

A PROJECT REPORT ON

"FOOD DELIVERY DATABASE SYSTEM"

MSIS-5643



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"FOOD DELIVERY DATABASE SYSTEM"

SUBMITTED BY

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UNDER THE GUIDANCE OF Dr. ALI AMIRI

A REPORT SUBMITTED IN PART FULFILMENT OF THE PROJECT AND COURSE MSIS-5643



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Executive Summary

Business Description:

Our Database is a Food Delivery Database system which performs orders as per customer requests and has information about orders, delivery, customer details, and menu form where the customer's order the food. Once the customer places an order, employees receive the orders and only after the payment is done, he updates the status as done. The customer can then track the status of his order by checking the status information from the portal which he logs in. Once the order is prepared, the delivery team picks up the food and delivers it to the customer and updates the status as 'Delivered'. The administrator can add and edit food items in the menu and he can also fetch the details of total orders or total sales made in a day. Based on the total amount of sales made in a day, the Manager can assess the progress of his business.

Type of User:

It is used by administrators of our database to keep track on the customer order requests and deal with the orders and delivery. Our employees receive the orders, Delivery team takes care of the delivery of the food items to the customer, customers can track the order status. The Manager of the business takes care of the total sales in a day and number of orders.

Features and Functions:



Manage the customers and their orders, track the order by the delivery status and maintaining the details of the price of food items. We can also keep track of the total sales and total number of orders generated in a single day.

Business Rules:

- A customer can place zero, one or many orders.
- A customer address can be associated with only one address and one phone number.
- The customer must have valid login details.
- Every order can have zero or multiple deliveries depending on the quantity of products.
- One order can have multiple order items
- Multiple order item id can have one order id.
- One order item can have one or more foods.
- Each food item may have one or more order items.
- A delivery date cannot be prior to the order date.



Data Dictionary

Entity Name	Description	Aliases	Occurrence
Customer_detai	It describes all the customers	Order_detail	Each customer places 0 or many
1	Information.		orders.
Delivery	It describes all the delivery details.	Order_detail	Every order can have 0 or more deliveries depending on the quantity of food items.
Menu	It describes the food items.	Order_item	Each food item may have 0 or more order items.
Order_item	It describes the order items depending on the quantity and the total prices.	Order_detail	Each order may have 1 or many order items.

Entity name	Multiplicity	Relationship	Multiplicity	Entity name
Customers	0:1	places	0: *	orders
Order_item	0: *	has	0:1	Orders
Menu	0:1	Fetched	0: *	Order_items
order	0:1	reserves	0: *	Delivery

Entity name	Attributes	Description	Data type and length	Null s	Multivalued
Customer_Detai	Cust_ID	It shows the Id of the customer	Number[10]	No	No



	First_Name	First name of the customer	Varchar2[25]	No	No
	Last_Name	Last name of the customer	Varchar2[25]	No	No
	Login_ID	Login ID of the customer	Varchar2[25]	No	No
	Login_Password	Login password of the customer to login	Varchar2[15]	No	No
	Email_ID	Email id of the customer	Varchar2[20]	No	No
	House_Number	House Number of the customer	Varchar2[5]	No	No
	Street	Street in which the customer lives.	Varchar2[25]	No	No
	City	City in which the customer is located	Varchar2[25]	No	No
	State	State in which the customer is located	Varchar2[25]	No	No
	Phone_number	Gives the contact number of the customer	Number[10]	No	No
	Zipcode	Zip code of the area where customer resides.	Number[9]	No	No
Order_Detail	Order_ID	It shows the order id	Varchar2[10]	No	No
	Cust_ID	It shows the customer id	Number[10]	Yes	No
	Order_Date	It shows the date of order placed	Timestamp	No	No
	Order_Status	It gives the status of order placed	Varchar2[25]	No	No
Delivery	Delivery_ID	It shows the delivery id	Varchar2[10]	No	No
	Order_ID	It shows the order id	Varchar2[10]	Yes	No



