RESTAURANT ORDER ANALYSIS

"Unveiling Insights from Taste of the World Cafe's New Menu: A Beginner's Data Analysis Journey"

Problem Statement :

The Taste of the World Cafe, a restaurant with a diverse menu, recently introduced a new set of offerings. As a data analyst, the challenge was to delve into customer data to evaluate the reception of the new menu. The goal was to identify successful and underperforming menu items, understand customer preferences, and extract actionable insights to inform business decisions. This project aimed to leverage SQL queries to analyze the 'menu_items' and 'order_details' tables, providing valuable insights into customer behavior and menu performance

Tables used :

Menu_items table

```
12369 •  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

Order_details table

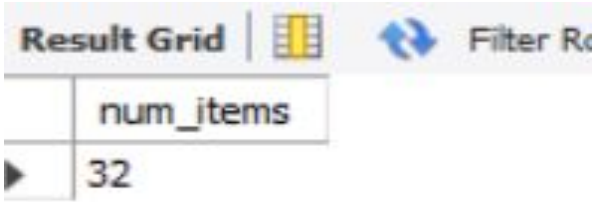
```
12370 •  select * from order_details;
```

Result Grid | Filter Rows: | Edit:

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

OBJECTIVE 1 : View the menu_items table and write a query to find the number of items on the menu

```
select count(menu_item_id) as num_items from menu_items  ;
```



OBJECTIVE 2 : What are the least and most expensive items on the menu?

```
select * from menu_items where price in (select max(price) from menu_items);
select * from menu_items where price in (select min(price) from menu_items);
```

OBJECTIVE 3 : How many Italian dishes are on the menu? What are the least and most expensive Italian dishes on the menu?

```
select count(menu_item_id) as italian_dishes from
menu_items where category= 'Italian';
```

Result Grid

italian_dishes
9

```
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
NULL	NULL	NULL	NULL

```
select * from menu_items
where category='Italian'
order by price
limit 1;
```

menu_item_id	item_name	category	price
124	Spaghetti	Italian	14.50
NULL	NULL	NULL	NULL

OBJECTIVE 4: How many dishes are in each category? What is the average dish price within each category?

```
select count(menu_item_id) ,
category from menu_items
group by category;
```

	count(menu_item_id)	category
▶	6	American
	8	Asian
	9	Mexican
	9	Italian

```
select avg(price) , category from
menu_items
group by category;
```

Result Grid | Filter Rov

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

OBJECTIVE 5 : View the order_details table. 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

OBJECTIVE 6 : How many orders were made within this date range? How many items were ordered within this date range?

```
select count(distinct order_id) from
order_details;
```

	count(distinct order_id)
▶	5370

```
select count(distinct item_id) from
order_details;
```

	count(distinct item_id)
▶	32

Objective 7 : 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
330	14
440	14
443	14
1957	14
2675	14
3473	14
4305	14

OBJECTIVE 8 : 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
order by num_items desc) as num_of_orders;
```

count(*)
20

Objective 9 : Combine the menu_items and order_details tables into a single table

```
select * from menu_items
join order_details
on menu_items.menu_item_id = order_details.item_id;
```

menu_item_id	item_name	category	price	order_details_id	order_id	order_date	order_time	item_id
109	Korean Beef Bowl	Asian	17.95	1	1	2023-01-01	11:38:36	109
108	Tofu Pad Thai	Asian	14.50	2	2	2023-01-01	11:57:40	108
124	Spaghetti	Italian	14.50	3	2	2023-01-01	11:57:40	124
117	Chicken Burrito	Mexican	12.95	4	2	2023-01-01	11:57:40	117
129	Mushroom Ravioli	Italian	15.50	5	2	2023-01-01	11:57:40	129
106	French Fries	American	7.00	6	2	2023-01-01	11:57:40	106
117	Chicken Burrito	Mexican	12.95	7	3	2023-01-01	12:12:28	117
119	Chicken Torta	Mexican	11.95	8	3	2023-01-01	12:12:28	119
117	Chicken Burrito	Mexican	12.95	9	4	2023-01-01	12:16:31	117
117	Chicken Burrito	Mexican	12.95	10	5	2023-01-01	12:21:30	117
101	Hamburger	American	12.95	11	6	2023-01-01	12:29:36	101
114	Potstickers	Asian	9.00	12	6	2023-01-01	12:29:36	114

OBJECTIVE 10 : What were the least and most ordered items? What categories were they in?

```
select  menu_items.category, count(item_id) as least_ordered from
order_details  left join menu_items
on order_details.item_id = menu_items.menu_item_id
group by menu_items.category
order by least_ordered asc
limit 2 ;
```

	category	least_ordered
▶	NULL	0
	American	2734

```
select  menu_items.category, count(item_id) as most_ordered from
order_details
left join menu_items
on order_details.item_id = menu_items.menu_item_id
group by menu_items.category
order by most_ordered desc
limit 1;
```

	category	most_ordered
▶	Asian	3470

OBJECTIVE 11 : What were the top 5 orders that spent the most money?

```
select order_id, sum(price) as
total_spend
from order_details od left join
menu_items mi
on od.item_id=mi.menu_item_id
group by order_id
order by total_spend desc
limit 5 ;
```

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

OBJECTIVE 12 : View the details of the highest spend order. Which specific items were purchased?

```
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=440
group by category;
```

order_id	category	num_items
440	Mexican	2
440	American	2
440	Italian	8
440	Asian	2

THANK YOU ...!