SQL PROJECT ON PIZZA SALES

Where Every Slice Tells A Story

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ABOUT PIZZA

Our Passion for Pizza

Pizza, originating from Italy, has become a globally cherished dish, evolving into various styles and flavors. With 32 different pizza types categorized into four main varieties, it caters to diverse preferences, ranging from classic flavors to innovative fusion recipes.

Among the most popular pizzas, The Thai Chicken Pizza, The Big Meat Pizza, The Classic Deluxe Pizza, The Five Cheese Pizza, and The Four Cheese Pizza are customer favorites, frequently ordered for their rich flavors and quality ingredients.

Pizza's adaptability allows it to remain a top choice for dine-in, takeout, and delivery. Whether it's a cheesy indulgence or a meaty feast, pizza continues to bring people together with its irresistible appeal.

PROBLEM STATEMENT

- Retrieve the maximum, minimum, and average price of pizzas
- Retrieve the most and least popular pizzas based on order count
- Retrieve the busiest and least busy order dates based on the number of orders placed
- Retrieve the orders with the highest and lowest revenue
- Retrieve the total number of orders placed each month
- Retrieve the distribution of orders based on the time of day
- Retrieve the total number of pizzas sold for each category
- Retrieve the most commonly ordered pizza size
- Retrieve the number of orders placed during each hour of the day
- Retrieve the most expensive pizza and its price
- Retrieve the distribution of pizza sales by size
- Calculate the total revenue generated from pizza sales
- Retrieve the top 3 best-selling pizzas based on total revenue
- Retrieve the top 5 most sold pizzas based on total quantity ordered
- Retrieve the pizza with the highest number of ingredients
- Retrieve pizzas that contain both Tomato and Cheese as ingredients

MAXIMUM, MINIMUM, AND AVERAGE PIZZA PRICES

```
SELECT MAX(price) AS max_price,
       MIN(price) AS min_price,
       AVG(price) AS average_price
FROM pizzas;
```

Result Grid | Filter Rows:

	max_price	min_price	average_price
▶	35.95	9.75	16.440625

PURPOSE

The purpose of this query is to retrieve the maximum, minimum, and average price of pizzas to analyze price variations, determine the most and least expensive options, and identify pricing trends in the pizza market.

MOST AND LEAST POPULAR PIZZAS BY ORDER COUNT

```sql
SELECT o.pizza_id, COUNT(*) AS order_count
FROM order_details o
GROUP BY o.pizza_id
ORDER BY order_count DESC
LIMIT 1;
```

```sql
SELECT o.pizza_id, COUNT(*) AS order_count
FROM order_details o
GROUP BY o.pizza_id
ORDER BY order_count ASC
LIMIT 1;
```

Result Grid | Filter Rows

pizza_id	order_count
big_meat_s	1830

Result Grid | Filter Rows:

pizza_id	order_count
the_greek_xxl	28

PURPOSE

The purpose of this query is to retrieve the most and least popular pizzas based on order count to analyze customer preferences, identify best-selling and least-ordered pizzas, and optimize menu offerings accordingly.

BUSIEST AND LEAST BUSY ORDER DATES BY ORDER COUNT

```sql
SELECT order_date, COUNT(*) AS order_count
FROM orders
GROUP BY order_date
ORDER BY order_count DESC
LIMIT 1;
```

Result Grid | Filter Rows

	order_date	order_count
▶	2015-11-27	115

```sql
SELECT order_date, COUNT(*) AS order_count
FROM orders
GROUP BY order_date
ORDER BY order_count ASC
LIMIT 1;
```

Result Grid | Filter Rows

	order_date	order_count
▶	2015-12-29	27

PURPOSE

The purpose of this query is to retrieve the busiest and least busy order dates based on the number of orders placed to analyze peak and low-demand periods, optimize staffing and inventory, and improve operational efficiency.

ORDERS WITH HIGHEST AND LOWEST REVENUE

```sql
SELECT o.order_id, MAX(od.quantity * p.price) AS max_order_revenue
FROM orders o
JOIN order_details od ON o.order_id = od.order_id
JOIN pizzas p ON od.pizza_id = p.pizza_id
GROUP BY o.order_id
ORDER BY max_order_revenue DESC LIMIT 1;
```

Result Grid | Filter Rows:

order_id	max_order_revenue
15674	83

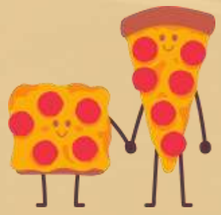
```sql
SELECT o.order_id, MIN(od.quantity * p.price) AS min_order_revenue
FROM orders o
JOIN order_details od ON o.order_id = od.order_id
JOIN pizzas p ON od.pizza_id = p.pizza_id
GROUP BY o.order_id
ORDER BY min_order_revenue ASC LIMIT 1;
```

Result Grid | Filter Rows

order_id	min_order_revenu
31	9.75

PURPOSE

The purpose of this query is to retrieve the orders with the highest and lowest revenue to analyze sales performance, identify high-value and low-value transactions, and optimize pricing and promotional strategies.



