

Pizza Sales Data Analysis Using SQL

- Name: Gnanasurya R
- Tools: MySQL Workbench, SQL
- Project Type : SQL Data Analysis

Objective

- Analyze sales performance
- Identify revenue drivers
- Understand customer ordering patterns
- Provide data-driven insights

Dataset Overview

Tables:





- Orders
- order_details
- pizzas
- pizza_types

Database Relationships:

orders
↓
order_details
↓
pizzas
↓
pizza_types

Total Revenue

```
1  -- Calculate the total revenue generated from pizza sales
2  • SELECT
3  ⦿  ROUND(SUM(order_details.quantity * pizzas.price),
4      2) AS total_sales
5  FROM
6      order_details
7      JOIN
8      pizzas ON pizzas.pizza_id = order_details.pizza_id;
```

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	total_sales
▶	817860.05

- Revenue calculated as quantity × price
- Multi-table join used
- Total revenue: ₹X
- Indicates overall business performance

Product Performance

```
1  -- List the top 5 most ordered pizza types along with their quantities.
2  • SELECT
3      pizza_types.name, SUM(order_details.quantity) AS quantity
4  FROM
5      pizza_types
6      JOIN
7      pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
8      JOIN
9      order_details ON order_details.pizza_id = pizzas.pizza_id
10 GROUP BY pizza_types.name
11 ORDER BY quantity DESC
12 LIMIT 5;
13
```

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

- Aggregated quantity using SUM
- Ranked products
- Top performers drive majority of sales

Insight:

Focus marketing on top-selling items, and find any improvements needed in other category products

Time-Based Analysis

```
1  -- Determine the distribution of orders by hour of the day.
2  • select hour(order_time) , count(order_id) as order_count from orders
3  group by hour(order_time);
```

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

	hour(order_time)	order_count
▶	11	1231
	12	2520
	13	2455
	14	1472
	15	1468
	16	1920
	17	2336
	18	2399
	19	2009
	20	1642

- Extracted hour from order_time
- Identified peak demand window
- Useful for staffing & promotions

Category Analysis

```
1  -- Calculate the percentage contribution of each pizza type to total revenue.
2  • select pizza_types.category , round(sum(
3  order_details.quantity* pizzas.price)/(SELECT
4  ROUND(SUM(order_details.quantity * pizzas.price),
5  2) AS total_sales FROM
6  order_details JOIN
7  pizzas ON pizzas.pizza_id = order_details.pizza_id)*100 ,2)as revinue
8  from pizza_types join pizzas
9  on pizza_types.pizza_type_id = pizzas.pizza_type_id
10 join order_details |
11 on order_details.pizza_id = pizzas.pizza_id
12 group by pizza_types.category order by revinue desc ;
13
```

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

	category	revinue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

- Revenue segmented by category
- Identified dominant category
- Shows customer preference trend

Top 3 Pizza Types per Category, Based on revenue

```
1  -- Determine the top 3 most ordered pizza types based on revenue for each pizza category.
2  •  select name, revenue from
3  (select category, name , revenue, rank() over(partition by category order by revenue desc) as rn from
4  (select pizza_types.category, pizza_types.name,
5  sum((order_details.quantity) * pizzas.price) as revenue
6  from pizza_types join pizzas
7  on pizza_types.pizza_type_id = pizzas.pizza_type_id
8  join order_details
9  on order_details.pizza_id = pizzas.pizza_id
10 group by pizza_types.category, pizza_types.name) as a) as b
11 where rn<=3;
```

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

	name	revenue
▶	The Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5
	The Classic Deluxe Pizza	38180.5
	The Hawaiian Pizza	32273.25
	The Pepperoni Pizza	30161.75
	The Spicy Italian Pizza	34831.25

Result 3 x

- Identify highest revenue-generating pizzas within each category
- Perform intra-category performance comparison

Key Takeaways & Skills Demonstrated

• Analytical Insights

- Identified high-revenue products and categories
- Determined peak sales periods using time-based aggregation
- Measured product-level revenue contribution
- Performed intra-category ranking using window functions

Technical Competencies

- Multi-table INNER JOIN operations
- Advanced aggregation (SUM, COUNT, AVG)
- GROUP BY with dimensional analysis
- Window functions (RANK, PARTITION BY, OVER)
- Revenue metric modeling

Business Impact

- Enables data-driven product prioritization
- Supports staffing optimization during peak hours
- Assists in revenue-focused marketing strategies