THE MEXICAN

MEXICAN RESTAURANT AND BAR

MAVEN ANALYTICS RESTAURANTS ORDER ANALYSIS

Tools Used: -

MySQL - For ETL and EDA.

Jupyter Notebook - Python MySQL. Connector Module and Pandas

Project Overview

This data analysis project aims to provide insights into the sales performance of an international Restaurant. By analyzing various aspects of the sales data, we seek to identify trends, make data-driven recommendations, and gain a deeper understanding of the company's performance.

Data sources

Item data: The primary dataset used for this analysis is the Menu_item file, containing detailed information about each Menu made by the company.

Order details data: The primary dataset used for this analysis is the Order_details file, containing detailed information about each order obtained by the company.

Order Details Schema

Field	Type	Null	Key	Default	Extra
order_details_id	smallint	NO	PRI	NULL	
order_id	smallint	NO		NULL	
order_date	date	YES		NULL	
order_time	time	YES		NULL	
item_id	smallint	YES		NULL	

Menu items Schema

Field	Type	Null	Key	Default	Extra
menu_item_id	smallint	NO	PRI	NULL	
item_name	varchar(45)	YES		NULL	
category	varchar(45)	YES		NULL	
price	decimal(5,2)	YES		NULL	

Menu Items Table Exploratory Analysis

-- 1. View the menu items table.

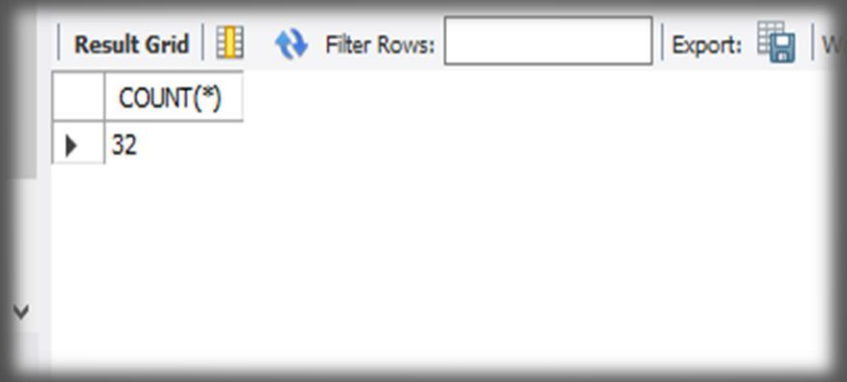
SELECT *FROM menu_ items ;

Result Grid | Filter Rows: | Edit:

menu_item_id	item_name	category	price
101	Hamburger	American	12.95
102	Cheeseburger	American	13.95
103	Hot Dog	American	9.00
104	Veggie Burger	American	10.50
105	Mac & Cheese	American	7.00
106	French Fries	American	7.00
107	Orange Chicken	Asian	16.50
108	Tofu Pad Thai	Asian	14.50
109	Korean Beef Bowl	Asian	17.95
110	Pork Ramen	Asian	17.95
111	California Roll	Asian	11.95
112	Salmon Roll	Asian	14.95
113	Edamame	Asian	5.00
114	Potstickers	Asian	9.00
115	Chicken Tacos	Mexican	11.95
116	Steak Tacos	Mexican	13.95
117	Chicken Burrito	Mexican	12.95
118	Steak Burrito	Mexican	14.95
119	Chicken Torta	Mexican	11.95
120	Steak Torta	Mexican	13.95

-- 2. Find the number of items on the menu

```
SELECT COUNT(*) FROM menu_ items ;
```



-- 3. What are the least and most expensive items on the menu?

```
SELECT * FROM menu_ items ORDER BY price;
```

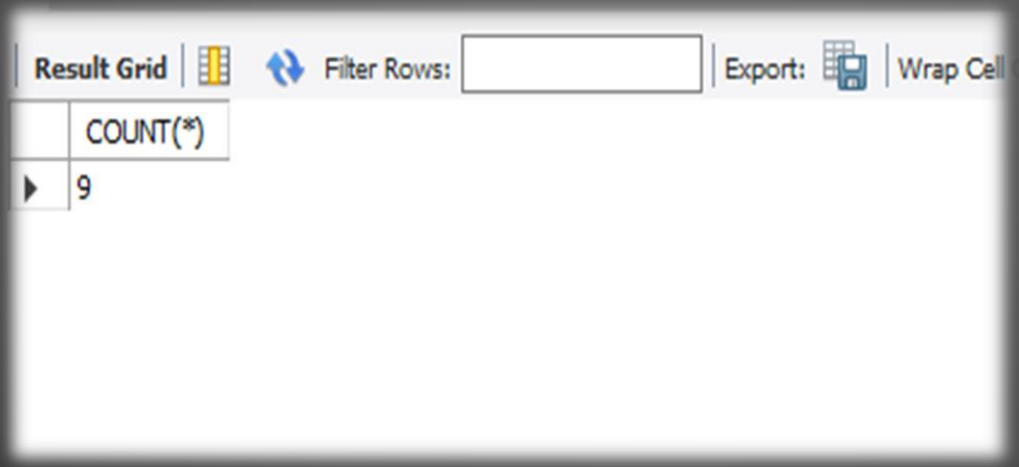
menu_item_id	item_name	category	price
113	Edamame	Asian	5.00
105	Mac & Cheese	American	7.00
106	French Fries	American	7.00
122	Chips & Salsa	Mexican	7.00
103	Hot Dog	American	9.00
114	Potstickers	Asian	9.00
123	Chips & Guacamole	Mexican	9.00
104	Veggie Burger	American	10.50
121	Cheese Quesadillas	Mexican	10.50
111	California Roll	Asian	11.95
115	Chicken Tacos	Mexican	11.95
119	Chicken Torta	Mexican	11.95
101	Hamburger	American	12.95
117	Chicken Burrito	Mexican	12.95
102	Cheeseburger	American	13.95
116	Steak Tacos	Mexican	13.95
120	Steak Torta	Mexican	13.95
108	Tofu Pad Thai	Asian	14.50
124	Spaghetti	Italian	14.50
126	Fettuccine Alfredo	Italian	14.50