	Delivery_Datetim e	It shows the delivery date time.	Timestamp	No	No
	Delivery_Status	It shows the date its delivered	Varchar2[15]	No	No
Order_item	Order_item_id	It shows the order item id	Number[10]	No	No
	Food_ID	It gives food item id	Number[10]	Yes	No
	Order_ID	It shows order id	Varchar2[10]	No	No
	Quantity	It shows the quantity	Number[2]	No	No
Menu	Food_ID	It gives food item id	Number[10]	No	No
	Food_Name	It gives name of food item	Varchar2[150]	No	No
	Food_Price	It shows the food item price	Number[4,2]	No	No

List of Entities

- Customer_Detail
- Order_Detail
- Delivery
- Order_Item
- Menu

List of Attributes & Constraints



• Customer_Detail:

- 1. Cust_Id NUMBER(10)
- 2. First_Name VARCHAR2(25)
- 3. Last Name VARCHAR2(25)
- 4. Login ID VARCHAR2(25)
- 5. Login_Password VARCHAR2(25)
- 6. Email_ID VARCHAR2(25)
- 7. City VARCHAR2(25)
- 8. State VARCHAR2(25)
- 9. Phone Number NUMBER(10)
- 10. Zipcode NUMBER(9)

• Order_Detail:

- 1. Order ID VARCHAR2(10)
- 2. Cust ID NUMBER(10)
- 3. Order Date TIMESTAMP
- 4. Order_Status VARCHAR2(25)

• Menu:

- 1. Food ID NUMBER(10)
- 2. Food Name VARCHAR2(150)



3. Food_Price – NUMBER(4,2)

• Order_Item:

- 1. Order_item_ID NUMBER(10)
- 2. Food ID NUMBER(10)
- 3. Order_ID VARCHAR2(10)
- 4. Quantity NUMBER(2)

• Delivery:

- 1. Delivery ID VARCHAR2(10)
- 2. Order ID VARCHAR2(10)
- 3. Delivery Datetime TIMESTAMP
- 4. Delivery_Status VARCHAR2(15)

Primary & Foreign Keys

• Primary Keys:

- 1. Customers: Cust ID
- 2. Menu: Food ID
- 3. Order_Detail: Order_ID
- 4. Delivery: Delivery_ID



- 5. Order Item: order item ID
- Foreign Keys:
- 1. Order_Detail: Cust_ID
- 2. Delivery: order ID
- 3. Order item: (Food ID, order ID)

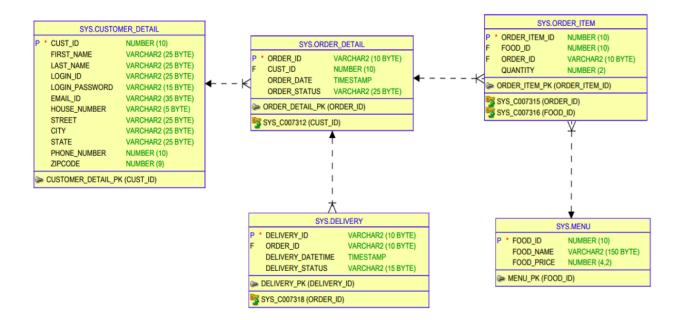
Referential Integrity Constraints

The referential integrity constraints can be observed in the following attributes.

- 1. Cust id from ORDER DETAIL refers to cust id of CUSTOMER DETAIL.
- 2. Food_id from ORDER_ITEM refers to Food_id of MENU.
- 3. Order_id from ORDER_ITEM refers to order_id of ORDER_DETAIL.
- 4. Order id from DELIVERY refers to order id of ORDER DETAIL

ER Model





In Entity-Relationship diagram (ERD), every relation between the entities are described.

• Customer --- Places --- Order

The customer can place several orders; the customer entity holds the attributes describing the properties of customer. The Order entity holds attributes concerning the details related to order such as Order date and time along with the status of the order.

