Project Overview :
The Taste of the World Café, a frictional restaurant that has diverse menu offerings and serves generous portions. The project aims at to help the management answer some of their business questions

Objectives:

- Explore the menu_items table to get an idea of what's on the new menu
- Explore the order_details table to get an idea of the data that's been collected
- Use both tables to understand how customers are reacting to the new menu

Objective-I

Explore the menu_items table to get an idea of what's on the new menu

```sql
1 •    USE restaurant_db;
2
3      -- View the menu_items table
4 •    SELECT *
5      FROM
6      menu_items;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: 𝐈A

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

```sql
8    -- write a query to find the number of items on the menu
9  •  SELECT
10   COUNT(menu_item_id) AS num_of_items_in_Menu
11   FROM
12   menu_items;
13
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:

	num_of_items_in_Menu
▶	32

```
14      -- What is the least expensive items on the menu?
15  •   SELECT
16      item_name, price
17      FROM menu_items
18      ORDER BY price
19      LIMIT 1;
```

Result Grid | 📊 | 🔁 Filter Rows: [   ] | Export: 📑 | Wrap Cell Content:

item_name	price
Edamame	5.00

```sql
21      -- What is the most expensive items on the menu?
22  •   SELECT
23      item_name,
24      price
25      FROM
26      menu_items
27      ORDER BY price DESC
28      LIMIT 1;
29
```

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

item_name	price
Shrimp Scampi	19.95

```sql
     -- How many Italian dishes are on the menu
31 ●  SELECT
     COUNT(item_name) AS num_of_Italian_dishes
     FROM
     menu_items
     WHERE
     category="Italian";
```

Result Grid | 🟨 | 🔄 Filter Rows: [   ] | Export: 🖫 | Wrap Ce

num_of_Italian_dishes
9

```
38    -- What are the least expensive Italian dishes on the menu?
39 •  SELECT
40    *
41    FROM
42    menu_items
43    WHERE
44    category = "Italian"
45    ORDER BY price
46    LIMIT 1;
```

Result Grid | Filter Rows: [   ] | Edit: ✏️ 🖺 🖺 | Export/Import: 🖫 🖫 |

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

```sql
48      -- What are the most expensive Italian dishes on the menu?
49 •    SELECT
50      *
51      FROM
52      menu_items
53      WHERE
54      category = "Italian"
55      ORDER BY price DESC
56      LIMIT 1;
57
```

Result Grid | 🔢 | ↻ Filter Rows: | | Edit: 🖉 🖽 🖽 | Export/Import:

menu_item_id	item_name	category	price
130	Shrimp Scampi	Italian	19.95
NULL	NULL	NULL	NULL

```sql
58      -- How many dishes are in each category?
59 •    SELECT
60      category,
61      COUNT(category) AS Num_of_Dishes
62      FROM
63      menu_items
64      GROUP BY category;
```

Result Grid | Filter Rows: | Export: | Wrap

category	Num_of_Dishes
American	6
Asian	8
Mexican	9
Italian	9

```sql
66    -- What is the average dish price within each category?
67 •  SELECT |
68    category,
69    ROUND(AVG(price),2) AS Avg_dish_Price
70    FROM
71    menu_items
72    GROUP BY category;
```

Result Grid | ▥ | ↻ Filter Rows: [_____] | Export: 🖫 | Wrap Cell Content: ⫶A

category	Avg_dish_Price
American	10.07
Asian	13.48
Mexican	11.80
Italian	16.75

<u>Objective-II</u>

Explore the order_details table to get an idea of the data that's been collected

```sql
1 •   USE restaurant_db;
2
3     -- View the order_details table.
4 •   SELECT
5     *
6     FROM
7     order_details;
8
```

Result Grid | Filter Rows: | Edit: | Export/Im

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

```sql
 9    -- What is the date range of the table
10 •  SELECT
11    MIN(order_date) AS R_From,
12    MAX(order_date) AS R_To
13    FROM
14    order_details;
15
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: $\overline{A}$

	R_From	R_To
▶	2023-01-01	2023-03-31

```sql
16    -- How many orders were made within this date range?
17 •  SELECT
18    COUNT(DISTINCT(order_id)) AS Num_of_Orders
19    FROM
20    order_details;
21
```

Num_of_Orders
5370

```sql
22   -- How many items were ordered within this date range?
23 • SELECT
24   COUNT(order_details_id) AS Num_of_items_ordered
25   FROM
26   order_details;
27
```

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

Num_of_items_ordered
▶ 12234

```sql
28      -- Which orders had the most number of items?
29  •   SELECT
30      order_id,
31      COUNT(item_id) AS Num_of_items_per_order
32      FROM
33      order_details
34      GROUP BY order_id
35      ORDER BY Num_of_items_per_order DESC;
```

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

order_id	Num_of_items_per_order
4305	14
3473	14
1957	14
330	14
440	14
443	14
2675	14
5066	13
1274	13
1569	13
2725	13

```sql
37      -- How many orders had more than 12 items?
38   ●  SELECT
39      COUNT(*) AS num_of_orders
40      FROM
41   ⊖  (SELECT
42      order_id,
43      COUNT(item_id) AS Num_of_items_per_order
44      FROM
45      order_details
46      GROUP BY order_id
47      HAVING Num_of_items_per_order > 12) AS temp_table ;
48
```

Result Grid | ▦ | ↻ Filter Rows: [ ] | Export: 🖫 | W

num_of_orders
20

Objective-III

Use both tables to understand how customers are reacting to the new menu