SELECT * FROM menu_ items ORDER BY price DESC;

menu_item_id	item_name	category	price
130	Shrimp Scampi	Italian	19.95
109	Korean Beef Bowl	Asian	17.95
110	Pork Ramen	Asian	17.95
125	Spaghetti & Meatballs	Italian	17.95
127	Meat Lasagna	Italian	17.95
131	Chicken Parmesan	Italian	17.95
132	Eggplant Parmesan	Italian	16.95
107	Orange Chicken	Asian	16.50
128	Cheese Lasagna	Italian	15.50
129	Mushroom Ravioli	Italian	15.50
112	Salmon Roll	Asian	14.95
118	Steak Burrito	Mexican	14.95
108	Tofu Pad Thai	Asian	14.50
124	Spaghetti	Italian	14.50
126	Fettuccine Alfredo	Italian	14.50
102	Cheeseburger	American	13.95
116	Steak Tacos	Mexican	13.95
120	Steak Torta	Mexican	13.95
101	Hamburger	American	12.95
117	Chicken Burrito	Mexican	12.95

-- 4. How many Italian dishes are on the menu?

```
SELECT COUNT(*) FROM menu_ items WHERE
category = 'italian’ ;
```

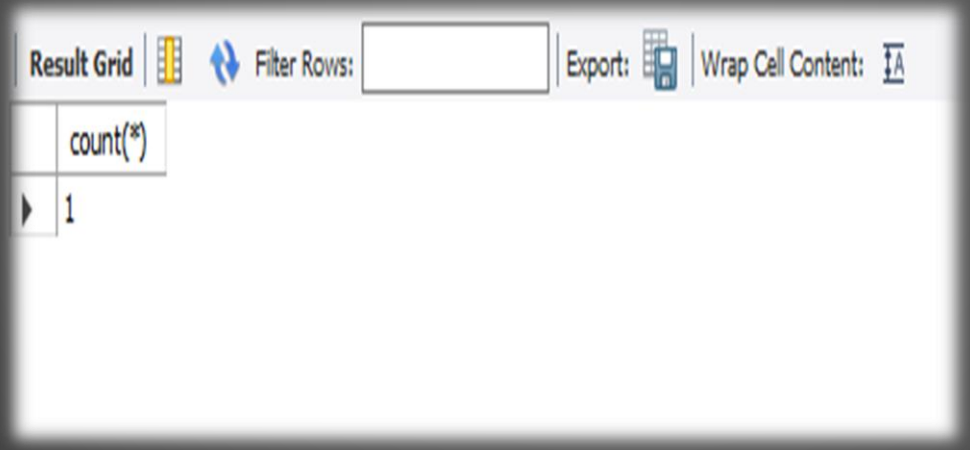


-- 5. What are the least and most expensive Italian dishes on the menu?

```
SELECT * FROM menu_ items
WHERE category = 'Italian'
ORDER BY price;
```

menu_item_id	item_name	category	price
124	Spaghetti	Italian	14.50
126	Fettuccine Alfredo	Italian	14.50
128	Cheese Lasagna	Italian	15.50
129	Mushroom Ravioli	Italian	15.50
132	Eggplant Parmesan	Italian	16.95
125	Spaghetti & Meatballs	Italian	17.95
127	Meat Lasagna	Italian	17.95
131	Chicken Parmesan	Italian	17.95
130	Shrimp Scampi	Italian	19.95
NULL	NULL	NULL	NULL

```
select count(*)  from menu_ items
where price =19.95
group by price;
```

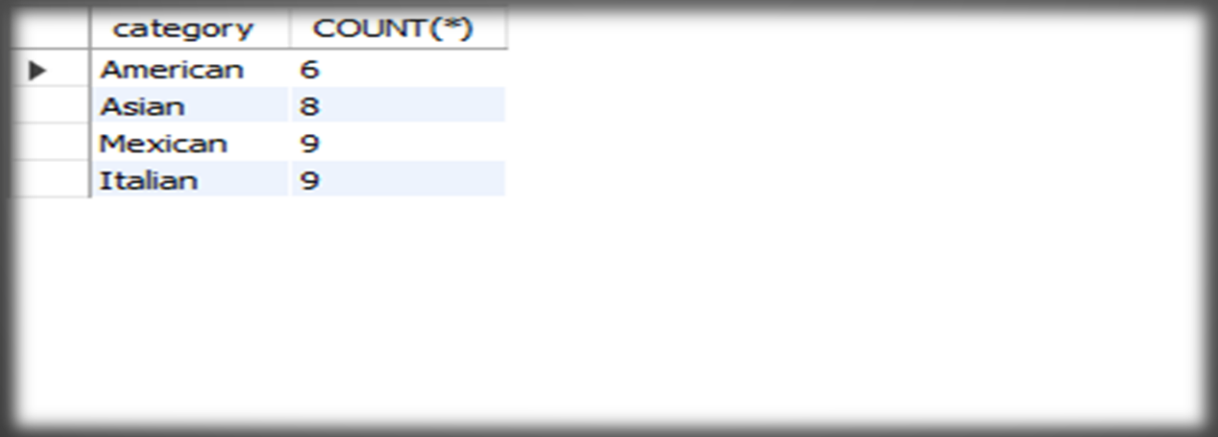


```
SELECT * FROM menu_ items
WHERE category = 'Italian'
ORDER BY price DESC;
```

menu_item_id	item_name	category	price
130	Shrimp Scampi	Italian	19.95
125	Spaghetti & Meatballs	Italian	17.95
127	Meat Lasagna	Italian	17.95
131	Chicken Parmesan	Italian	17.95
132	Eggplant Parmesan	Italian	16.95
128	Cheese Lasagna	Italian	15.50
129	Mushroom Ravioli	Italian	15.50
124	Spaghetti	Italian	14.50
126	Fettuccine Alfredo	Italian	14.50
NULL	NULL	NULL	NULL

-- 6. How many dishes are in each category?

