SQL PROJECT – PIZZA SALES ANALYSIS

INSIGHTS USING SQL ON PIZZA RESTAURANT DATASET

BY FAIZAN SHAIKH

🍕 SQL PROJECT – PIZZA SALES ANALYSIS

PROJECT OVERVIEW

🎯OBJECTIVE

The goal of this project is to analyze pizza sales data using SQL to identify revenue trends, top-selling pizzas, and ordering patterns to help improve business decisions.

📊DATASET DETAILS

- Orders Table: Order ID, Date, Time
- Order Details Table: Order ID, Pizza ID, Quantity
- Pizzas Table: Pizza ID, Size, Price
- Pizza Types Table: Name, Category, Ingredients

🛠️TOOLS USED

MySQL (for querying and analysis)

🔍KEY INSIGHTS COVERED

- Total Orders & Revenue
- Most Popular Pizza Sizes and Types
- Revenue Trends Over Time
- Category-wise Contribution

RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

```sql
SELECT
    COUNT(order_id) 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_sales
FROM
    orders_details
        JOIN
    pizzas ON pizzas.pizza_id = orders_details.pizza_id;
```

	total_sales
▶	817860.05

IDENTIFY THE HIGHEST-PRICED PIZZA.

```
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;
```

	name	price
▶	The Greek Pizza	35.95

IDENTIFY THE MOST COMMON PIZZA SIZE ORDERED.

```sql
SELECT
    pizzas.size,
    COUNT(orders_details.order_details_id) AS order_count
FROM
    pizzas
        JOIN
    orders_details ON pizzas.pizza_id = orders_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC;
```

size	order_count
L	18526
M	15385
S	14137
XL	544
XXL	28

LIST THE TOP 5 MOST ORDERED PIZZA TYPES ALONG WITH THEIR QUANTITIES.

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

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

JOIN THE NECESSARY TABLES TO FIND THE TOTAL QUANTITY OF EACH PIZZA CATEGORY ORDERED.

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

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

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

hour	order_count
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.

```sql
SELECT
    category, COUNT(name)
FROM
    pizza_types
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.

```sql
SELECT
    ROUND(AVG(quantity), 0) AS avg_pizza_ordered_per_day
FROM
    (SELECT
        orders.order_date, SUM(orders_details.quantity) AS quantity
    FROM
        orders
    JOIN orders_details ON orders.order_id = orders_details.order_id
    GROUP BY orders.order_date) AS order_quantity;
```

	avg_pizza_ordered_per_day
▶	138

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE.

```sql
SELECT
    pizza_types.name,
    SUM(orders_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.pizza_type_id
        JOIN
    orders_details ON orders_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.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.

```sql
SELECT
    pizza_types.category,
    ROUND(SUM(orders_details.quantity * pizzas.price) / (SELECT
                    ROUND(SUM(orders_details.quantity * pizzas.price),
                                2) AS total_sales
                FROM
                    orders_details
                        JOIN
                    pizzas ON pizzas.pizza_id = orders_details.pizza_id) * 100,
            2) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    orders_details ON orders_details.pizza_id = pizzas.pizza_id
GROUP BY pizza_types.category
ORDER BY revenue DESC;
```

category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```sql
SELECT
    order_date,
    SUM(revenue) OVER (ORDER BY order_date) AS cum_revenue
FROM
(
    SELECT
        orders.order_date,
        SUM(orders_details.quantity * pizzas.price) AS revenue
    FROM
        orders_details
        JOIN pizzas ON orders_details.pizza_id = pizzas.pizza_id
        JOIN orders ON orders.order_id = orders_details.order_id
    GROUP BY
        orders.order_date
) AS sales;
```

order_date	cum_revenue
2015-01-01	2713.8500000000004
2015-01-02	5445.75
2015-01-03	8108.15
2015-01-04	9863.6
2015-01-05	11929.55

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY.

```sql
SELECT
    name,
    revenue
FROM
(
    SELECT
        category,
        name,
        revenue,
        RANK() OVER (PARTITION BY category ORDER BY revenue DESC) AS rn
    FROM
    (
        SELECT
            pizza_types.category,
            pizza_types.name,
            SUM((orders_details.quantity) * pizzas.price) AS revenue
        FROM
            pizza_types
            JOIN pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
            JOIN orders_details ON orders_details.pizza_id = pizzas.pizza_id
        GROUP BY
            pizza_types.category,
            pizza_types.name
    ) AS a
) AS b
WHERE
    rn <= 3;
```

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
The Italian Supreme Pizza	33476.75
The Sicilian Pizza	30940.5
The Four Cheese Pizza	32265.70000000065
The Mexicana Pizza	26780.75
The Five Cheese Pizza	26066.5

SQL PROJECT - PIZZA SALES ANALYSIS

KEY FINDINGS

- Total Orders: 21,350
- Most Popular Size: Large
- Peak Ordering Time: 12-1 PM
- Total Revenue: $817,860
- Top Pizza by Revenue: The Thai Chicken Pizza

THANK YOU!