

Database Queries:

1. Display the count of all the tables in the schema

```
select 'Customer' as Table_name,count(*) as count_of_tables from [dbo].[Customer]
union

select 'Address',count(*) from [dbo].[Address]
union

select 'Delivery Partner',count(*) from [dbo].[Delivery_Partner]
union

select 'Coupons',count(*) from [dbo].[Coupons]
union

select 'Delivery Rating',count(*) from [dbo].[Delivery_Rating]
union

select 'Items',count(*) from [dbo].[Items]
union

select 'Order',count(*) from [dbo].[Order]
union

select 'Payment',count(*) from [dbo].[Payment]
union

select 'Order Quantity',count(*) from [dbo].[Order_Quantity]
union

select 'Restaurant Rating',count(*) from [dbo].[Restaurant_Rating]
union

select 'Restaurants',count(*) from [dbo].[Restaurants];
```

The screenshot shows the Microsoft SQL Server Management Studio interface. In the center, there is a results grid titled 'Results' with the following data:

Table_name	count_of_tables
Address	100
Coupons	10
Customer	50
Delivery Partner	25
Delivery Rating	10
Items	20
Order	15
Order Quantity	15
Payment	2
Restaurant Rating	10
Restaurants	25

Below the grid, a message bar indicates: 'Query executed successfully.' and '(local) (15.0 RTM) SIBY\sibya (64) MGS613_DBMS 00:00:00 11 rows'.

2. Display the customer first name and last name, concat it as full_name, phone number, email address, and the maximum orders submitted by each customer

```
select Customer_First_Name || ' ' || Customer_Last_Name as Customer_Full_Name,
```

```
Phone_Number, Email_Address,
```

```
count(pk_order_id) as order_count
```

```
from [dbo].[Customer]
```

```
left join [dbo].[Order] on PK_Customer_ID=FK_Customer_ID
```

```
group by Customer_First_Name, Customer_Last_Name, Phone_Number, Email_Address
```

```
order by order_count desc;
```

The screenshot shows the Microsoft SQL Server Management Studio interface. In the top bar, the title is "SQLQuery3.sql - (local).MGS613_DBMS (SIBY\sibya (64))* - Microsoft SQL Server Management Studio". The toolbar includes standard options like File, Edit, View, Query, Project, Tools, Window, Help, and various icons for navigating between queries and objects.

The main area contains two tabs: "SQLQuery3.sql" and "SQLQuery2.sql". The "SQLQuery2.sql" tab is active and displays the following SQL query:

```

--Display the customer first name and last name, concat it as full_name, phone number, email address, and the maximum orders submitted by each customer
select concat(Customer_First_Name, ' ', Customer_Last_Name) as Customer_Full_Name, Phone_Number, Email_Address, count(pk_order_id) as order_count
from [dbo].[Customer]
left join [dbo].[Order] on PK_Customer_ID=FK_Customer_ID
group by Customer_First_Name, Customer_Last_Name, Phone_Number, Email_Address
order by order_count desc;

```

Below the query, the results are displayed in a table:

	Customer_Full_Name	Phone_Number	Email_Address	order_count
1	Inez Kenrat	466-436-3747	ikenrat1@buzzfeed.com	3
2	Samantha Stenson	900-338-7394	sstenson2@barnesandnoble.com	2
3	Winn Bunney	865-655-1929	wbunney5@nymag.com	1
4	Rand Pavlov	206-477-1982	rpavlove@umich.edu	1
5	Ruprecht Maase	360-317-5601	rmaase0@networksolutions.com	1
6	Jourdain Hypkiewicz	827-468-1667	jhypkiewicz3@opera.com	1
7	Amberly Haislip	466-737-0560	ahaislip@mozilla.com	1
8	Briano Henkmann	925-999-8122	bhenkmann8@blinklist.com	1
9	Christy Fishley	554-326-7659	cfishley9@hc360.com	1
10	Corbett People	574-838-6408	cpeople7@diigo.com	1
11	Dewie Kettell	699-576-7766	dkettella@jathis.com	1

A message at the bottom of the results pane says "Query executed successfully." The status bar at the bottom right shows "(local) (15.0 RTM) SIBY\sibya (64) MGS613_DBMS 00:00:00 50 rows".