• Order --- has --- Order item

An order has several order items; The Order item entity entails the attributes concerning the food items and the quantities of each of these food items.



• Menu--- Fetched from --- Order Item

The Order Item is a compilation of zero, one or more food items. An order item contains the details of each food item and the quantity in which it has been ordered. All the food item details are being fetched from the Menu entity which has the information about the food item ID and food item description.

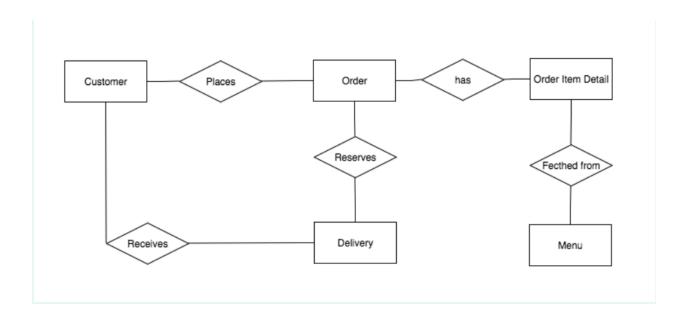
• Delivery --- Reserves --- Order

A delivery reserves the order and ever every order can have zero or multiple deliveries depending on the quantity of products. The delivery entity comprises delivery status and delivery time information.



Relational Model

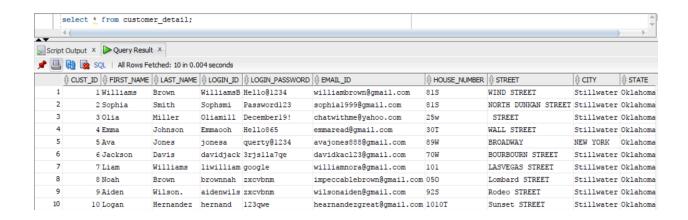
The below diagram shows the relational schema of the database. It is derived from the Entity-Relationship diagram.





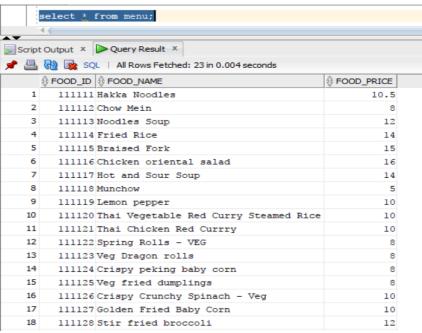
Creating Tables of FOOD DELIVERY Database

