Household Appliance Store

This project models a household appliance store that sells products like washing machines, refrigerators, microwaves, and more directly to customers.

The store needs to:

* Keep track of products from different suppliers.
* Manage inventory levels and restock products.
* Record orders placed by customers handled by employees.
* Monitor the status of orders: Pending, Shipped, or Delivered.
* Allow analytical reporting for recent quarters.
* Provide secure access for managers to view reports without modifying data.

Conceptual Model

Main entities: Supplier, Product, Customer, Employee, Orders, Order\_Item, Inventory. Relationships between tables were mapped, including a many-to-many relationship between Orders and Products through the Order\_Item table.

Logical Model

Based on Conceptual Model, defines data types of all columns, constraints, including primary and foreign keys. Serial data type is used for surrogate primary keys.

Physical Model

Created the database household\_appliances\_store and the schema appliances\_store.

Constraints

Added CHECK constraints for more accurate data such as price > 0, quantity > 0, created\_at date <= current\_date. Also, there are constraints so that only specified words can be inputted. Multiple DEFAULT constraints are also added, for instance updated\_at column, the default value for which is current\_date. Finally, a generated always as column in employee table which takes first\_name, last\_name and created a full\_name column.

Input

Inserted 6 rows of data per table, without inputting auto generated values (serial). Also, made sure that all the dates are from the last 3 months.

Functions

Two SQL functions were created.

1. The function takes 3 input values for replacing a value in the employee table. It takes as input the column name and row number and the new value that should replace the previous one.
2. The function creates a new order record inside table orders. It takes as input all the details of the new order: order date, employee\_email, customer\_email, order\_status. Based on the 2 emails the function retrieves the ids of the employee who conducted the order and the customer who made the order. After that the data is input inside the orders table and an output message is returned about the successful completion of the function.

Views

Created a view that takes all the analytical data of order that were made during the last quarter. For that the quarter dates are calculated, and the order\_date is checked to be between last quarter start date and the end of the quarter. And the data that is connected, even from other tables to the order is returned.

Role

A role is created so that the users can access the tables (login) and view the data inside tables.