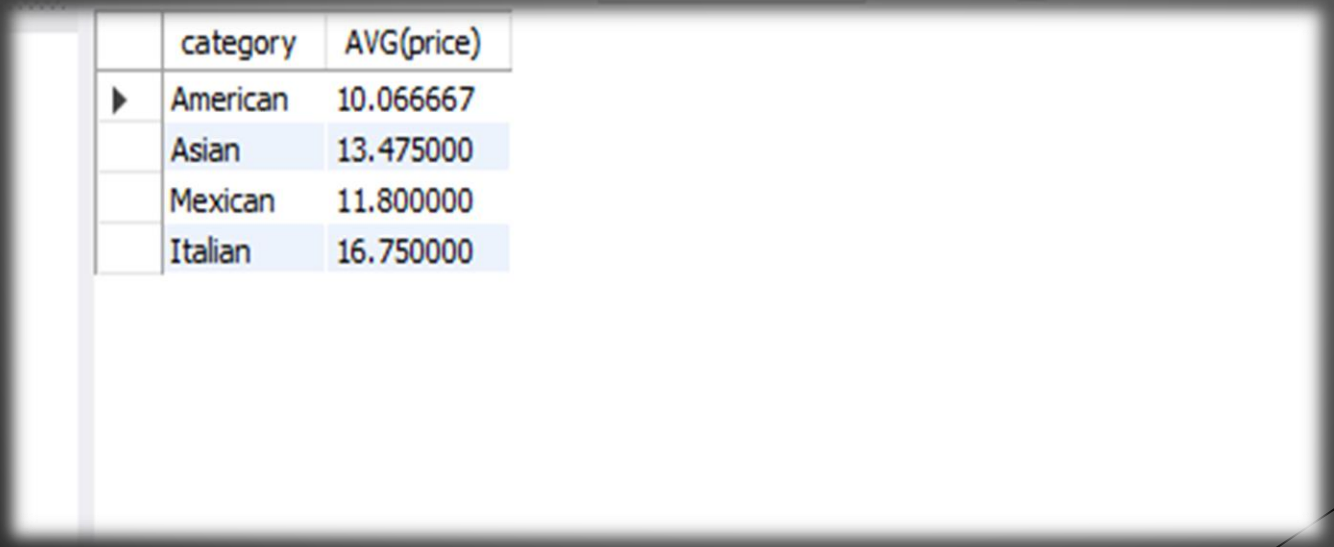
```
SELECT category, COUNT(*)
FROM menu_ items
GROUP BY category;
```



category	COUNT(*)
American	6
Asian	8
Mexican	9
Italian	9

-- 7. What is the average dish price within each category?

```
SELECT category, AVG(price) FROM menu_ items
GROUP BY category;
```

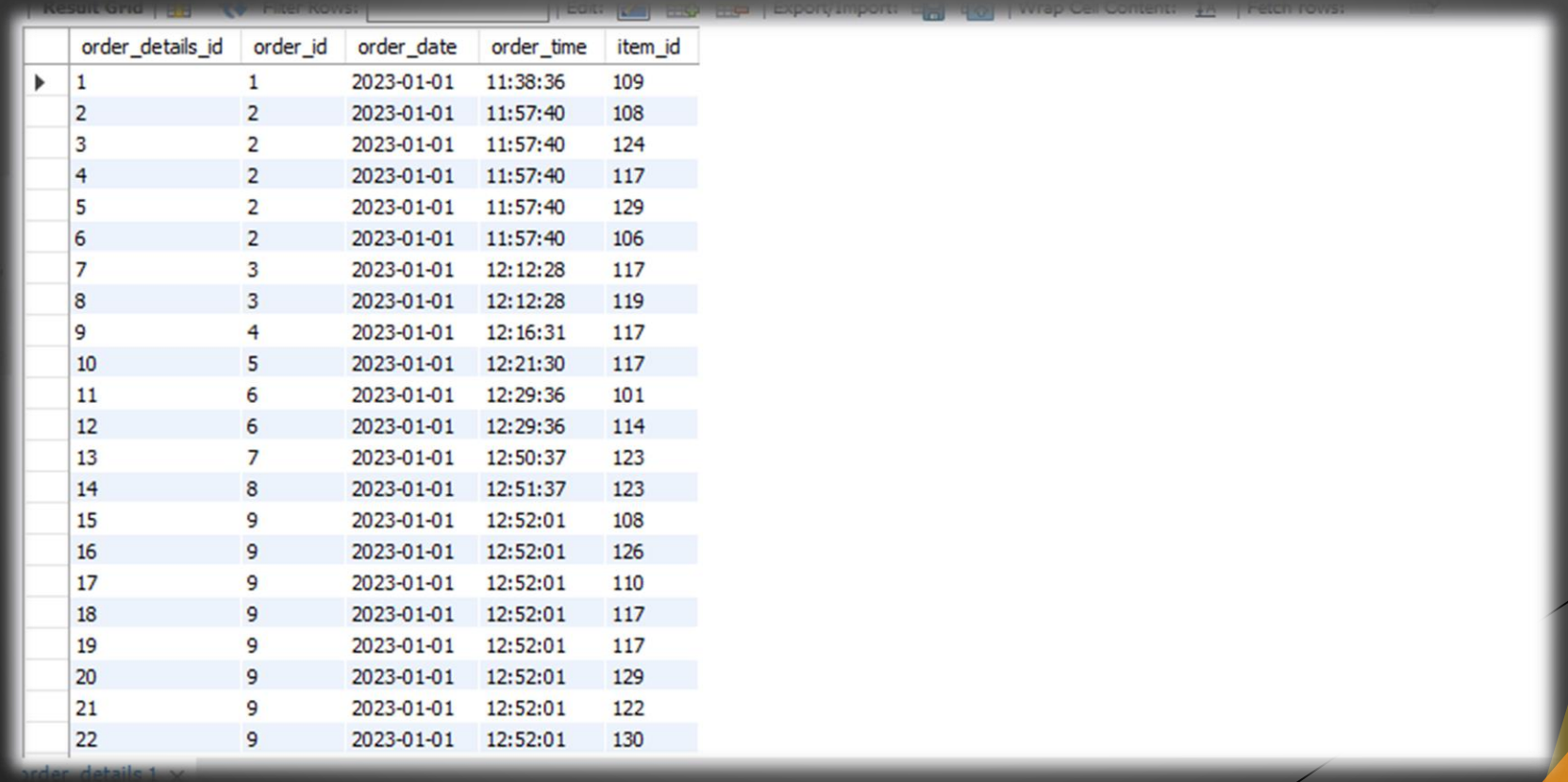


category	AVG(price)
American	10.066667
Asian	13.475000
Mexican	11.800000
Italian	16.750000

Order Details Table Exploratory Analysis

-- 1. View order_ details table.