MONTHLY ORDER TRENDS: TOTAL ORDERS PER MONTH

```sql
SELECT DATE_FORMAT(order_date, '%Y-%m') AS month, COUNT(*) AS total_orders
FROM orders
GROUP BY month
ORDER BY month;
```

Result Grid | Filter

month	total_orders
2015-01	1845
2015-02	1685
2015-03	1840
2015-04	1799
2015-05	1853
2015-06	1773
2015-07	1935
2015-08	1841
2015-09	1661
2015-10	1646
2015-11	1792
2015-12	1680

PURPOSE

The purpose of this query is to retrieve the total number of orders placed each month to analyze ordering patterns, identify seasonal trends, and support demand forecasting and business planning.

ORDER DISTRIBUTION BY TIME OF DAY

```sql
SELECT CASE
    WHEN CAST(order_time AS TIME) BETWEEN '00:00:00' AND '11:59:59' THEN 'Morning'
    WHEN CAST(order_time AS TIME) BETWEEN '12:00:00' AND '17:59:59' THEN 'Afternoon'
    ELSE 'Evening'
END AS time_of_day, COUNT(*) AS order_count
FROM orders
GROUP BY time_of_day;
```

Result Grid | Filter Rows

time_of_day	order_count
Morning	1240
Afternoon	12171
Evening	7939

PURPOSE

The purpose of this query is to retrieve the distribution of orders based on the time of day to analyze peak ordering hours, understand customer behavior, and optimize staffing and operational efficiency.

TOTAL PIZZA SALES BY CATEGORY

```sql
SELECT pt.category, SUM(o.quantity) AS total_sold
FROM order_details o
JOIN pizzas p ON o.pizza_id = p.pizza_id
JOIN pizza_types pt ON p.pizza_type_id = pt.pizza_type_id
GROUP BY pt.category
ORDER BY total_sold DESC;
```

Result Grid | Filter

category	total_sold
Classic	15034
Supreme	12100
Veggie	11756
Chicken	11156

PURPOSE

The purpose of this query is to retrieve the total number of pizzas sold for each category to analyze sales performance, identify popular pizza categories, and optimize menu offerings and inventory management.

MOST COMMON PIZZA SIZE ORDERED

```
SELECT size, COUNT(*) AS count FROM pizzas p
JOIN order_details o ON p.pizza_id = o.pizza_id
GROUP BY size ORDER BY count DESC LIMIT 1;
```

Result Grid

	size	count
▶	L	18726

PURPOSE

The purpose of this query is to retrieve the most commonly ordered pizza size to analyze customer preferences, optimize inventory management, and improve menu offerings based on demand.

ORDER COUNT BY HOUR OF THE DAY

```
SELECT HOUR(order_time) AS order_hour,
       COUNT(order_id) AS order_count
FROM orders
GROUP BY HOUR(order_time)
ORDER BY order_hour;
```

Result Grid | Filter Row

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
20	1642
21	1198
22	663
23	28

PURPOSE

The purpose of this query is to retrieve the number of orders placed during each hour of the day to analyze hourly demand patterns, identify peak ordering times, and optimize staffing and operational efficiency.

THE MOST EXPENSIVE PIZZA

```sql
SELECT pizza_types.name, pizzas.price
FROM pizza_types
JOIN pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
ORDER BY pizzas.price DESC LIMIT 1;
```

Result Grid | Filter Rc

	name	price
▶	The Greek Pizza	35.95

PURPOSE

The purpose of this query is to retrieve the most expensive pizza and its price to analyze pricing strategies, identify premium menu items, and optimize revenue potential.

PIZZA SALES DISTRIBUTION BY SIZE

```sql
SELECT p.size, SUM(od.quantity) AS total_sold,
       (SUM(od.quantity) * 100.0 / (SELECT SUM(quantity) FROM order_details)) AS percentage_of_total
FROM order_details od
JOIN pizzas p ON od.pizza_id = p.pizza_id
GROUP BY p.size;
```

Result Grid | Filter Rows:

size	total_sold	percentage_of_total
M	15770	31.51101
L	19160	38.28478
S	14532	29.03729
XL	556	1.11098
XXL	28	0.05595

PURPOSE

The purpose of this query is to calculate the total pizza sales to evaluate overall sales performance, track financial growth, and support strategic decision-making for pricing and promotions.