• Customers Table



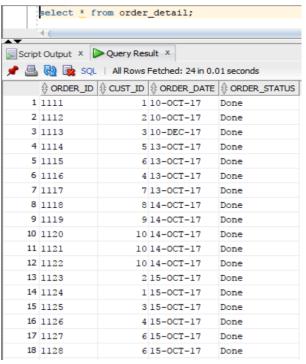
• Menu Table



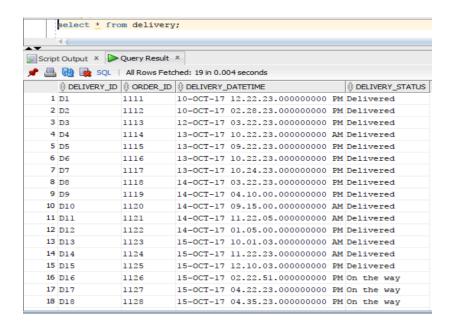


• Orders Table



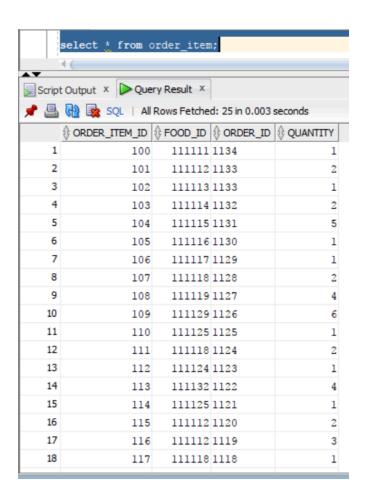


• Delivery Table





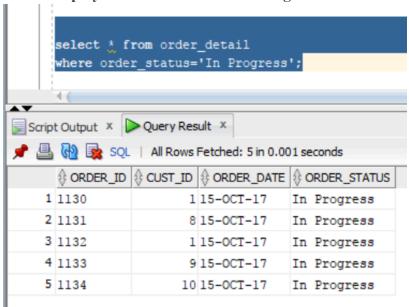
• Order Items Table





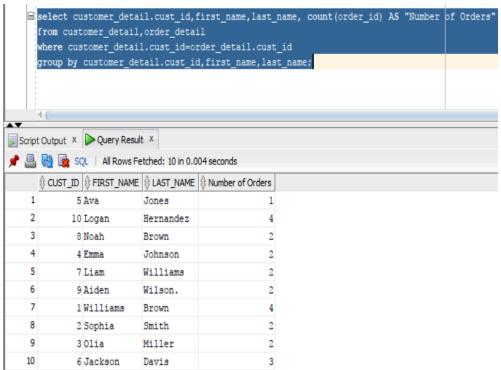
Query Operations on Database

• Display all orders that are "In Progress" Status.

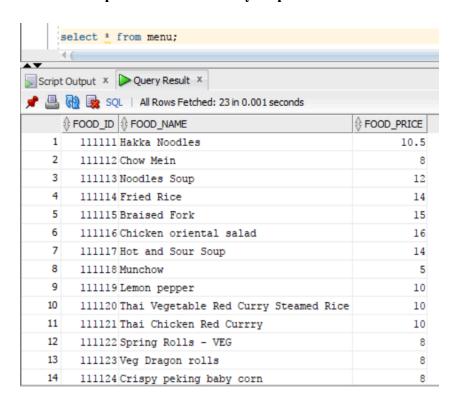


• Number of orders placed by each customer.

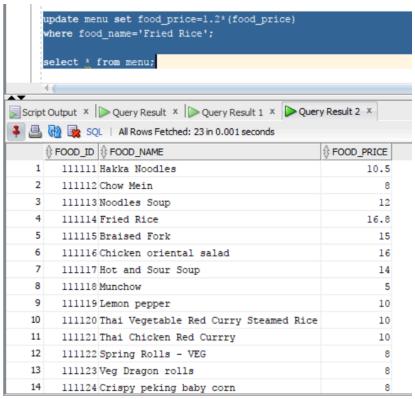




• Increase the price of Fried Rice by 20 percent.

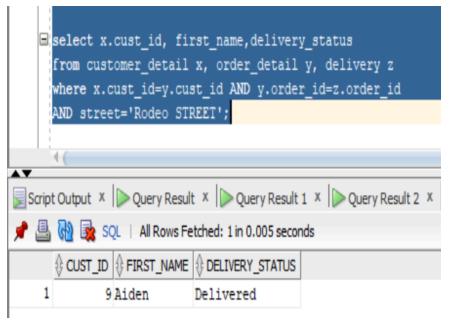




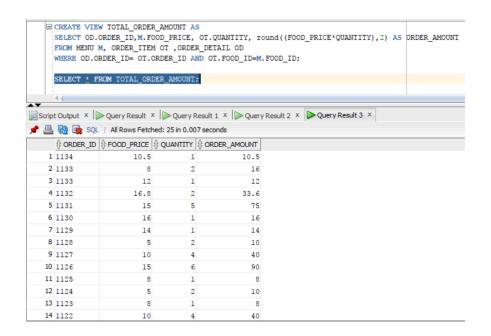


• What is the delivery status of the customer who stays in "Rodeo Street"?