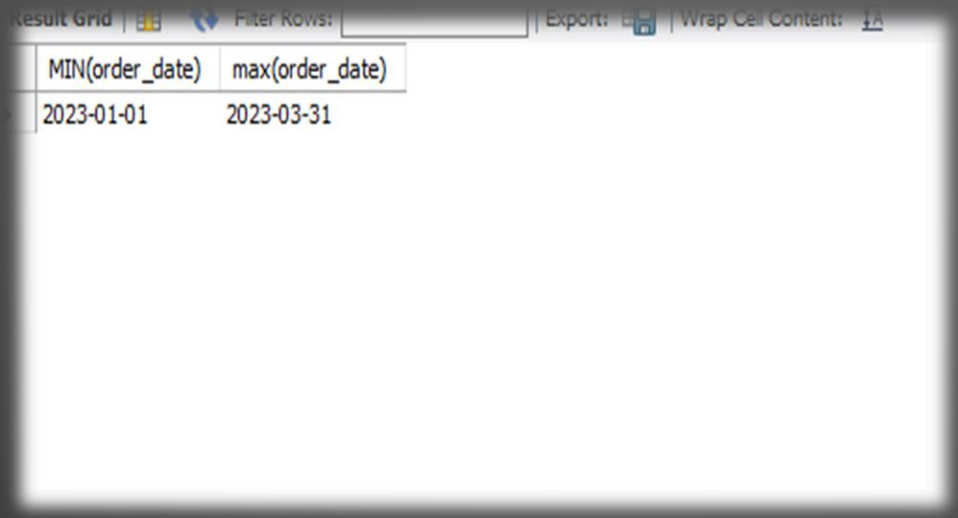
SELECT *FROM order_ details;



order_details_id	order_id	order_date	order_time	item_id
1	1	2023-01-01	11:38:36	109
2	2	2023-01-01	11:57:40	108
3	2	2023-01-01	11:57:40	124
4	2	2023-01-01	11:57:40	117
5	2	2023-01-01	11:57:40	129
6	2	2023-01-01	11:57:40	106
7	3	2023-01-01	12:12:28	117
8	3	2023-01-01	12:12:28	119
9	4	2023-01-01	12:16:31	117
10	5	2023-01-01	12:21:30	117
11	6	2023-01-01	12:29:36	101
12	6	2023-01-01	12:29:36	114
13	7	2023-01-01	12:50:37	123
14	8	2023-01-01	12:51:37	123
15	9	2023-01-01	12:52:01	108
16	9	2023-01-01	12:52:01	126
17	9	2023-01-01	12:52:01	110
18	9	2023-01-01	12:52:01	117
19	9	2023-01-01	12:52:01	117
20	9	2023-01-01	12:52:01	129
21	9	2023-01-01	12:52:01	122
22	9	2023-01-01	12:52:01	130

-- 2. What is the date range of the table?

```
SELECT  min(order_ date), max(order_ date)
FROM order_ details;
```



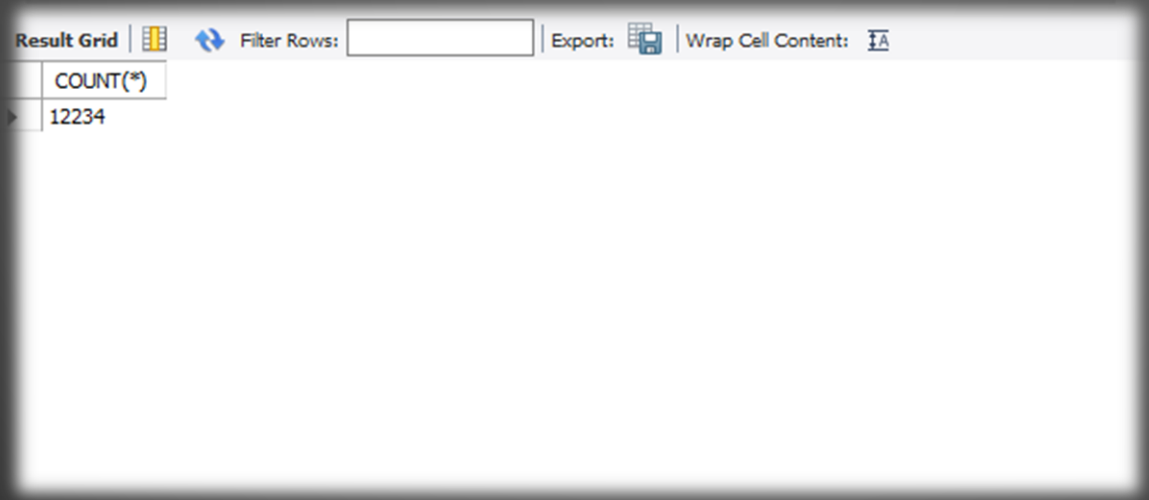
-- 3. How many orders were made within this date range?

```
SELECT COUNT(DISTINCT order_ id) FROM order_ details;
```