3. Display the restaurant name and the item that was ordered the maximum times

```

select Restaurant_Name,Item_Name,count(fk_item_id) items_count from
[dbo].[Order_Quantity]
inner join [dbo].[Order] on FK_Order_ID=PK_Order_ID
inner join [dbo].[Items] on FK_Item_ID=PK_Item_ID
inner join [dbo].[Restaurants] on FK_Restaurant_ID=PK_Restaurant_ID
group by Restaurant_Name,Item_Name
order by items_count desc;

```

SQLQuery3.sql - (local).MGS613_DBMS (SIBY\sibya (64))* - Microsoft SQL Server Management Studio

```
--Display the restaurant name and the item that was ordered the maximum times
select Restaurant_Name,Item_Name,count(fk_item_id) items_count from
[dbo].[Order_Quantity]
inner join [dbo].[Order] on FK_Order_ID=PK_Order_ID
inner join [dbo].[Item] on FK_Item_ID=PK_Item_ID
inner join [dbo].[Restaurant] on FK_Restaurant_ID=PK_Restaurant_ID
group by Restaurant_Name,Item_Name
order by items_count desc;
```

Results Messages

	Restaurant_Name	Item_Name	items_count
1	Red Robin	Chef	3
2	Texas Roadhouse	Hot Sea	2
3	Texas Roadhouse	Oriental Chicken	2
4	Zetis	Piccolo	1
5	Buffalo burger	Taco Salad	1
6	Buffalo burger	Italian Salad	1
7	Buffalo burger	Margherita Pizza	1
8	Zetis	Mediterranean Salad	1
9	Red Robin	Chicken Salad	1
10	Hens Nest	Greek Salad	1
11	Hens Nest	Hawaiian	1

Query executed successfully.

(local) (15.0 RTM) SIBY\sibya (64) MGS613_DBMS 00:00:00 11 rows

4. Display the item details, price and the overall average price of the items

```
select Item_Name, Ingredients, Price, Calories, avg(price) over () Overall_Average_Price
from [dbo].[Items]
```

SQLQuery3.sql - (local).MGS613_DBMS (SIBY\sibya (64))* - Microsoft SQL Server Management Studio

```
--Display the item details, price and the overall average price of the items
select Item_Name, Ingredients, Price, Calories, avg(price) over () Overall_Average_Price
from [dbo].[Items]
```

Results Messages

	Item_Name	Ingredients	Price	Calories	Overall_Average_Price
1	Margherita Pizza	Tomato Sauce, Mozzarella, Basil	8	350	6
2	Piccolo	Mushrooms, Mozzarella	9	300	6
3	Marinara	Cheese, Onions, Shrimp, Tama	10	350	6
4	Hot Sea	Shrimp, Cheese, Tama, Chili	11	250	6
5	Oriental Chicken	Chicken, Mushrooms, Pepper, Cheese, Onion	5	200	6
6	Hawaiian	Ham, Pineapple, Mozzarella	4	300	6
7	Greek Salad	Fresh mixed green topped with tomatoes, red onion...	4	200	6
8	Caesar Salad	Chicken, parmesan, lemon, caesar sauce	3	250	6
9	Italian Salad	Classic antipasti, green olives, feta	5	300	6
10	Taco Salad	Ground beef, veggies, cheese, salsa, sour cream, ...	6	200	6
11	BBQ Salad	Cherry, green onions, sweet BBQ's sauce	4	250	6
12	Mediterranean Salad	Shrimps, Salmon, cherry mint	5	300	6
13	Chicken Salad	Cherry chicken, red onion, olives, peprika	6	250	6
14	Chef	Roast beef, cheese, eggs, olives	9	250	6
15	Crispy chicken wrap cheese & curry with chips	Chips, chicken, cheese, Mayonaise	8	350	6
16	Fries	Potato, oil	3	300	6
17	Bombaloni Beans	Butter beans, garlic, herbs, butter, extra virgin olive...	4	350	6
18	Fresh Oysters	Oysters	8	150	6
19	Fish Sticks	Fish, Tartar sauce	9	250	6
20	Kids Grilled Cheese Sandwich	Cheddar cheese, grilled pain de mie	6	300	6

Query executed successfully.