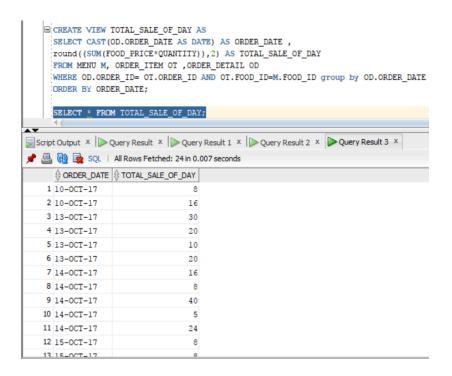


• Below view will give us the total order amount.

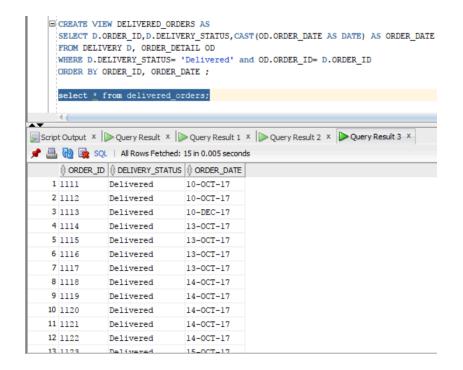




• Below view will give the Total sale for a day.

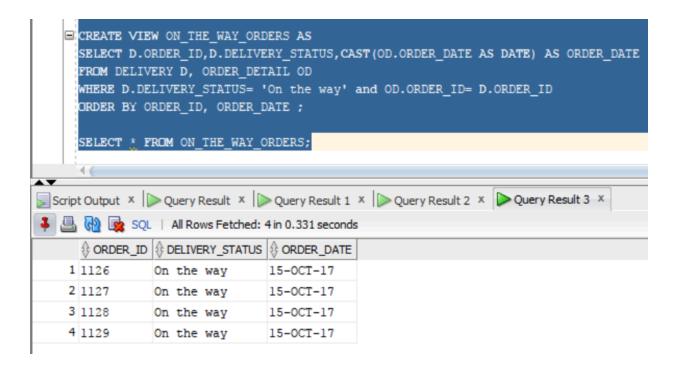


• Below view will give us the delivered order details.



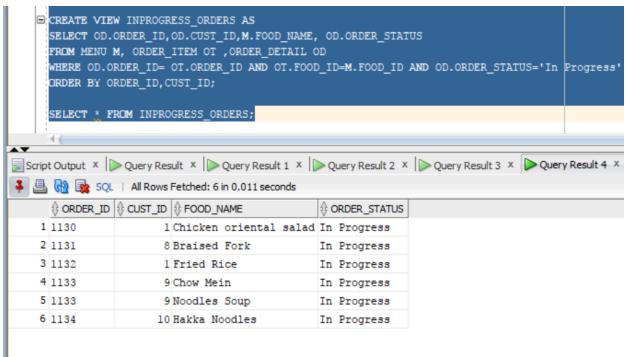


• Below view will give us "on the way" order details.



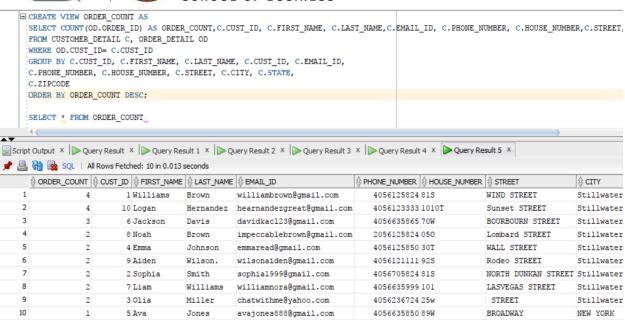
• Below view will give us in-progress order details.





• Below view will give us details about number of times each customer ordered food







Applications

Administrator side database is assimilated into every company that runs on the principle of Food delivery systems like Panda Express, Tapingo or dealing with customers.

Conclusion

References



- https://www.oracle.com/downloads/index.html
- https://www.w3schools.com/sql/DEfaULT.asP
- https://www.tutorialspoint.com/sql/