	COUNT(DISTINCT order_id)
▶	5370

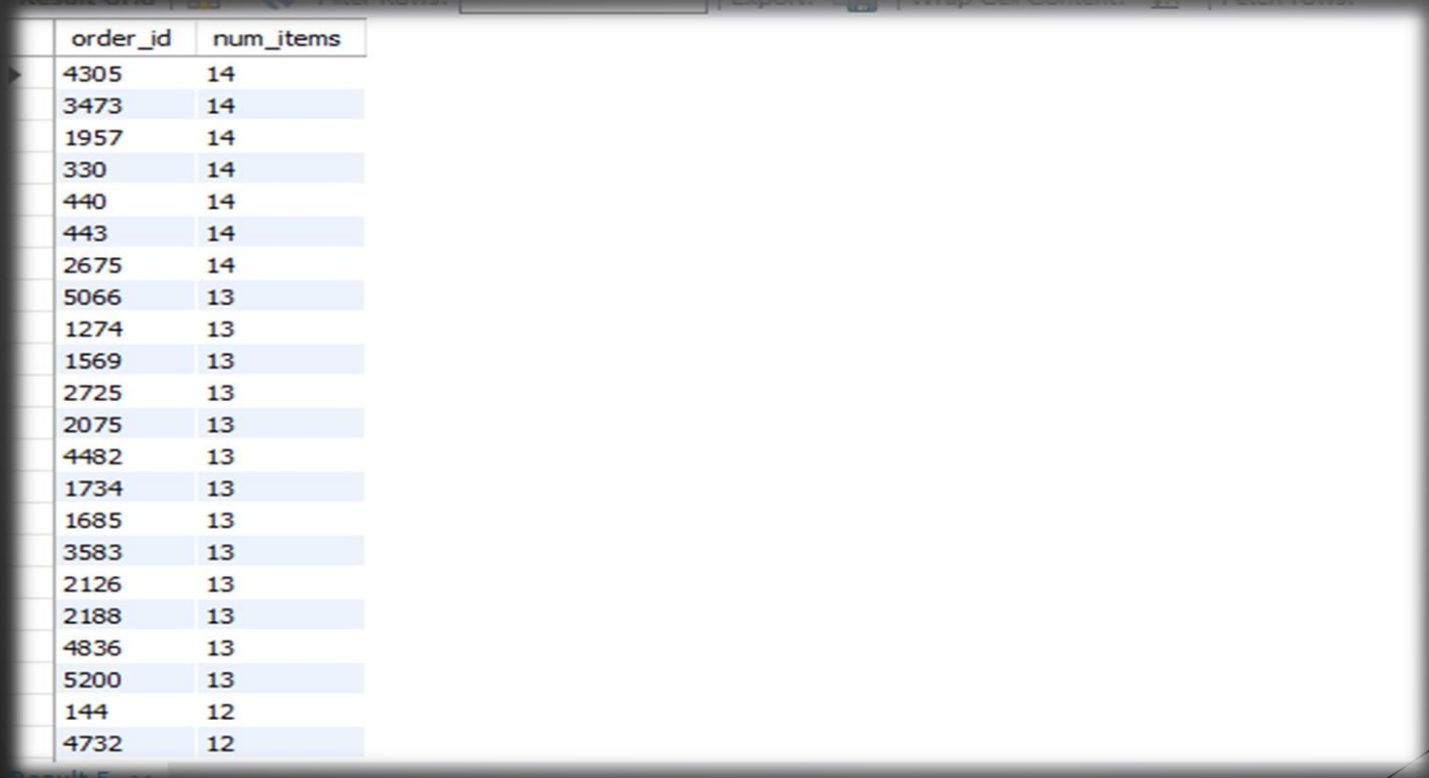
-- 4. How many items were ordered within this date range?

```
SELECT COUNT(*) FROM order_ details;
```



-- 5. Which orders had the most number of items?

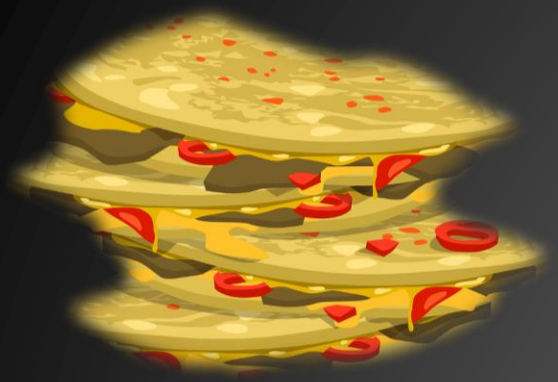
```
SELECT order_ id, COUNT(item_ id) AS num_ items
FROM order_ details GROUP BY order_ id  ORDER BY num_
items DESC;
```



order_id	num_items
4305	14
3473	14
1957	14
330	14
440	14
443	14
2675	14
5066	13
1274	13
1569	13
2725	13
2075	13
4482	13
1734	13
1685	13
3583	13
2126	13
2188	13
4836	13
5200	13
144	12
4732	12

-- 6. How many orders had more than 12 items?

```
SELECT COUNT(*) FROM (SELECT order_ id, COUNT(item_
id) AS num_ items FROM order_ details GROUP BY order_ id
HAVING num_ items > 12) AS num_ orders;
```