```
2    -- 1. Combine the menu_items and order_details tables into a single table
3 •  SELECT
4    *
5    FROM order_details AS dimension_tb
6    LEFT JOIN
7    menu_items AS lookup_tb
8        ON dimension_tb.item_id = lookup_tb.menu_item_id;
9
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝚰A | Fetch rows:

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

```sql
-- 2. What was the least ordered item and in which category?
SELECT
item_name, category, count(order_details_id) AS order_count
FROM(
SELECT *
FROM order_details AS dimension_tb
LEFT JOIN menu_items AS lookup_tb
    ON dimension_tb.item_id = lookup_tb.menu_item_id) AS temp_tbl
GROUP BY item_name,category
ORDER BY order_count;
```

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

item_name	category	order_count
Chicken Tacos	Mexican	123
NULL	NULL	137
Potstickers	Asian	205
Cheese Lasagna	Italian	207
Steak Tacos	Mexican	214
Cheese Quesadillas	Mexican	233
Chips & Guacamole	Mexican	237
Veggie Burger	American	238
Shrimp Scampi	Italian	239
Fettuccine Alfredo	Italian	249
Hot Dog	American	257

```sql
21    -- 3. What was the most ordered item and in which category?
22  ● SELECT
23    item_name,
24    category,
25    count(order_details_id) AS order_count
26    FROM order_details AS dimension_tb
27    LEFT JOIN
28    menu_items AS lookup_tb
29        ON dimension_tb.item_id = lookup_tb.menu_item_id
30    GROUP BY item_name,category
31    ORDER BY order_count DESC;
```

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

item_name	category	order_count
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

```sql
33      -- 4. What were the top 5 orders that spent the most money?
34  ●   SELECT
35      order_id,
36      SUM(price) AS Money_Spent
37      FROM order_details AS dimension_tb
38      LEFT JOIN
39      menu_items AS lookup_tb
40          ON dimension_tb.item_id = lookup_tb.menu_item_id
41      GROUP BY order_id
42      ORDER BY Money_Spent DESC
43      LIMIT 5;
```

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

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

```sql
45    -- 5. View the details of the highest spend order. Which specific items were purchased?
46 •  SELECT
47    *
48    FROM
49    order_details OD LEFT JOIN menu_items MI
50        ON OD.item_id   = MI.menu_item_id
51    WHERE
52    order_id = 440;
53            -- specification of items
```

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

```sql
53              -- specification of items
54 •    SELECT
55      category, COUNT(DISTINCT item_id) AS items_odered
56      FROM
57      order_details OD LEFT JOIN menu_items MI
58          ON OD.item_id    = MI.menu_item_id
59      WHERE
60      order_id = 440
61      GROUP BY category;
```

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

category	items_odered
American	2
Asian	2
Italian	6
Mexican	2

```sql
63      -- 6. View the details of the top 5 highest spend orders
64  •   SELECT
65      *
66      FROM
67      order_details OD LEFT JOIN menu_items MI
68          ON OD.item_id   = MI.menu_item_id
69      WHERE
70      order_id IN (440,2075,1957,330,2675);
```

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
750	330	2023-01-06	13:27:11	107	107	Orange Chicken	Asian	16.50
751	330	2023-01-06	13:27:11	103	103	Hot Dog	American	9.00
752	330	2023-01-06	13:27:11	108	108	Tofu Pad Thai	Asian	14.50
753	330	2023-01-06	13:27:11	108	108	Tofu Pad Thai	Asian	14.50
754	330	2023-01-06	13:27:11	124	124	Spaghetti	Italian	14.50
755	330	2023-01-06	13:27:11	125	125	Spaghetti & Meatballs	Italian	17.95
756	330	2023-01-06	13:27:11	109	109	Korean Beef Bowl	Asian	17.95
757	330	2023-01-06	13:27:11	112	112	Salmon Roll	Asian	14.95
758	330	2023-01-06	13:27:11	118	118	Steak Burrito	Mexican	14.95
759	330	2023-01-06	13:27:11	120	120	Steak Torta	Mexican	13.95
760	330	2023-01-06	13:27:11	122	122	Chips & Salsa	Mexican	7.00

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
4689	2075	2023-02-04	14:03:04	112	112	Salmon Roll	Asian	14.95
4690	2075	2023-02-04	14:03:04	118	118	Steak Burrito	Mexican	14.95
4691	2075	2023-02-04	14:03:04	122	122	Chips & Salsa	Mexican	7.00
4692	2075	2023-02-04	14:03:04	132	132	Eggplant Parmesan	Italian	16.95
4693	2075	2023-02-04	14:03:04	132	132	Eggplant Parmesan	Italian	16.95
6027	2675	2023-02-14	14:41:49	101	101	Hamburger	American	12.95
6028	2675	2023-02-1 2023-02-14		102	102	Cheeseburger	American	13.95
6029	2675	2023-02-14	14:41:49	108	108	Tofu Pad Thai	Asian	14.50

Insights/ Recommendations:

- Among the four dish categories (American, Asian, Mexican, and Italian), Italian cuisine not only dominates the restaurant's menu but also boasts the highest average price.

- A total of 12,234 items were reserved through 5,370 orders from January 1, 2023, to March 31, 2023. Notably, 20 orders involved the purchase of more than 12 items, with the maximum number of items per order set at 14.

- Despite Italian Chicken Tacos being the least ordered menu item, the highest-valued order (Order No-440) featured 6 Italian dishes out of the 12 items booked. This suggests a strong preference for Italian dishes, as reinforced by the observation that the top 5 highest-value orders consistently include a significant number of Italian dishes.

❖ **Recommendation:** It is strongly advised that the restaurant focuses on incorporating Italian cuisine prominently in their new menu, capitalizing on the evident popularity and profitability associated with Italian dishes.