

Restaurant Orders Analysis Project (MySQL)

Tools: MySQL

Project Type: SQL Data Analysis / Business Insights

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1. Project Objective

The goal of this project is to analyze restaurant order data using MySQL and generate business insights such as:

- Total revenue and order trends
- Top-selling menu items
- Revenue by category and payment method
- Customer spending and ranking

2. Database Schema

Database Name: restaurant

Tables Used

customer

menu

orders

Relationship

- `orders.customer_id` → references `customer.customer_id`
- `orders.item_id` → references `menu.item_id`

3. Query

1) Total Revenue

```
SELECT ROUND(SUM(m.price * o.quantity),2) AS total_revenue  
FROM orders o  
JOIN menu m ON o.item_id = m.item_id;
```

```
mysql> SELECT ROUND(SUM(m.price * o.quantity),2) AS total_revenue  
-> FROM orders o  
-> JOIN menu m ON o.item_id = m.item_id;  
+-----+  
| total_revenue |  
+-----+  
|      3950.00 |  
+-----+  
1 row in set (0.01 sec)
```

2) Top 5 Items by Revenue

```
SELECT m.category,  
       ROUND(SUM(m.price * o.quantity),2) AS revenue  
FROM orders o  
JOIN menu m ON o.item_id = m.item_id  
GROUP BY m.category  
ORDER BY revenue DESC;
```

```
mysql> SELECT m.item_name,
->         ROUND(SUM(m.price * o.quantity),2) AS revenue
-> FROM orders o
-> JOIN menu m ON o.item_id = m.item_id
-> GROUP BY m.item_name
-> ORDER BY revenue DESC
-> LIMIT 5;
```

item_name	revenue
Pizza	750.00
Chicken Biryani	720.00
Ice Cream	630.00
Cold Coffee	550.00
Veg Burger	480.00

5 rows in set (0.00 sec)

3) Category-wise Revenue

```
SELECT m.category,
       ROUND(SUM(m.price * o.quantity),2) AS revenue
FROM orders o
JOIN menu m ON o.item_id = m.item_id
GROUP BY m.category
ORDER BY revenue DESC;
```

```
mysql> SELECT m.category,
->         ROUND(SUM(m.price * o.quantity),2) AS revenue
-> FROM orders o
-> JOIN menu m ON o.item_id = m.item_id
-> GROUP BY m.category
-> ORDER BY revenue DESC;
```

category	revenue
Fast Food	1230.00
Main Course	920.00
Dessert	630.00
Beverage	550.00
South Indian	400.00
Italian	220.00

6 rows in set (0.01 sec)

4) Customer Ranking (Window Function)

```
SELECT c.customer_name,
       ROUND(SUM(m.price * o.quantity),2) AS total_spent,
       RANK() OVER (ORDER BY SUM(m.price * o.quantity) DESC) AS
       spend_rank
FROM orders o
JOIN customer c ON o.customer_id = c.customer_id
JOIN menu m ON o.item_id = m.item_id
GROUP BY c.customer_name;
```

```
mysql> SELECT c.customer_name,
->         ROUND(SUM(m.price * o.quantity),2) AS total_spent,
->         RANK() OVER (ORDER BY SUM(m.price * o.quantity) DESC) AS spend_rank
FROM orders o
JOIN customer c ON o.customer_id = c.customer_id
JOIN menu m ON o.item_id = m.item_id
GROUP BY c.customer_name;
```

customer_name	total_spent	spend_rank
Amit	760.00	1
Priya	740.00	2
Shashi	700.00	3
Sneha	670.00	4
Rahul	480.00	5
Karthik	400.00	6
Neha	200.00	7

7 rows in set (0.00 sec)

5) Order Bill View Output

`SELECT * FROM order_bill_view ORDER BY order_date, order_id;`

```
mysql> SELECT * FROM order_bill_view ORDER BY order_date, order_id;
```

order_id	order_date	customer_name	city	item_name	category	quantity	price	amount	payment_mode
1001	2026-01-01	Shashi	Chennai	Chicken Biryani	Main Course	2	180.00	360.00	UPI
1002	2026-01-02	Amit	Delhi	Pizza	Fast Food	1	250.00	250.00	Card
1003	2026-01-03	Priya	Bangalore	Masala Dosa	South Indian	3	80.00	240.00	Cash
1004	2026-01-03	Shashi	Chennai	Ice Cream	Dessert	2	90.00	180.00	UPI
1005	2026-01-04	Rahul	Mumbai	Veg Burger	Fast Food	4	120.00	480.00	Card
1006	2026-01-04	Sneha	Chennai	Pasta	Italian	1	220.00	220.00	UPI
1007	2026-01-05	Amit	Delhi	Chicken Biryani	Main Course	1	180.00	180.00	UPI
1008	2026-01-06	Priya	Bangalore	Pizza	Fast Food	2	250.00	500.00	Card
1009	2026-01-06	Shashi	Chennai	Masala Dosa	South Indian	2	80.00	160.00	Cash
1010	2026-01-07	Sneha	Chennai	Ice Cream	Dessert	5	90.00	450.00	Cash
1011	2026-01-07	Karthik	Hyderabad	Cold Coffee	Beverage	2	110.00	220.00	UPI
1012	2026-01-08	Neha	Pune	Paneer Butter Masala	Main Course	1	200.00	200.00	Card
1013	2026-01-08	Karthik	Hyderabad	Chicken Biryani	Main Course	1	180.00	180.00	UPI
1014	2026-01-09	Amit	Delhi	Cold Coffee	Beverage	3	110.00	330.00	Cash

14 rows in set (0.00 sec)