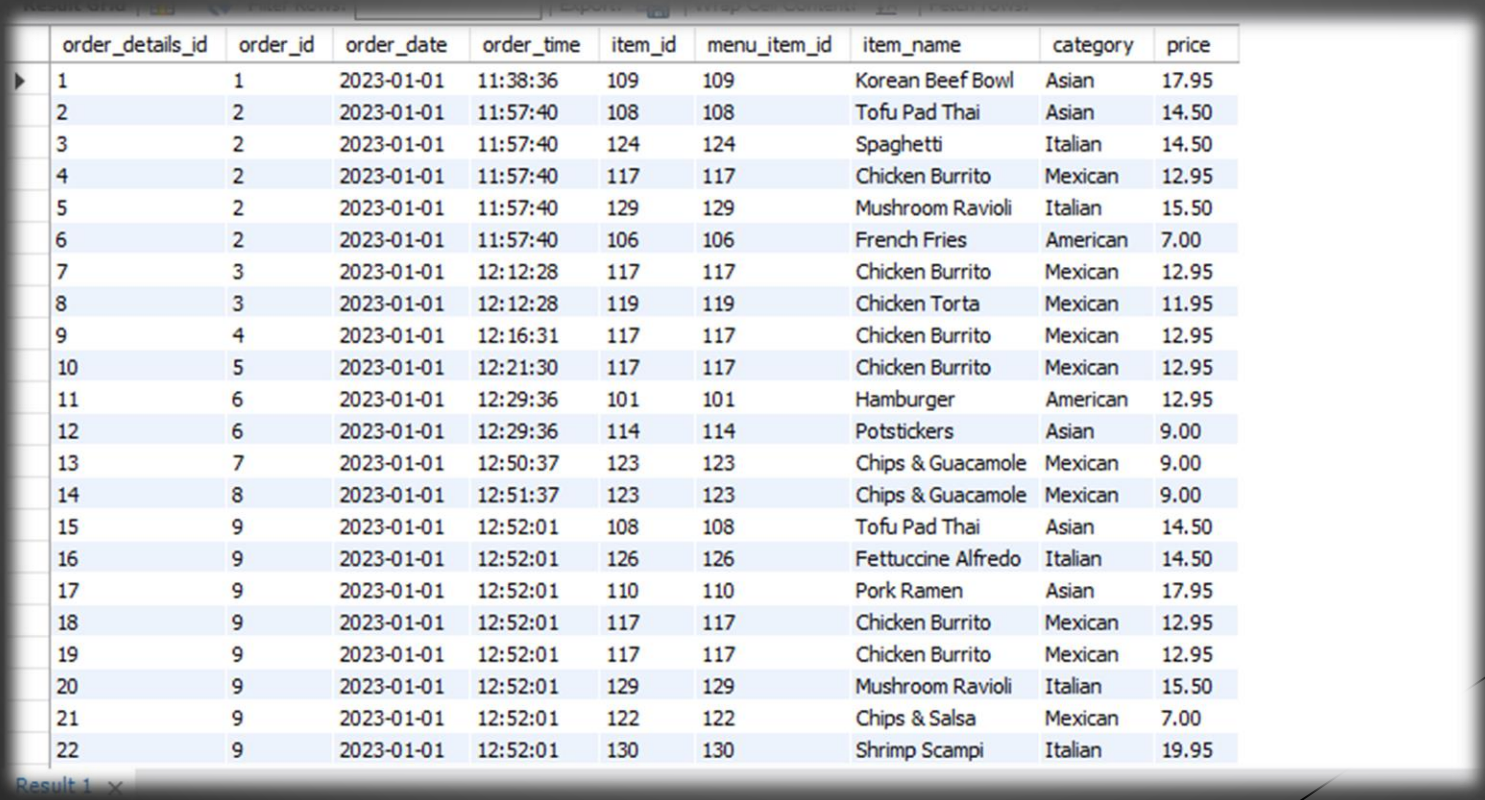
Combined Table Exploratory Analysis

-- 1. Combine the menu_ items table and order_ details table into a single table.

- SELECT * FROM menu_ items;

- SELECT * FROM order_ details;

- SELECT * FROM order_ details od LEFT JOIN menu_ items mi ON od. item_ id = mi. menu_ item_ id;