TOTAL REVENUE GENERATED FROM PIZZA SALES

```sql
SELECT ROUND(SUM(order_details.quantity * pizzas.price), 2) AS total_sales
FROM order_details
JOIN pizzas ON pizzas.pizza_id = order_details.pizza_id;
```

Result Grid

	total_sales
▶	825717

PURPOSE

The purpose of this query is to calculate the total revenue generated from pizza sales to assess business profitability, track financial performance, and support data-driven decision-making for sales growth and pricing strategies.

TOP 3 BEST-SELLING PIZZAS BY REVENUE

```sql
SELECT pt.name, SUM(od.quantity * p.price) AS total_revenue
FROM order_details od
JOIN pizzas p ON od.pizza_id = p.pizza_id
JOIN pizza_types pt ON p.pizza_type_id = pt.pizza_type_id
GROUP BY pt.name
ORDER BY total_revenue DESC
LIMIT 3;
```

Result Grid | Filter Rows:

name	total_revenue
The Thai Chicken Pizza	43926.5
The Barbecue Chicken Pizza	43252.25
The California Chicken Pizza	41780.5

PURPOSE

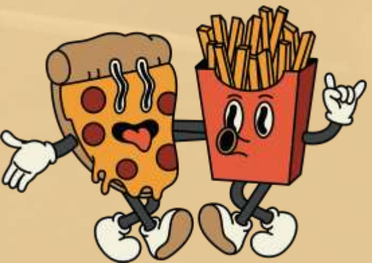
The purpose of this query is to retrieve the top 3 best-selling pizzas based on total revenue to identify high-performing menu items, optimize marketing strategies, and enhance sales and profitability.

THE TOP 5 MOST SOLD PIZZAS BY NAME

```sql
SELECT pt.name, SUM(od.quantity) AS total_sold
FROM order_details od
JOIN pizzas p ON od.pizza_id = p.pizza_id
JOIN pizza_types pt ON p.pizza_type_id = pt.pizza_type_id
GROUP BY pt.name
ORDER BY total_sold DESC LIMIT 5;
```

Result Grid | Filter Rows:

name	total_sold
The Classic Deluxe Pizza	2474
The Barbecue Chicken Pizza	2459
The Hawaiian Pizza	2444
The Pepperoni Pizza	2444
The Thai Chicken Pizza	2398



PURPOSE

The purpose of this query is to retrieve the top 5 most sold pizzas based on total quantity ordered to identify customer favorites, optimize inventory management, and enhance sales strategies.

THE PIZZA WITH THE HIGHEST NUMBER OF INGREDIENTS

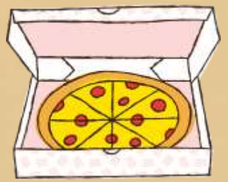
```
SELECT name, LENGTH(ingredients) - LENGTH(REPLACE(ingredients, ',', '')) + 1 AS ingredient_count
FROM pizza_types
ORDER BY ingredient_count DESC
LIMIT 1;
```

Result Grid | Filter Rows:

	name	ingredient_count
▶	The Southwest Chicken Pizza	8

PURPOSE

The purpose of this query is to retrieve the pizza with the highest number of ingredients to analyze complex menu items, assess their impact on pricing and preparation time, and optimize ingredient management.



PIZZAS WITH TOMATO AND CHEESE INGREDIENTS

```
SELECT name, ingredients
FROM pizza_types
WHERE ingredients LIKE '%Tomato%' AND ingredients LIKE '%Cheese%';
```

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

name	ingredients
The Italian Capocollo Pizza	Capocollo, Red Peppers, Tomatoes, Goat Chee...
The Greek Pizza	Kalamata Olives, Feta Cheese, Tomatoes, Garli...
The Pepper Salami Pizza	Genoa Salami, Capocollo, Pepperoni, Tomatoes,...
The Spicy Italian Pizza	Capocollo, Tomatoes, Goat Cheese, Artichokes,...
The Spinach Supreme Pizza	Spinach, Red Onions, Pepperoni, Tomatoes, Art...
The Green Garden Pizza	Spinach, Mushrooms, Tomatoes, Green Olives, ...
The Mediterranean Pizza	Spinach, Artichokes, Kalamata Olives, Sun-dried...

PURPOSE

The purpose of this query is to retrieve pizzas that contain both Tomato and Cheese as ingredients to analyze menu combinations, identify popular ingredient pairings, and optimize recipe offerings based on customer preferences.

THANK YOU