



PIZZA SALES ANALYSIS

Using: PostgreSQL

How many orders have been placed in total?



```
SELECT COUNT(order_id) AS total_orders  
FROM orders;
```

	total_orders 
1	21350

What is the total revenue generated?




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

	total_revenue  numeric
1	817860.05

What is the average value of an order?



```
SELECT ROUND(AVG(order_value),2) AS avg_order_value
FROM (SELECT od.order_id,
             SUM(od.quantity*p.price) AS order_value
      FROM order_details od
      JOIN pizzas p
      ON p.pizza_id = od.pizza_id
      GROUP BY od.order_id);
```

	avg_order_value 
1	38.31

Identify the highest-priced pizza





```
SELECT pt.name, p.price
FROM pizza_type pt
JOIN pizzas p ON pt.pizza_type_id = p.pizza_type_id
ORDER BY p.price DESC
LIMIT 1;
```

	name character varying (255) 🔒	price numeric (10,2) 🔒
1	The Greek Pizza	35.95

How many orders were placed each month?



```
SELECT DATE_TRUNC('month', order_date) AS months,
       COUNT(order_id) AS total_orders
FROM orders
GROUP BY months
ORDER BY months;
```

	months timestamp with time zone 	total_orders bigint 
1	2015-01-01 00:00:00+05:30	1845
2	2015-02-01 00:00:00+05:30	1685
3	2015-03-01 00:00:00+05:30	1840
4	2015-04-01 00:00:00+05:30	1799
5	2015-05-01 00:00:00+05:30	1853
6	2015-06-01 00:00:00+05:30	1773
7	2015-07-01 00:00:00+05:30	1935
8	2015-08-01 00:00:00+05:30	1841
9	2015-09-01 00:00:00+05:30	1661
10	2015-10-01 00:00:00+05:30	1646
11	2015-11-01 00:00:00+05:30	1792
12	2015-12-01 00:00:00+05:30	1680

Which pizza size is ordered the most?



```
SELECT p.size AS pizza_size,  
       SUM(od.quantity) AS total_quantity  
FROM pizzas AS p  
JOIN order_details AS od  
ON p.pizza_id = od.pizza_id  
GROUP BY p.size  
ORDER BY total_quantity DESC;
```

	pizza_size character varying (10) 🔒	total_quantity bigint 🔒
1	L	18956
2	M	15635
3	S	14403
4	XL	552
5	XXL	28

Total orders by each type of pizza?





```
SELECT pt.name AS pizza_name,  
       SUM(od.quantity) AS total_orders  
FROM order_details AS od  
JOIN pizzas AS p  
ON od.pizza_id = p.pizza_id  
JOIN pizza_type AS pt  
ON pt.pizza_type_id = p.pizza_type_id  
GROUP BY pt.name;
```

	pizza_name character varying (255)	total_orders bigint			
1	The Italian Vegetables Pizza	981	17	The Vegetables + Vegetables Pizza	1526
2	The Thai Chicken Pizza	2371	18	The Spinach Pesto Pizza	970
3	The Hawaiian Pizza	2422	19	The Mediterranean Pizza	934
4	The Pepperoni, Mushroom, and Peppers Pizza	1359	20	The Spinach and Feta Pizza	1446
5	The Italian Supreme Pizza	1884	21	The Pepperoni Pizza	2418
6	The Mexicana Pizza	1484	22	The Soppressata Pizza	961
7	The Brie Carre Pizza	490	23	The Five Cheese Pizza	1409
8	The Chicken Pesto Pizza	973	24	The California Chicken Pizza	2370
9	The Chicken Alfredo Pizza	987	25	The Classic Deluxe Pizza	2453
10	The Pepper Salami Pizza	1446	26	The Greek Pizza	1420
11	The Big Meat Pizza	1914	27	The Calabrese Pizza	937
12	The Napolitana Pizza	1464	28	The Spinach Supreme Pizza	950
13	The Four Cheese Pizza	1902	29	The Sicilian Pizza	1938
14	The Green Garden Pizza	997	30	The Italian Capocollo Pizza	1438
15	The Barbecue Chicken Pizza	2432	31	The Prosciutto and Arugula Pizza	1457
16	The Southwest Chicken Pizza	1917	32	The Spicy Italian Pizza	1924

Most ordered pizza type?