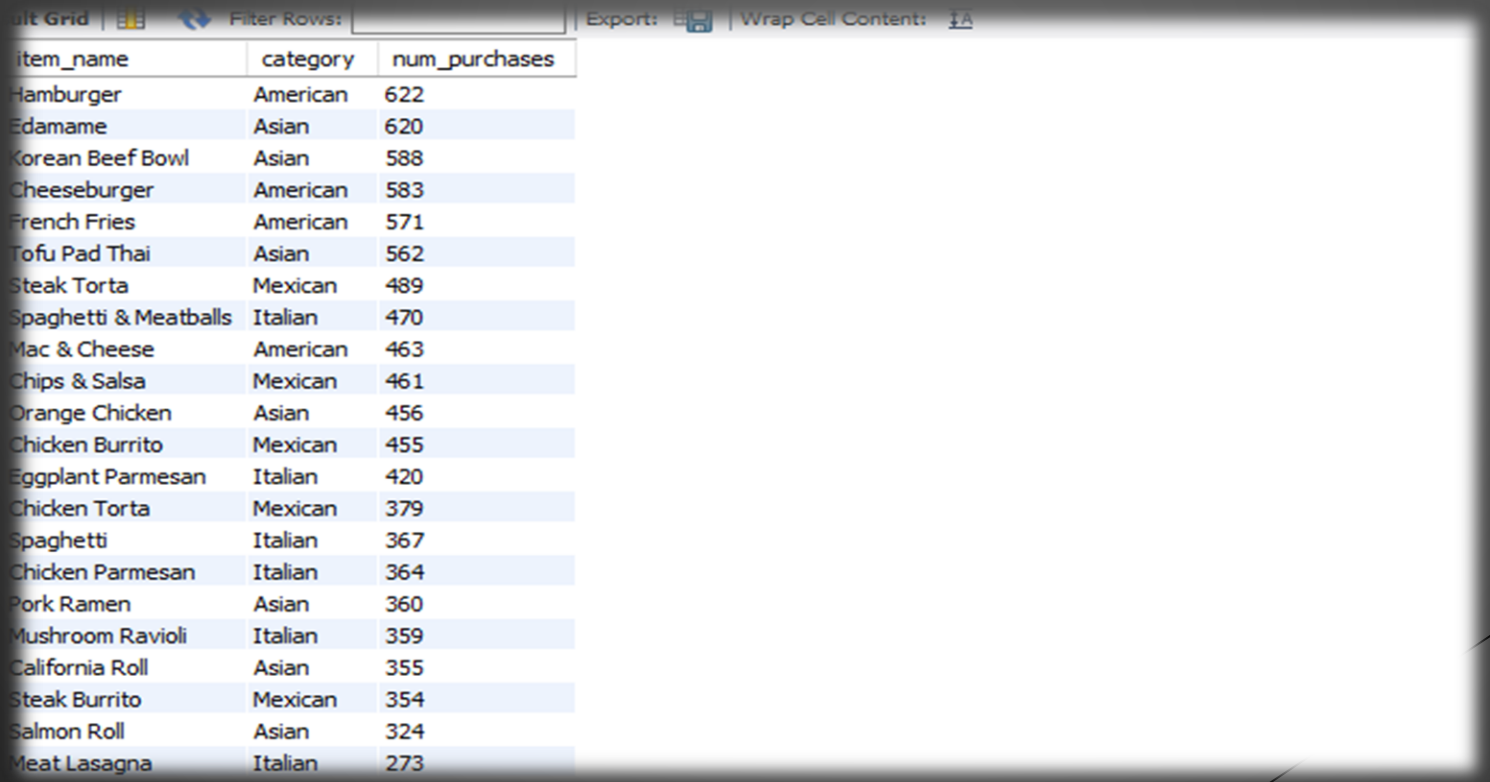


order_details_id	order_id	order_date	order_time	item_id	menu_item_id	item_name	category	price
1	1	2023-01-01	11:38:36	109	109	Korean Beef Bowl	Asian	17.95
2	2	2023-01-01	11:57:40	108	108	Tofu Pad Thai	Asian	14.50
3	2	2023-01-01	11:57:40	124	124	Spaghetti	Italian	14.50
4	2	2023-01-01	11:57:40	117	117	Chicken Burrito	Mexican	12.95
5	2	2023-01-01	11:57:40	129	129	Mushroom Ravioli	Italian	15.50
6	2	2023-01-01	11:57:40	106	106	French Fries	American	7.00
7	3	2023-01-01	12:12:28	117	117	Chicken Burrito	Mexican	12.95
8	3	2023-01-01	12:12:28	119	119	Chicken Torta	Mexican	11.95
9	4	2023-01-01	12:16:31	117	117	Chicken Burrito	Mexican	12.95
10	5	2023-01-01	12:21:30	117	117	Chicken Burrito	Mexican	12.95
11	6	2023-01-01	12:29:36	101	101	Hamburger	American	12.95
12	6	2023-01-01	12:29:36	114	114	Potstickers	Asian	9.00
13	7	2023-01-01	12:50:37	123	123	Chips & Guacamole	Mexican	9.00
14	8	2023-01-01	12:51:37	123	123	Chips & Guacamole	Mexican	9.00
15	9	2023-01-01	12:52:01	108	108	Tofu Pad Thai	Asian	14.50
16	9	2023-01-01	12:52:01	126	126	Fettuccine Alfredo	Italian	14.50
17	9	2023-01-01	12:52:01	110	110	Pork Ramen	Asian	17.95
18	9	2023-01-01	12:52:01	117	117	Chicken Burrito	Mexican	12.95
19	9	2023-01-01	12:52:01	117	117	Chicken Burrito	Mexican	12.95
20	9	2023-01-01	12:52:01	129	129	Mushroom Ravioli	Italian	15.50
21	9	2023-01-01	12:52:01	122	122	Chips & Salsa	Mexican	7.00
22	9	2023-01-01	12:52:01	130	130	Shrimp Scampi	Italian	19.95

Result 1

-- 2. What were the least and most ordered items? What categories were they in?

SELECT item_ name, category, COUNT(order_ details_ id) AS num_ purchases FROM order_ details od LEFT JOIN menu_ items mi ON od. item_ id = mi. menu_ item_ id GROUP BY item_ name, category ORDER BY num_ purchases DESC;

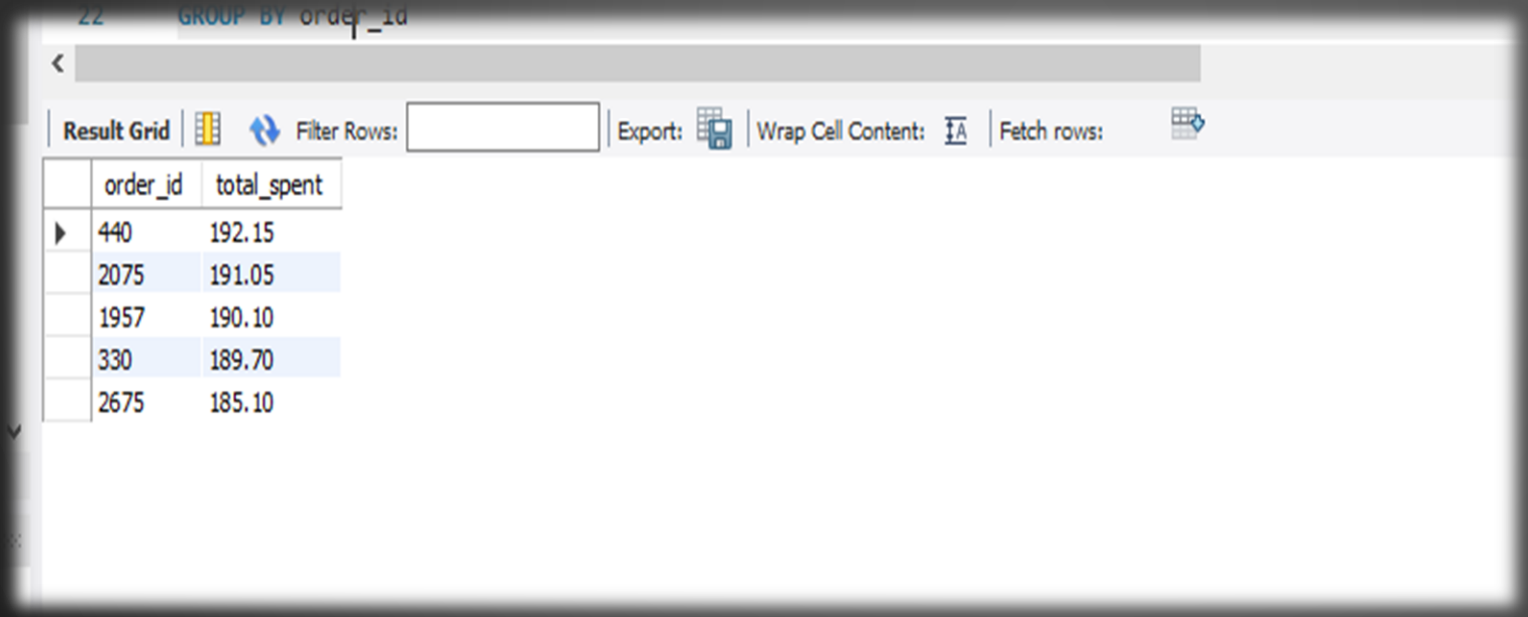


Filter Rows: Export: Wrap Cell Content:

item_name	category	num_purchases
Hamburger	American	622
Edamame	Asian	620
Korean Beef Bowl	Asian	588
Cheeseburger	American	583
French Fries	American	571
Tofu Pad Thai	Asian	562
Steak Torta	Mexican	489
Spaghetti & Meatballs	Italian	470
Mac & Cheese	American	463
Chips & Salsa	Mexican	461
Orange Chicken	Asian	456
Chicken Burrito	Mexican	455
Eggplant Parmesan	Italian	420
Chicken Torta	Mexican	379
Spaghetti	Italian	367
Chicken Parmesan	Italian	364
Pork Ramen	Asian	360
Mushroom Ravioli	Italian	359
California Roll	Asian	355
Steak Burrito	Mexican	354
Salmon Roll	Asian	324
Meat Lasagna	Italian	273

