Pizza Sales Analysis

PIZZA IS ONE OF THE FAVORITE FOODS OF ALMOST EVERYONE IN THE WORLD.

- We all love pizza! And if you're reading this, it's likely you also share a passion for data analytics. What could be a more perfect blend than combining our love for food and data by delving into a project focused on analyzing Pizza Sales?
- I embarked on this journey in april 2024, when I began learning SQL. As I progressed, the idea of sharing this project with others starting out on their analytics journey seemed only natural. So, I designed this article to be like a practice project where you can follow along and try to attempt the questions mentioned below and compare the answers (code included). At last, I'll summarize the key insights and give data-driven recommendations that can potentially increase the store's revenue.

- As always, let's get started with data retrieval.
- For this project, I sourced pizza sales data from Kaggle (link) which contains four csv files: order_details.csv, orders.csv, pizza_types.csv, and pizzas.csv, which I subsequently imported into MySQL Workbench.

- orders.csv has columns : order_id, date, time
- order_details.csv has columns : order_details_id, order_id, pizza_id, quantity
- pizza_types.csv has columns : pizza_type_id, name, category, ingredients
- pizzas.csv has columns : pizza_id, pizza_type_id, size, price

Retrieve the total number of orders placed.

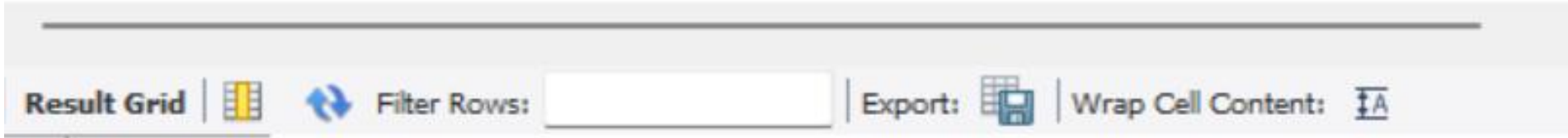
```sql
-- Retrieve the total number of orders placed.
SELECT
    COUNT(order_id) AS cnt
FROM
    orders;
```

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

cnt
21350

Calculate the total revenue generated from pizza sales.

```
2 •    SELECT
3          ROUND(SUM(price * quantity), 2) AS revenue
4      FROM
5          pizzas p
```



revenue
817860.05

Identify the highest-priced pizza.

```
2 •   SELECT
3         name, pp.price
4     FROM
5         pizza_types p
6             JOIN
7         pizzas pp ON p.pizza_type_id = pp.pizza_type_id
8     ORDER BY pp.price DESC
9     LIMIT 1
```

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name	price
The Greek Pizza	35.95

List the top 5 most ordered pizza types along with their quantities.

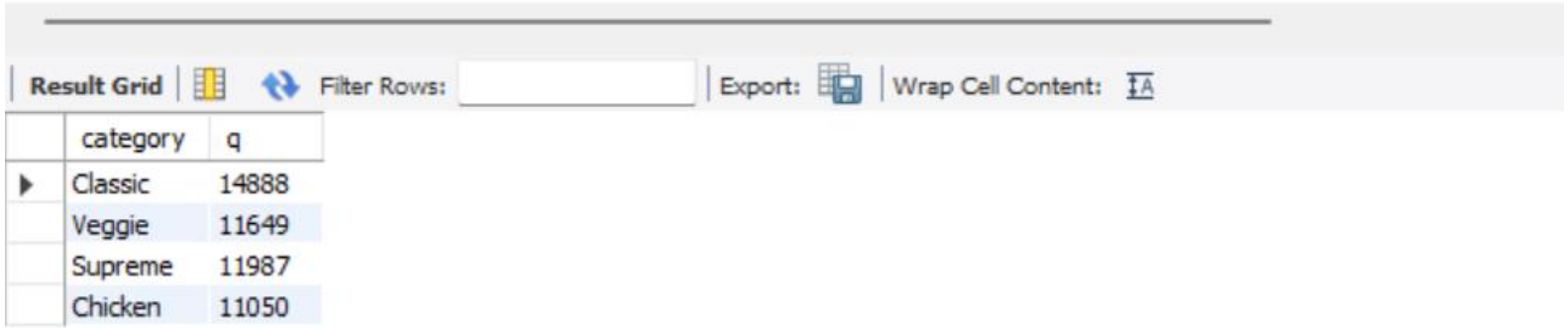
```
2  SELECT
3      p.name, sum(quantity) AS q
4  FROM
5      pizza_types p
6          JOIN
7      pizzas pp ON p.pizza_type_id = pp.pizza_type_id
8          JOIN
9      order_details o ON o.pizza_id = pp.pizza_id
10 GROUP BY p.name
11 ORDER BY q DESC
12 LIMIT 5
```

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

name	q
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

Join the necessary tables to find the total quantity of each pizza category ordered.

```
2 •  SELECT
3        p.category, sum(quantity) AS q
4    FROM
5        pizza_types p
6            JOIN
7        pizzas pp ON p.pizza_type_id = pp.pizza_type_id
8            JOIN
9        order_details o ON o.pizza_id = pp.pizza_id
10   GROUP BY p.category
```



category	q
Classic	14888
Veggie	11649
Supreme	11987
Chicken	11050

Determine the distribution of orders by hour of the day.

```
2 •   SELECT
3         EXTRACT(HOUR FROM order_time) AS order_hour,
4         COUNT(*) AS order_count
5     FROM
6         orders
7     GROUP BY
8         order_hour
9     ORDER BY
10        order_hour;
```

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

order_hour	order_count
9	1
10	8
11	1231
12	2520
13	2455
14	1472
15	1468
16	1920
17	2336
18	2399
19	2009

Join relevant tables to find the category-wise distribution of pizzas.

```
2 •    SELECT
3          category, COUNT(pizza_type_id) AS c
4      FROM
5          pizza_types
6      GROUP BY category
```


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

category	c
Chicken	6
Classic	8
Supreme	9
Veggie	9

Determine the top 3 most ordered pizza types based on revenue.

```
2 •   SELECT
3         pt.name, SUM(p.price * od.quantity) AS revenue
4     FROM
5         pizza_types pt
6             JOIN
7         pizzas p ON pt.pizza_type_id = p.pizza_type_id
8             JOIN
9         order_details od ON od.pizza_id = p.pizza_id
10    GROUP BY pt.name
11    ORDER BY revenue DESC
12    LIMIT 3
```

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

name	revenue
The Thai Chicken Pizza	43434.25
The Barbecue Chicken Pizza	42768
The California Chicken Pizza	41409.5

Key Insights and Recommendations

- The Thai Chicken Pizza is top selling pizza for the restaurant.
- The classic Deluxe Pizza is the most ordered pizza for them.
- The classic category pizza is the most ordered category.
- The total revenue genrated by sales reported is 8,17,860.

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