stored, so the appropriate warehouse can be identified when orders are placed, connecting through WAREHOUSE_ID to Inventory Table.

Field Name	Data Type	Description
WAREHOUSE_ID (PK)	INT	Unique identifier for the warehouse
WAREHOUSE_NAME	VARCHAR (50)	The warehouse name
CITY	VARCHAR (50)	The city where the warehouse is located.
PROVINCE	VARCHAR (50)	The state or province where the warehouse is located
POSTAL_CODE	VARCHAR (50)	ZIP code of the warehouse location.
WAREHOUSE_PHONE	INT	The phone number of the warehouse's primary contact person.
WAREHOUSE_EMAIL	VARCHAR (50)	The email address of the warehouse.

Order Table:

The Order table stores information related to orders placed by customers in an Omnichannel inventory management system.

The table contains the Order ID (**primary key**) which is used to identify each order uniquely; the Customer ID (**foreign key**) that links to the customer who placed the order; the Order Date, which is the date the order was placed, the Order Status which is the current status of the order, and the Payment Status which is the current status of the payment associated with the order.

Field Name	Data Type	Description
ORDER_ID (PK)	INT	Unique identifier for order item id
CUSTOMER_ID (FK)	INT (50)	Customer unique identifier
ORDER_DATE	DATE	The date of order detail
ORDER_STATUS	VARCHAR (50)	The status of the order.
PAYMENT_STATUS	VARCHAR (50)	The status of the payment

Order Item Table:

The Order Item table is part of an Omnichannel inventory management system, and stores information regarding items that are placed in an order.

It contains a unique Order Item ID to identify each item as the **primary key**, as well as references to the Order ID and Product ID that the item pertains to as **foreign key**.

The table also stores information regarding the quantity, price and subtotal of each item ordered. This table allows for quick and easy management of order items, enabling accurate inventory tracking and streamlined ordering processes.

Field Name	Data Type	Description
ORDERITEM_ID (PK)	INT	Unique identifier for the Order item
ORDER_ID (FK)	INT	Unique identifier for order item id
PRODUCT_ID (FK)	INT	Unique identifier for the product being ordered.
QTY	INT	The total quantity of order item
PRICE	DECIMAL (10,2)	The price of the ordered item
SUBTOTAL	DECIMAL (10,2)	The total amount of order item