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

	category character varying (50) 	quantity_sold bigint 
1	Classic	14888
2	Supreme	11987
3	Veggie	11649
4	Chicken	11050

What is the total revenue generated by each type of pizza?



```
SELECT pt.name AS pizza_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_type pt  
ON p.pizza_type_id = pt.pizza_type_id  
GROUP BY pt.name  
ORDER BY total_revenue DESC;
```

	pizza_name character varying (255)	total_revenue numeric			
			17	The Vegetables + Vegetables Pizza	24374.75
			18	The Prosciutto and Arugula Pizza	24193.25
1	The Thai Chicken Pizza	43434.25	19	The Napolitana Pizza	24087.00
2	The Barbecue Chicken Pizza	42768.00	20	The Spinach and Feta Pizza	23271.25
3	The California Chicken Pizza	41409.50	21	The Big Meat Pizza	22968.00
4	The Classic Deluxe Pizza	38180.50	22	The Pepperoni, Mushroom, and Peppers Pizza	18834.50
5	The Spicy Italian Pizza	34831.25	23	The Chicken Alfredo Pizza	16900.25
6	The Southwest Chicken Pizza	34705.75	24	The Chicken Pesto Pizza	16701.75
7	The Italian Supreme Pizza	33476.75	25	The Soppressata Pizza	16425.75
8	The Hawaiian Pizza	32273.25	26	The Italian Vegetables Pizza	16019.25
9	The Four Cheese Pizza	32265.70	27	The Calabrese Pizza	15934.25
10	The Sicilian Pizza	30940.50	28	The Spinach Pesto Pizza	15596.00
11	The Pepperoni Pizza	30161.75	29	The Mediterranean Pizza	15360.50
12	The Greek Pizza	28454.10	30	The Spinach Supreme Pizza	15277.75
13	The Mexicana Pizza	26780.75	31	The Green Garden Pizza	13955.75
14	The Five Cheese Pizza	26066.50	32	The Brie Carré Pizza	11588.50
15	The Pepper Salami Pizza	25529.00			
16	The Italian Capocollo Pizza	25094.00			

Top 5 ingredient combinations used in pizzas?





```
SELECT pt.ingredients,
       COUNT(od.order_id) AS most_used_ingredients
FROM pizza_type AS pt
JOIN pizzas AS p ON pt.pizza_type_id = p.pizza_type_id
JOIN order_details AS od ON od.pizza_id = p.pizza_id
GROUP BY pt.ingredients
ORDER BY most_used_ingredients DESC
LIMIT 5;
```

	ingredients text	most_used_ingredients bigint
1	Pepperoni, Mushrooms, Red Onions, Red Peppers, Bacon	2416
2	Barbecued Chicken, Red Peppers, Green Peppers, Tomatoes, Red Onions, Barbecue Sa...	2372
3	Sliced Ham, Pineapple, Mozzarella Cheese	2370
4	Mozzarella Cheese, Pepperoni	2369
5	Chicken, Pineapple, Tomatoes, Red Peppers, Thai Sweet Chilli Sauce	2315

Which category has the highest number of orders?



```
SELECT pt.category,  
       COUNT(DISTINCT od.order_id) AS total_orders  
FROM pizza_type AS pt  
JOIN pizzas AS p  
ON pt.pizza_type_id = p.pizza_type_id  
JOIN order_details AS od  
ON p.pizza_id = od.pizza_id  
GROUP BY pt.category  
ORDER BY total_orders DESC;
```

	category character varying (50) 	total_orders bigint 
1	Classic	10859
2	Supreme	9085
3	Veggie	8941
4	Chicken	8536

Determine the distribution of orders by hour of the day.



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

	order_hour numeric	orders bigint
1	9	1
2	10	8
3	11	1231
4	12	2520
5	13	2455
6	14	1472
7	15	1468
8	16	1920
9	17	2336
10	18	2399
11	19	2009
12	20	1642
13	21	1198
14	22	663
15	23	28

Category wise distribution of pizzas



```
SELECT category,  
       COUNT(DISTINCT pizza_type_id) AS pizza_count  
FROM  
       pizza_type  
GROUP BY  
       category  
ORDER BY  
       pizza_count DESC;
```

	category character varying (50) 🔒	pizza_count bigint 🔒
1	Supreme	9
2	Veggie	9
3	Classic	8
4	Chicken	6