(local) (15.0 RTM) SIBY\sibya (64) MGS613_DBMS 00:00:00 20 rows

5. Display the customer who has ordered the most number of times

```
Select Customer_Full_name, Count_Of_Orders from
(
    select Customer_Full_name, Count_Of_Orders, DENSE_RANK() over (order by
        Count_Of_Orders desc) drnk
    from
    (
        select Concat(Customer_First_Name, ' ', Customer_Last_Name) as
Customer_Full_Name, COUNT(pk_order_id) as Count_Of_Orders from [dbo].[Order_Quantity]
        inner join [dbo].[Order] on FK_Order_ID=PK_Order_ID
        inner join [dbo].[Customer] on FK_Customer_ID=PK_Customer_ID
        group by Concat(Customer_First_Name, ' ', Customer_Last_Name)
    ) as Order_details
) as Max_orders
where drnk=1;
```

```

--Display the customer who has ordered the most number of times
Select Customer_Full_name, Count_of_Orders
from (
    select Customer_Full_name, Count_of_Orders, DENSE_RANK() over (order by Count_of_Orders desc) drnk
    from (
        select Concat(Customer_First_Name, ' ', Customer_Last_Name) as Customer_Full_Name, COUNT(pk_order_id) as Count_of_Orders from [dbo].[Order_Quantity]
        inner join [dbo].[Order] on FK_Order_ID=PK_Order_ID
        inner join [dbo].[Customer] on FK_Customer_ID=PK_Customer_ID
        group by Concat(Customer_First_Name, ' ', Customer_Last_Name)
    ) as Order_Details
) as Max_orders
where drnk=1;

```

Customer_Full_name	Count_of_Orders
Inez Kenrat	3

Query executed successfully.

6. Display the Restaurant who has received the maximum number of orders

Select Restaurant_Name, Count_of_Orders from

(

select Restaurant_Name, Count_of_Orders, DENSE_RANK() over (order by Count_of_Orders

desc) drnk

from

(

select Restaurant_Name, count(pk_order_id) as Count_of_Orders

from [dbo].[Order_Quantity]

inner join [dbo].[Order] on FK_Order_ID=PK_Order_ID

inner join [dbo].[Items] on FK_Item_ID=PK_Item_ID

inner join Restaurants on FK_Restaurant_ID=PK_Restaurant_ID

group by Restaurant_Name

) as Order_details

) as Max_orders

where drnk=1;

The screenshot shows the Microsoft SQL Server Management Studio interface. In the Object Explorer, there is a connection to 'MGS613_DBMS'. In the center pane, three tabs are open: 'SQLQuery3.sql - (local)\MGS613_DBMS (SIBY\sibya (64))*', 'SQLQuery2.sql - (local)\SIBY\sibya (70)*', and '~vsE406.sql - (local)\MS (SIBY\sibya (58))*'. The first tab contains a complex SQL query that joins multiple tables (Order_Quantity, Order, Item, Restaurants) to find the top two restaurants by order count. The results are displayed in a table:

Restaurant_Name	Count_of_Orders
Red Robin	4
Texas Roadhouse	4

At the bottom of the results window, a message says 'Query executed successfully.' and shows '(local) (15.0 RTM) SIBY\sibya (64) MGS613_DBMS 00:00:00 2 rows'.

7. Display the restaurants with the 2nd highest overall restaurant rating

```
Select * from
(
  Select PK_Restaurant_ID, Restaurant_Name, dense_rank() over (order by
    Overall_Restaurant_Rating desc) as RNK
  from Restaurants
) as rest_ratings
where RNK=2;
```

SQLQuery3.sql - (local).MGS613_DBMS (SIBY\sibya (64))* - Microsoft SQL Server Management Studio

```
--Display the restaurants with the 2nd highest overall restaurant rating.

Select * from
(
  Select PK_Restaurant_ID, Restaurant_Name, dense_rank() over (order by Overall_Restaurant_Rating desc) as RNK
  from Restaurants
) as rest_ratings
where RNK=2;
```

Results

PK_Restaurant_ID	Restaurant_Name	RNK
20	Japanese Sushi	2
11	Storming Crab	2
5	Red Robin	2
2	Hens Nest	2

Query executed successfully.

8. Display the details of the coupon that offers the highest discount with the next discount juxtaposed.

Select Coupon_Code, Coupon_Name, Discount, lag(Discount,1,0) over(order by Discount desc) from Coupons;

SQLQuery3.sql - (local).MGS613_DBMS (SIBY\sibya (64))* - Microsoft SQL Server Management Studio

```
--Display the details of the coupon that offers the highest discount with the next discount juxtaposed.

Select Coupon_Code, Coupon_Name, Discount, lag(Discount,1,0) over(order by Discount desc)
from Coupons;
```

Results

Coupon_Code	Coupon_Name	Discount	(No column name)
1	M48yP	2	0
3	F16pp	2	2
5	W42m3	2	2
9	O93bQ	2	2
10	A73nH	2	2
6	D83zA	1	2
7	F78pR	1	1
8	W20mw	1	1
4	I32wX	1	1
2	K49vx	1	1

Query executed successfully.