-- 3. What were the top 5 orders that spent the most money?

```
SELECT order_ id, SUM(price) AS total_ spent FROM order_ details od
LEFT JOIN menu_ items mi ON od.item_ id = mi.menu_ item_ id
GROUP BY order_ id
ORDER BY total_ spent DESC LIMIT 5 ;
```



-- 4. View the details of the highest spent order. What insights can you gather from them?

```
SELECT * FROM order_ details od
LEFT JOIN menu_ items mi ON od. item_ id = mi. menu_ item_ id
WHERE order_ id = 440 ;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

order_details_id	order_id	order_date	order_time	item_id	menu_item_id	item_name	category	price
1003	440	2023-01-08	12:16:34	116	116	Steak Tacos	Mexican	13.95
1004	440	2023-01-08	12:16:34	103	103	Hot Dog	American	9.00
1005	440	2023-01-08	12:16:34	124	124	Spaghetti	Italian	14.50
1006	440	2023-01-08	12:16:34	125	125	Spaghetti & Meatballs	Italian	17.95
1007	440	2023-01-08	12:16:34	125	125	Spaghetti & Meatballs	Italian	17.95
1008	440	2023-01-08	12:16:34	126	126	Fettuccine Alfredo	Italian	14.50
1009	440	2023-01-08	12:16:34	126	126	Fettuccine Alfredo	Italian	14.50
1010	440	2023-01-08	12:16:34	109	109	Korean Beef Bowl	Asian	17.95
1011	440	2023-01-08	12:16:34	127	127	Meat Lasagna	Italian	17.95
1012	440	2023-01-08	12:16:34	113	113	Edamame	Asian	5.00
1013	440	2023-01-08	12:16:34	122	122	Chips & Salsa	Mexican	7.00
1014	440	2023-01-08	12:16:34	131	131	Chicken Parmesan	Italian	17.95
1015	440	2023-01-08	12:16:34	106	106	French Fries	American	7.00
1016	440	2023-01-08	12:16:34	132	132	Eggplant Parmesan	Italian	16.95

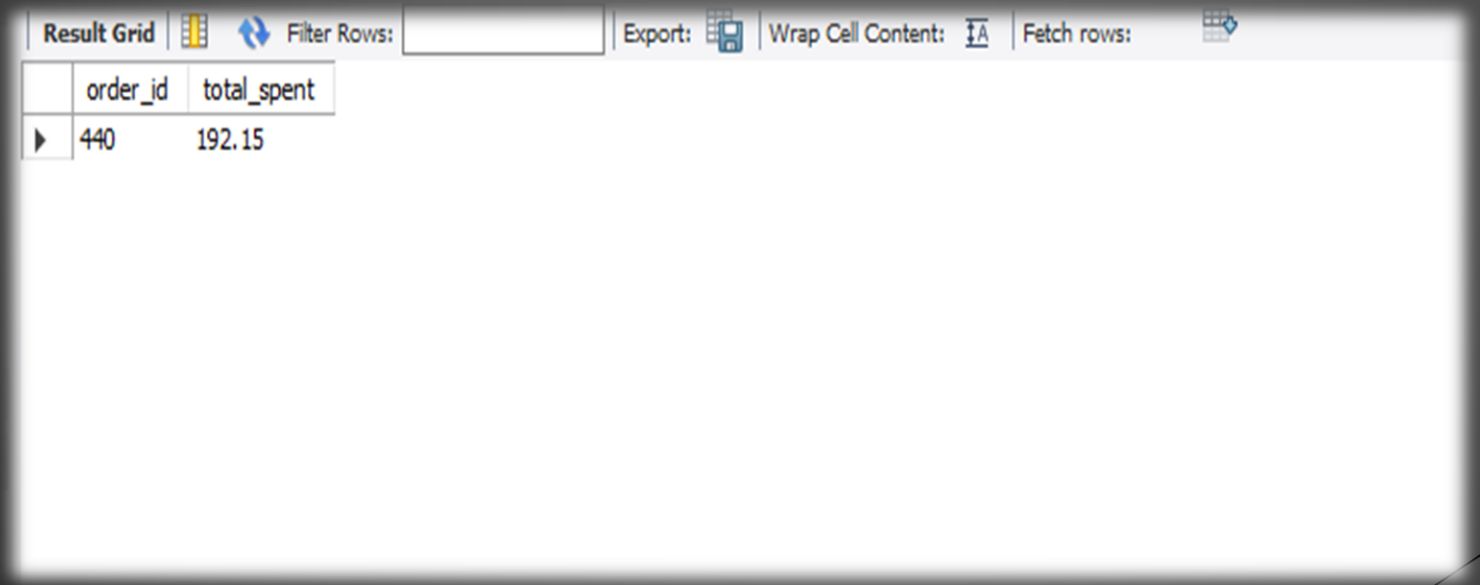
-- 5. View the details of the top 5 highest spent orders. What insights can you gather from them?

```
SELECT order_ id, category, COUNT(item_ id) AS num_ items FROM
order_ details od LEFT JOIN menu_ items mi ON od. item_ id = mi.
menu_ item_ id WHERE order_ id IN (440, 2075, 1957, 330, 2675 )
GROUP BY order_ id, category;
```

order_id	category	num_items
330	Asian	6
330	American	1
330	Italian	3
330	Mexican	4
440	Mexican	2
440	American	2
440	Italian	8
440	Asian	2
1957	Asian	3
1957	American	3
1957	Italian	5
1957	Mexican	3
2075	Asian	3
2075	Mexican	3
2075	American	1
2075	Italian	6
2675	American	3
2675	Asian	3
2675	Italian	4
2675	Mexican	4

How much was the most expensive order?

```
SELECT order_ id, SUM(price) AS total_ spent FROM order_ details od
LEFT JOIN menu_ items mi ON od. item_ id = mi. menu_ item_ id
GROUP BY order_ Id
ORDER BY total_ spent DESC
LIMIT 1;
```



Thank You .....

By
Rupal Hiwarkar