Restaurant Order Analysis Using MySql

Project Outcomes

There are 32 new dishes on the menu
Count of dishes from different categories American 6 , Asian 8, Italian 9, Mexican 9
Edamame from Asian is the least expensive ($5)
Shrimp Scampi from Italian is the most expensive ($19.95)
Italian dishes are the most expensive (Average price $16.75)
American dishes are most affordable (Average price $10.07)
Total Orders 5370, Number of items ordered 12234
Maximum Items per order is 14
Most ordered items are American (Hamburger (5.08%))
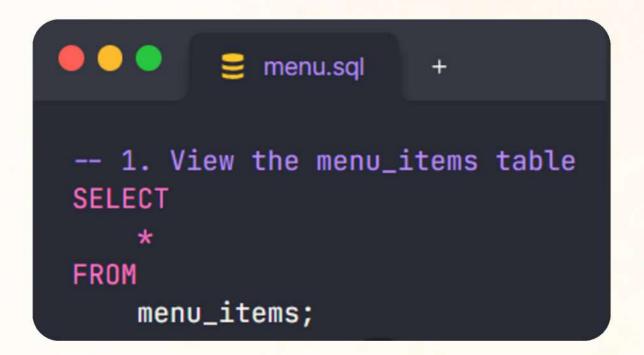and Asian (Edamame (5.06%))
Highest spending order $192.15
'Customers spent the most on the 'Korean Beef Bowl' from Asian category, 'Spaghetti & Meatballs' from Italian, 'Steak Torta' from Mexican,
'Cheeseburger' from Mexican.
Despite the higher prices of Italian dishes, customers still prefer to purchase them.
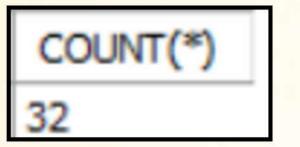
View the menu items table

```sql
-- 1. View the menu_items table
SELECT
    *
FROM
    menu_items;
```

menu_item_id	item_name	category	price
01	Hamburger	American	12.95
02	Cheeseburger	American	13.95
03	Hot Dog	American	9.00
04	Veggie Burger	American	10.50
05	Mac & Cheese	American	7.00
06	French Fries	American	7.00
07	Orange Chicken	Asian	16.50
08	Tofu Pad Thai	Asian	14.50
09	Korean Beef Bowl	Asian	17.95
10	Pork Ramen	Asian	17.95
11	California Roll	Asian	Asian
12	Salmon Roll	Asian	14.95
13	Edamame	Asian	5.00
14	Potstickers	Asian	9.00
15	Chicken Tacos	Mexican	11.95
16	Steak Tacos	Mexican	13.95
17	Chicken Burrito	Mexican	12.95
18	Steak Burrito	Mexican	14.95
19	Chicken Torta	Mexican	11.95
20	Steak Torta	Mexican	13.95
21	Cheese Quesadillas	Mexican	10.50
22	Chips & Salsa	Mexican	7.00
23	Chips & Guacamole	Mexican	9.00

Number of the items on the menu

```sql
-- 2. Find the number of items on the menu
SELECT
    COUNT(*)
FROM
    menu_items;
```

COUNT(*)
32

What are the least expensive items in the menu

```sql
-- 3. What are the least expensive items on the menu?
SELECT
    *
FROM
    menu_items
order by price limit 1;
```

menu_item_id	item_name	category	price
113	Edamame	Asian	5.00

What are the most expensive items in the menu

```sql
-- 4 What are the most expensive items on the menu?
SELECT
    *
FROM
    menu_items
ORDER BY price DESC limit 1;
```

menu_item_id	item_name	category	price
130	Shrimp Scampi	Italian	19.95

How many italian dishes are on the menu?

```sql
-- 5. How many italian dishes are on the menu?
SELECT
    COUNT(*) AS Italian_dishes
FROM
    menu_items
WHERE
    category = 'Italian';
```

Italian_dishes
9

How many dishes are in each Category?

```sql
-- 6. How many dishes are in each Category?
SELECT
    category, COUNT(menu_item_id) AS num_dishes
FROM
    menu_items
GROUP BY category;
```

category	num_dishes
American	6
Asian	8
Mexican	9
Italian	9

What are the least expensive Italian dishes on the menu?

```sql
-- 7. What are the least expensive Italian dishes on the menu?
SELECT
    *
FROM
    menu_items
WHERE
    category = 'Italian'
ORDER BY price limit 1;
```

menu_item_id	item_name	category	price
124	Spaghetti	Italian	14.50

What are the most expensive Italian dishes on the menu?

```sql
-- 8. What are the most expensive Italian dishes on the menu?
SELECT
    *
FROM
    menu_items
WHERE
    category = 'Italian'
ORDER BY price DESC
LIMIT 1;
```

menu_item_id	item_name	category	price
130	Shrimp Scampi	Italian	19.95

What is the average dish price within each category?