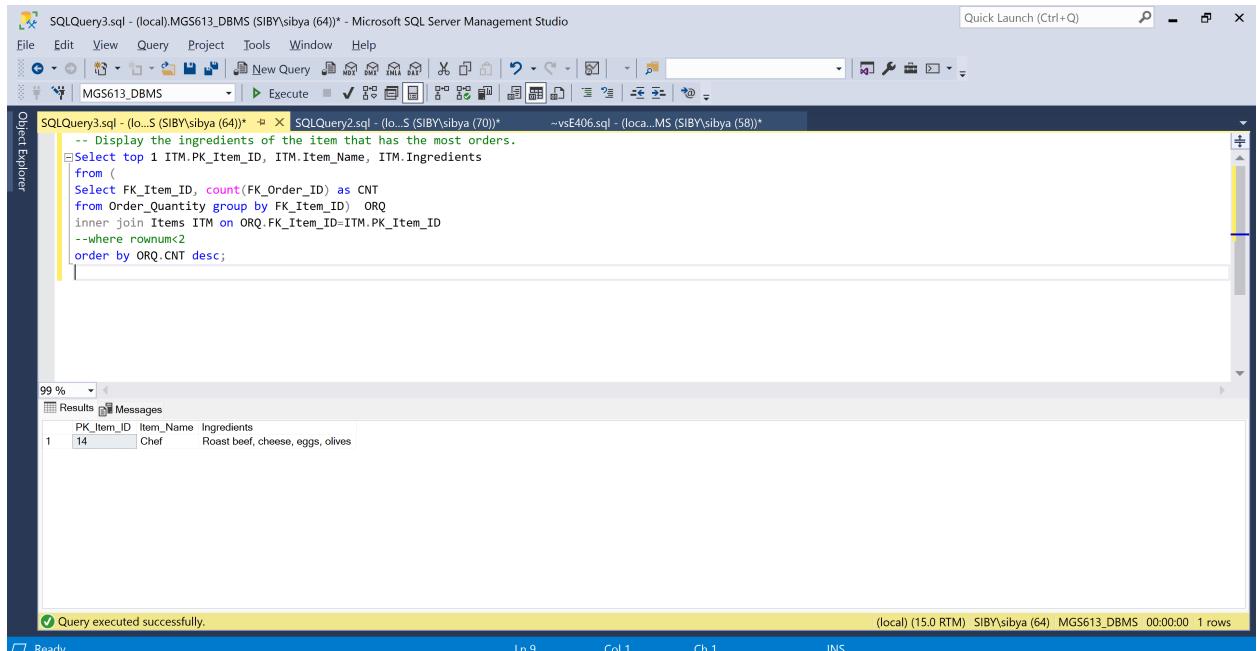
9. Display the details of the delivery partner with the lowest rating and the next rating juxtaposed.

```
Select PK_Partner_ID, Partner_Name, Overall_Partner_Rating,
lead(Overall_Partner_Rating,1,0) over(order by overall_partner_rating)
from Delivery_Partner;
```

PK_Partner_ID	Partner_Name	Overall_Partner_Rating
1	Carly Patrick	3
2	Tanner Miles	3
3	Quentin Bernard	3
4	Kareem Holder	3
5	Dorothy Warren	3.5
6	Olivia Poole	3.5
7	Wylie Ratliff	3.5
8	Alexa Hodge	3.5
9	Ashton Booker	3.5
10	Janna Washington	3.5
11	Nicholas Austin	4
12	Denton Farmer	4
13	Donovan Wilkerson	4
14	Ishmael Graham	4
15	Seth Lyons	4
16	Lee Kent	4
17	Kibo Figueroa	4
18	Jessie Whitehead	4
19	Cameran Ingram	4
20	Robert Clements	4
21	Chandler Mcfadden	4.5
22	Alan Harvey	4.5
23	Marcia Horn	4.5
24	Holmes Carpenter	4.5
25	Ora Glenn	5

10. Display the ingredients of the item that has the most orders.

```
Select ITM.PK_Item_ID, ITM.Item_Name, ITM.Ingredients
from (
Select FK_Item_ID, count(FK_Order_ID) as CNT
from Order_Quantity group by FK_Item_ID) ORQ
inner join Items ITM on ORQ.FK_Item_ID=ITM.PK_Item_ID
where rownum<2
order by ORQ.CNT desc;
```



The screenshot shows the Microsoft SQL Server Management Studio interface. In the center, there is a results grid titled 'Results' with one row of data:

PK_Item_ID	Item_Name	Ingredients
14	Chef	Roast beef, cheese, eggs, olives

Below the grid, a status bar displays the message 'Query executed successfully.'

```
-- Display the ingredients of the item that has the most orders.
Select top 1 ITM.PK_Item_ID, ITM.Item_Name, ITM.Ingredients
from (
    Select FK_Item_ID, count(FK_Order_ID) as CNT
    from Order_Quantity group by FK_Item_ID) ORQ
inner join Items ITM on ORQ.FK_Item_ID=ITM.PK_Item_ID
--where rownum<2
order by ORQ.CNT desc;
```