Average quantity of pizza ordered each day.



```
SELECT
    ROUND(AVG(total_orders_per_day),2) AS avg_quantity_ordered
FROM (SELECT
    DATE_TRUNC('day', o.order_date) AS day,
    SUM(od.quantity) AS total_orders_per_day
FROM orders AS o
JOIN order_details AS od
ON o.order_id = od.order_id
GROUP BY day
);
```

	avg_quantity_ordered numeric	
1	138.47	

Calculate the percentage contribution of each pizza type to total revenue.



```
WITH total_revenue AS(  
    SELECT  
        SUM(od.quantity*p.price) AS revenue  
    FROM pizzas AS p  
    JOIN order_details AS od  
    ON p.pizza_id = od.pizza_id  
),  
category_wise_revenue AS (  
    SELECT  
        pt.category,  
        SUM(od.quantity*p.price) AS categorical_revenue  
    FROM order_details AS od  
    JOIN pizzas AS p  
    ON od.pizza_id = p.pizza_id  
    JOIN pizza_type AS pt  
    ON pt.pizza_type_id = p.pizza_type_id  
    GROUP BY pt.category  
)  
SELECT  
    cwr.category,  
    ROUND((cwr.categorical_revenue/tr.revenue)*100,2) AS percentage_revenue_of_category  
FROM total_revenue AS tr  
CROSS JOIN category_wise_revenue AS cwr  
ORDER BY percentage_revenue_of_category DESC;
```

	category character varying (50) 🔒	percentage_revenue_of_category 🔒 numeric
1	Classic	26.91
2	Supreme	25.46
3	Chicken	23.96
4	Veggie	23.68

Analyse the cumulative revenue generated over time.



```
SELECT order_month,
       SUM(revenue) OVER(ORDER BY order_month) AS cumulative_sum_revenue
FROM(
  SELECT TO_CHAR(DATE_TRUNC('month', o.order_date), 'YYYY-MM') AS order_month,
         SUM(od.quantity * p.price) AS revenue
  FROM order_details AS od
  JOIN pizzas AS p
  ON od.pizza_id = p.pizza_id
  JOIN orders AS o
  ON o.order_id = od.order_id
  GROUP BY order_month);
```

	order_month text	cumulative_sum_revenue numeric
1	2015-01	69793.30
2	2015-02	134952.90
3	2015-03	205350.00
4	2015-04	274086.80
5	2015-05	345489.55
6	2015-06	413719.75
7	2015-07	486277.65
8	2015-08	554555.90
9	2015-09	618735.95
10	2015-10	682763.55
11	2015-11	753158.90
12	2015-12	817860.05

Determine the Top 3 most ordered pizza type based on revenue for each pizza category.



```
SELECT pizza_name, pizza_category, revenue
FROM (SELECT pt.category AS pizza_category,
            pt.name AS pizza_name,
            SUM(od.quantity * p.price) AS revenue,
            DENSE_RANK() OVER(PARTITION BY pt.category ORDER BY SUM(od.quantity * p.price) DESC) AS rank
      FROM order_details AS od
      JOIN pizzas AS p
      ON od.pizza_id = p.pizza_id
      JOIN pizza_type AS pt
      ON p.pizza_type_id = pt.pizza_type_id
      GROUP BY pt.name, pt.category)
WHERE rank <= 3
ORDER BY pizza_category;
```

	<div>pizza_name</div> <div>character varying (255)</div>	<div>pizza_category</div> <div>character varying (50)</div>	<div>revenue</div> <div>numeric</div>
1	The Thai Chicken Pizza	Chicken	43434.25
2	The Barbecue Chicken Pizza	Chicken	42768.00
3	The California Chicken Pizza	Chicken	41409.50
4	The Classic Deluxe Pizza	Classic	38180.50
5	The Hawaiian Pizza	Classic	32273.25
6	The Pepperoni Pizza	Classic	30161.75
7	The Spicy Italian Pizza	Supreme	34831.25
8	The Italian Supreme Pizza	Supreme	33476.75
9	The Sicilian Pizza	Supreme	30940.50
10	The Four Cheese Pizza	Veggie	32265.70
11	The Mexicana Pizza	Veggie	26780.75
12	The Five Cheese Pizza	Veggie	26066.50



THANK YOU

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