View the orders table

```sql
-- 9. What is the average dish price within each category?
SELECT
    category, ROUND(AVG(price), 2) AS average_price
FROM
    menu_items
GROUP BY category;
```
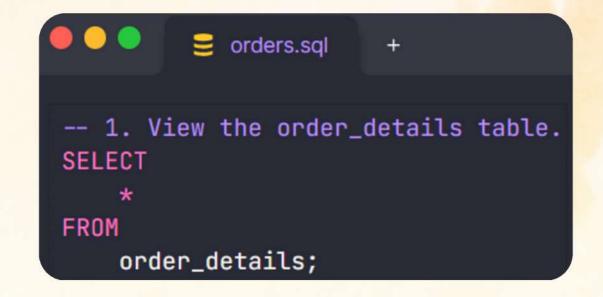
```sql
-- 1. View the order_details table.
SELECT
    *
FROM
    order_details;
```

category	average_price
American	10.07
Asian	13.48
Mexican	11.80
Italian	16.75

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

What is the date range of the orders table?

```sql
-- 2. What is the date range of the table.
SELECT
    MIN(order_date), MAX(order_date)
FROM
    order_details;
```

MIN(order_date)	MAX(order_date)
2023-01-01	2023-03-31

How many orders were made within this date range?
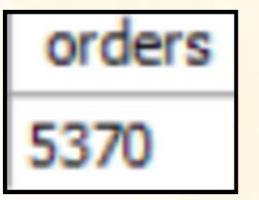
```sql
-- 3. How many orders were made within this date range?
SELECT
    COUNT(DISTINCT order_id) AS orders
FROM
    order_details;
```

orders
5370

How many items were ordered within this date range?

```sql
-- 4. How many items were ordered within this date range?
SELECT
    COUNT(*) as Items
FROM
    order_details;
```

Items
12234

Which order has the most number of items?

```sql
-- 5. Which order has the most number of items?
SELECT
    order_id, COUNT(item_id) AS most_items
FROM
    order_details
GROUP BY order_id
ORDER BY most_items DESC;
```

order_id	most_items
2675	14
330	14
4305	14
440	14
443	14
3473	14
1957	14
5066	13
3583	13

How many orders had more than 12 items?

```sql
-- 6. How many orders had more than 12 items?
SELECT
    COUNT(*) AS orders
FROM
    (SELECT
        order_id, COUNT(item_id) AS most_items
    FROM
        order_details
    GROUP BY order_id
    HAVING most_items > 12) AS num_orders;
```
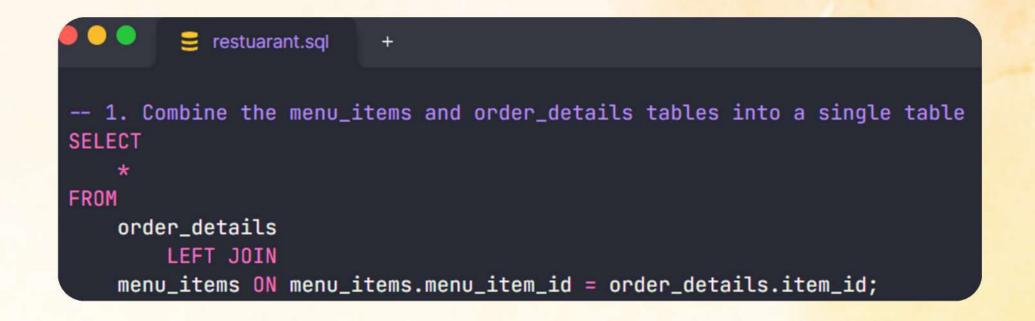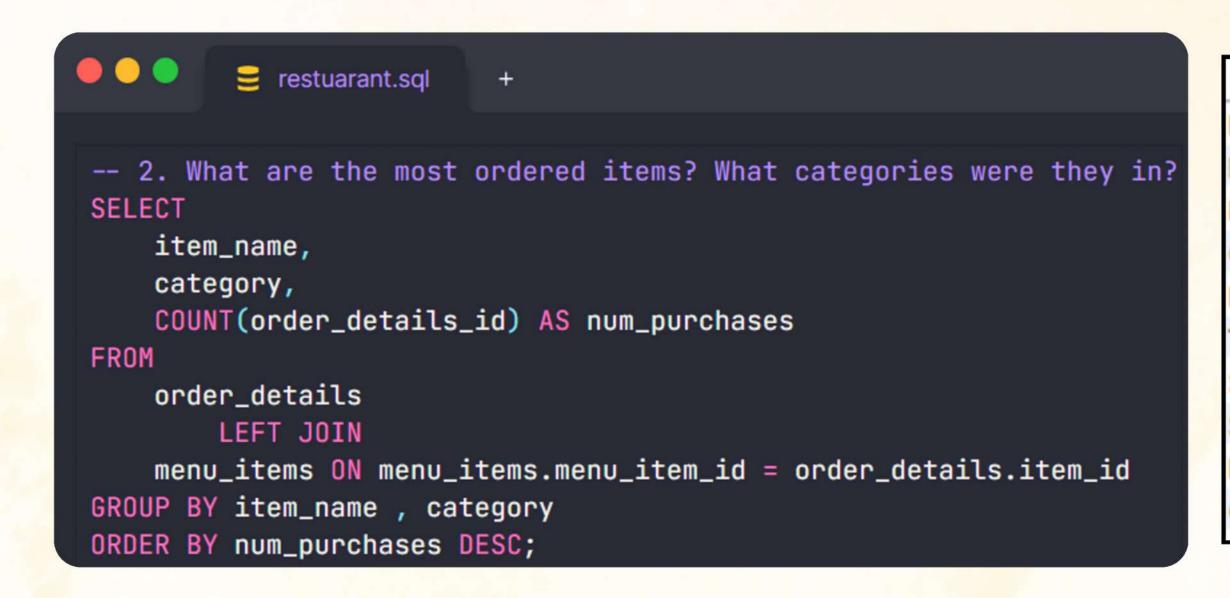
orders
20

