**Pizza Sales Portfolio Project – SQL**

Project Overview

In this project, I utilized SQL and Power BI to analyze a year’s worth of sales data from a pizza outlet. The objective was to uncover valuable insights to help the outlet make informed decisions to increase sales. The data is sourced from four CSV files and is analyzed using MySQL.

Data Source

[Pizza Place Sales Dataset](https://www.kaggle.com/datasets/mysarahmadbhat/pizzaplacesales)

Step 1: Data Preview

The raw data consists of four tables:

`order\_details`

`orders`

`pizza\_types`

`pizzas`

```sql

SELECT FROM order\_details;

SELECT FROM orders;

SELECT FROM pizza\_types;

SELECT FROM pizzas;

```

Step 2: SQL Queries

Key Performance Indicators (KPIs)

1. Total Revenue

```sql

SELECT SUM(quantity price) AS total\_revenue

FROM order\_details AS ord

JOIN pizzas AS piz ON ord.pizza\_id = piz.pizza\_id;

```

2. Average Order Value

```sql

SELECT SUM(quantity price) / COUNT(DISTINCT order\_id) AS average\_order\_value

FROM order\_details AS ord

JOIN pizzas AS piz ON ord.pizza\_id = piz.pizza\_id;

```

3. Total Pizzas Sold

```sql

SELECT SUM(quantity) AS total\_pizzas\_sold

FROM order\_details;

```

4. Total Orders

```sql

SELECT COUNT(order\_id) AS total\_orders

FROM orders;

```

5. Average Pizzas per Order

```sql

SELECT SUM(quantity) / COUNT(DISTINCT orders.order\_id) AS average\_pizzas\_per\_order

FROM order\_details

JOIN orders ON order\_details.order\_id = orders.order\_id;

```

Questions to Answer

1. Daily Trends for Total Orders

```sql

ALTER TABLE orders MODIFY COLUMN `date` DATE;

SELECT DAYNAME(`date`) AS weekday, COUNT(DISTINCT order\_id) AS total\_orders

FROM orders

GROUP BY weekday

ORDER BY total\_orders DESC;

```

2. Hourly Trend for Total Orders

```sql

ALTER TABLE orders MODIFY COLUMN `time` TIME;

SELECT HOUR(time) AS hour\_of\_day, COUNT(DISTINCT order\_id) AS total\_orders

FROM orders

GROUP BY hour\_of\_day

ORDER BY total\_orders DESC;

```

3. Percentage of Sales by Pizza Category

```sql

SELECT

category,

ROUND(SUM(quantity price), 2) AS revenue,

ROUND(SUM(quantity price) 100.0 / (SELECT SUM(quantity price) FROM pizzas AS p2 JOIN order\_details AS od2 ON od2.pizza\_id = p2.pizza\_id), 2) AS percentage\_of\_sales

FROM

pizzas AS p

JOIN

pizza\_types AS pt ON p.pizza\_type\_id = pt.pizza\_type\_id

JOIN

order\_details AS od ON od.pizza\_id = p.pizza\_id

GROUP BY

category;

```

4. Percentage of Sales by Pizza Size

```sql

SELECT

size,

ROUND(SUM(quantity price), 2) AS revenue,

ROUND(SUM(quantity price) 100.0 / (SELECT SUM(quantity price) FROM pizzas AS p2 JOIN order\_details AS od2 ON od2.pizza\_id = p2.pizza\_id), 2) AS percentage\_of\_sales

FROM

pizzas AS p

JOIN

pizza\_types AS pt ON p.pizza\_type\_id = pt.pizza\_type\_id

JOIN

order\_details AS od ON od.pizza\_id = p.pizza\_id

GROUP BY

size;

```

5. Total Pizzas Sold by Pizza Category

```sql

SELECT category, SUM(quantity) AS total\_pizzas\_sold

FROM order\_details AS ord

JOIN pizzas AS piz ON ord.pizza\_id = piz.pizza\_id

JOIN pizza\_types AS pity ON piz.pizza\_type\_id = pity.pizza\_type\_id

GROUP BY category;

```

6. Top 5 Best Sellers by Total Pizzas Sold

```sql

SELECT name, SUM(quantity) AS total\_pizzas\_sold

FROM order\_details AS ord

JOIN pizzas AS piz ON ord.pizza\_id = piz.pizza\_id

JOIN pizza\_types AS pity ON piz.pizza\_type\_id = pity.pizza\_type\_id

GROUP BY name

ORDER BY total\_pizzas\_sold DESC

LIMIT 5;

```

7. Bottom 5 Worst Sellers by Total Pizzas Sold

```sql

SELECT name, SUM(quantity) AS total\_pizzas\_sold

FROM order\_details AS ord

JOIN pizzas AS piz ON ord.pizza\_id = piz.pizza\_id

JOIN pizza\_types AS pity ON piz.pizza\_type\_id = pity.pizza\_type\_id

GROUP BY name

ORDER BY total\_pizzas\_sold

LIMIT 5;

```

Step 3: Findings

KPIs

1. Total Revenue for the Year: $817,860

2. Average Order Value: $38.31

3. Total Pizzas Sold: 50,000

4. Total Orders: 21,000

5. Average Pizzas per Order: 2

Insights

1. Busiest Days:

Thursday (3,239 orders)

Friday (3,538 orders)

Saturday (3,158 orders)

Most sales recorded on Fridays.

2. Order Timing:

Peak orders between 12 PM to 1 PM and 5 PM to 7 PM.

3. Sales by Pizza Category:

Classic pizza leads sales at 26.91%, followed by Supreme (25.46%), Chicken (23.96%), and Veggie (23.68%).

4. Sales by Pizza Size:

Large pizzas account for 45.89% of sales, followed by medium (30.49%) and small (21.77%).

5. TopSelling Pizzas:

Classic Pizza: 14,888 pizzas

Supreme: 11,987 pizzas

Veggie: 11,649 pizzas

Chicken: 11,050 pizzas.

6. Top 5 Best Sellers:

Classic Deluxe (2,453 pizzas)

Barbecue Chicken (2,432 pizzas)

Hawaiian (2,422 pizzas)

Pepperoni (2,418 pizzas)

Thai Chicken (2,371 pizzas).

7. Bottom 5 Worst Sellers:

Brie Carre (490 pizzas)

Mediterranean (934 pizzas)

Calabrese (937 pizzas)

Spinach Supreme (950 pizzas)

Soppressata (961 pizzas).

Step 4: Conclusion and Recommendations

Conclusion

The analysis has provided actionable insights into sales trends, customer preferences, and overall business performance.

Recommendations

1. Promotional Strategies: Focus on Fridays for special promotions.

2. Inventory Management: Adjust inventory for large pizzas and consider menu changes for underperformers.

3. Operational Adjustments: Increase staffing during peak order times.

4. Continued Monitoring: Regularly update data and track the impact of changes.