Pizza Sales SQL Analysis Project

This project presents an end-to-end SQL analysis of a pizza sales dataset to uncover meaningful business insights. The dataset consists of order transactions, product details, pricing information, and pizza categories. Using structured queries, we analyze sales performance, customer ordering behavior, revenue trends, and product popularity.

- ## Retrieve the total number of orders placed.

SELECT

   COUNT(*) AS total_orders

FROM

  orders;

total_orders
21350

- ## Calculate the total revenue generated from pizza sales.

SELECT

   ROUND(SUM(orders_details.quantity * pizzas.price),

     2) AS Total_revenue

FROM

  orders_details

    JOIN

  pizzas ON orders_details.pizza_id = pizzas.pizza_id;

Total_revenue
817860.05

- ## Identify the highest-priced pizza.

SELECT

   MAX(price)

FROM

  pizzas;

max(price)
35.95

- **Identify the most common pizza size ordered**

SELECT

   pizzas.size, COUNT(orders_details.quantity)

FROM

   pizzas

      JOIN

   orders_details ON pizzas.pizza_id = orders_details.pizza_id

GROUP BY pizzas.size

ORDER BY COUNT(orders_details.quantity) DESC

LIMIT 1;

size	COUNT(orders_details.quant...
L	18526

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

SELECT

   pizza_type1.name, COUNT(orders_details.quantity)

FROM

   pizza_type1

      JOIN

   pizzas ON pizza_type1.pizza_type_id = pizzas.pizza_type_id

      JOIN

   orders_details ON pizzas.pizza_id = orders_details.pizza_id

GROUP BY pizza_type1.name

ORDER BY COUNT(orders_details.quantity) DESC

LIMIT 5;

name	COUNT(orders_details.quant...
The Classic Deluxe Pizza	2416
The Barbecue Chicken Pizza	2372
The Hawaiian Pizza	2370
The Pepperoni Pizza	2369
The Thai Chicken Pizza	2315

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

SELECT

   pizza_type1.category, COUNT(orders_details.quantity)

FROM

   pizza_type1

     JOIN

   pizzas ON pizza_type1.pizza_type_id = pizzas.pizza_type_id

     JOIN

   orders_details ON orders_details.pizza_id = pizzas.pizza_id

GROUP BY pizza_type1.category

ORDER BY COUNT(orders_details.quantity) DESC;

category	COUNT(orders_details.quant...
Classic	14579
Supreme	11777
Veggie	11449
Chicken	10815

- **Determine the distribution of orders by hour of the day.**

SELECT

   HOUR(order_time), COUNT(order_id)

FROM

   orders

GROUP BY HOUR(order_time);

HOUR(order_time)	COUNT(order_i...	
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	
10	8	
9	1	

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

SELECT

   category, COUNT(name)

FROM

   pizza_type1

GROUP BY category;

category	COUNT(name)	
Chicken	6	
Classic	8	
Supreme	9	
Veggie	9	

- **Group the orders by date and calculate the average number of pizzas ordered per day.**

SELECT

  AVG(Total_quantity)

FROM

```
(SELECT

  orders.order_date,

    SUM(orders_details.quantity) AS Total_quantity

FROM

  orders

JOIN orders_details ON orders.order_id = orders_details.order_id

GROUP BY orders.order_date) AS order_quantity;
```

AVG(Total_quanti...
138.4749

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

```
SELECT

  pizza_type1.name,

  ROUND(SUM(orders_details.quantity * pizzas.price),

    2) AS revenue

FROM

  pizza_type1

    JOIN

  pizzas ON pizza_type1.pizza_type_id = pizzas.pizza_type_id

    JOIN

  orders_details ON pizzas.pizza_id = orders_details.pizza_id

GROUP BY pizza_type1.name

ORDER BY revenue DESC

LIMIT 3;
```

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

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

select t.category, round(t.revenue * 100/ sum(t.revenue) over (),2) as Total_percent

from(

select pizza_type1.category, round(sum(orders_details.quantity *pizzas.price),2) as revenue

from pizza_type1 join pizzas on pizza_type1.pizza_type_id = pizzas.pizza_type_id

join orders_details on pizzas.pizza_id =orders_details.pizza_id

group by pizza_type1.category) as t

order by revenue desc;

category	Total_perce...	
Classic	26.91	
Supreme	25.46	
Chicken	23.96	
Veggie	23.68	

- **Analyze the cumulative revenue generated over time.**

SELECT

  order_date,

  round(SUM(revenue) OVER (ORDER BY order_date),2) AS cum_revenue

FROM (

  SELECT

    o.order_date,

    SUM(od.quantity * p.price) AS revenue

  FROM orders_details od

```
    JOIN orders o

        ON od.order_id = o.order_id

    JOIN pizzas p

        ON od.pizza_id = p.pizza_id

    GROUP BY o.order_date

) AS sales

ORDER BY order_date;
```

order_date	cum_revenue
2015-01-01	2713.85
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55
2015-01-06	14358.5
2015-01-07	16560.7
2015-01-08	19399.05
2015-01-09	21526.4
2015-01-10	23990.35
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.3
2015-01-14	32358.7
2015-01-15	34343.5
2015-01-16	36937.65
2015-01-17	39001.75
2015-01-18	40978.6
2015-01-19	43365.75
2015-01-20	45763.65
2015-01-21	47804.2
2015-01-22	50300.9
2015-01-23	52724.6
2015-01-24	55013.85
2015-01-25	56631.4
2015-01-26	58515.8
2015-01-27	61043.85
2015-01-28	63059.85
2015-01-29	65105.15
2015-01-30	67375.45
2015-01-31	69793.3

Result 6

- **<u>Determine the top 3 most ordered pizza types based on revenue for each pizza category.</u>**

```
SELECT

  category,

  pizza_name,

  revenue

FROM (

  SELECT

    pt.category,

    pt.name AS pizza_name,

    SUM(od.quantity * p.price) AS revenue,

    ROW_NUMBER() OVER (

      PARTITION BY pt.category

      ORDER BY SUM(od.quantity * p.price) DESC

    ) AS rn

  FROM pizza_type1 pt

  JOIN pizzas p

    ON pt.pizza_type_id = p.pizza_type_id

  JOIN orders_details od

    ON p.pizza_id = od.pizza_id

  GROUP BY pt.category, pt.name

) AS ranked

WHERE rn <= 3

ORDER BY category, revenue DESC;
```

category	pizza_name	revenue
Chicken	The Thai Chicken Pizza	43434.25
Chicken	The Barbecue Chicken Pizza	42768
Chicken	The California Chicken Pizza	41409.5
Classic	The Classic Deluxe Pizza	38180.5
Classic	The Hawaiian Pizza	32273.25
Classic	The Pepperoni Pizza	30161.75
Supreme	The Spicy Italian Pizza	34831.25
Supreme	The Italian Supreme Pizza	33476.75
Supreme	The Sicilian Pizza	30940.5
Veggie	The Four Cheese Pizza	32265.70000000065
Veggie	The Mexicana Pizza	26780.75
Veggie	The Five Cheese Pizza	26066.5