11. Display the Top 5 customers who have made the most orders.

```
Select CUST.PK_Customer_ID, CUST.Customer_First_Name, cust.Customer_Last_Name, CNT
from (
    Select fk_customer_id, count(pk_order_id) as CNT
    from dbo.[Order]
    group by fk_customer_id
) ORD
inner join Customer CUST on ORD.FK_Customer_ID=CUST.PK_Customer_ID
where rownum<6
order by ORD.CNT desc;
```

The screenshot shows the Microsoft SQL Server Management Studio interface. In the center, there is a results grid titled 'Results' with columns: PK_Customer_ID, Customer_First_Name, Customer_Last_Name, and CNT. The data in the grid is as follows:

PK_Customer_ID	Customer_First_Name	Customer_Last_Name	CNT
2	Inez	Kenrat	3
3	Samantha	Stenson	2
4	Jourdain	Hryskiewicz	1
5	Gabriel	Egger	1
6	Winn	Bunney	1

At the bottom of the screen, a yellow status bar displays the message 'Query executed successfully.'

```
--Display the Top 5 customers who have made the most orders.
Select top 5 CUST.PK_Customer_ID, CUST.Customer_First_Name, cust.Customer_Last_Name, CNT
from (
Select fk_customer_id, count(pk_order_id) as CNT
from dbo.[Order]
group by fk_customer_id
) ORD
inner join Customer CUST on ORD.FK_Customer_ID=CUST.PK_Customer_ID
--where rownum<6
order by ORD.CNT desc;
```

12. Display the customers, their corresponding orders and the total number of items in each order.

```
Select C.PK_Customer_ID, C.Customer_First_Name,c.Customer_Last_Name,
ORQ.FK_Order_ID, count(ORQ.FK_Item_ID) as Items_In_An_Order from

(Select CUST.PK_Customer_ID,
CUST.Customer_First_Name,cust.Customer_Last_Name, ORD.PK_Order_ID
from dbo.Customer CUST

inner join dbo.[Order] ORD on CUST.PK_Customer_ID=ORD.FK_Customer_ID)

inner join Order_Quantity ORQ on C.PK_Order_ID=ORQ.FK_Order_ID

group by C.PK_Customer_ID, C.Customer_First_Name,c.Customer_Last_Name,
ORQ.FK_Order_ID;
```

SQLQuery3.sql - (local).MGS613_DBMS (SIBY\sibya (64))* - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

New Query | Execute |

Object Explorer | MGS613_DBMS |

SQLQuery3.sql - (local).SIBY\sibya (64)* | SQLQuery2.sql - (local).SIBY\sibya (70)* | vsE406.sql - (local).MS (SIBY\sibya (58))*

--Display the customers, their corresponding orders and the total number of items in each order.

```
SELECT C.PK_Customer_ID, C.Customer_First_Name, C.Customer_Last_Name, ORQ.FK_Order_ID, COUNT(ORQ.FK_Item_ID) AS Items_In_An_Order FROM (SELECT CUST.PK_Customer_ID, CUST.Customer_First_Name, cust.Customer_Last_Name, ORD.PK_Order_ID FROM dbo.Customer CUST INNER JOIN dbo.[Order] ORD ON CUST.PK_Customer_ID=ORD.FK_Customer_ID) C INNER JOIN Order_Quantity ORQ ON C.PK_Order_ID=ORQ.FK_Order_ID GROUP BY C.PK_Customer_ID, C.Customer_First_Name, C.Customer_Last_Name, ORD.FK_Order_ID
```

Results Messages

	PK_Customer_ID	Customer_First_Name	Customer_Last_Name	FK_Order_ID	Items_In_An_Order
1	2	Inez	Kenrat	1	1
2	4	Jourdain	Hnykiewicz	2	1
3	5	Gabriel	Egger	3	1
4	6	Winn	Bunny	4	1
5	7	Amberry	Hasnip	5	1
6	8	Corbett	People	6	1
7	2	Inez	Kenrat	7	1
8	9	Briano	Henkmann	8	1
9	10	Christy	Fishley	9	1
10	15	Rand	Pavlov	10	1
11	1	Ruprecht	Maase	11	1
12	3	Samantha	Stenson	12	1

Query executed successfully.

(local) (15.0 RTM) SIBY\sibya (64) MGS613_DBMS 00:00:00 15 rows