Combine the menu items and order details tables into a single table

```sql
-- 1. Combine the menu_items and order_details tables into a single table
SELECT
    *
FROM
    order_details
        LEFT JOIN
    menu_items ON menu_items.menu_item_id = order_details.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		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

What are the most ordered items?
What categories were they in?

```sql
-- 2. What are the most ordered items? What categories were they in?
SELECT
    item_name,
    category,
    COUNT(order_details_id) AS num_purchases
FROM
    order_details
        LEFT JOIN
    menu_items ON menu_items.menu_item_id = order_details.item_id
GROUP BY item_name , category
ORDER BY num_purchases DESC;
```

item_name	category	num_purchases
Hamburger	American	522
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

What were the top 5 orders that spent most money?

```sql
-- 3. What were the top 5 orders that spent most money?
SELECT
    order_id, SUM(price) AS total_spent
FROM
    order_details
        LEFT JOIN
    menu_items ON menu_items.menu_item_id = order_details.item_id
GROUP BY order_id
ORDER BY total_spent DESC
LIMIT 5;
```

order_id	total_spent
440	192.15
2075	191.05
1957	190.10
330	189.70
2675	185.10

View the details of the highest spend order. Which specific items were purchased?

```sql
-- 4.View the details of the highest spend order. Which specific items were purchased?
SELECT
    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 = 440
GROUP BY category;
```
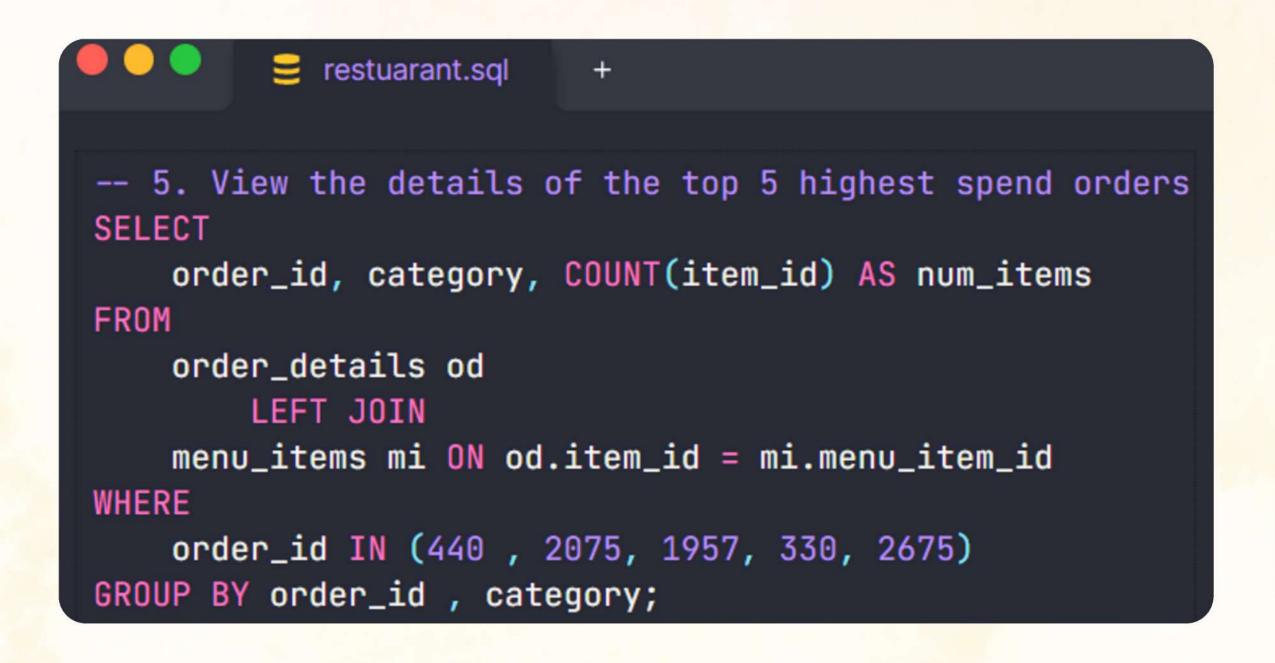
category	num_items
Mexican	2
American	2
Italian	8
Asian	2

View the details of the top 5 highest spend orders.

```sql
-- 5. View the details of the top 5 highest spend orders
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

Thank you!