PIZZA SALES ANALYSIS

By
Durga Kudale

Introduction

- The goal of this SQL project is to analyse pizza sales data to gain insights into customer behaviour, popular pizza types, sales trends, and overall performance.
- The analysis will be performed using four tables: order_details, orders, pizza_type, and pizzas.

Business Problems

1: The total number of order place
2: The total revenue generated from pizza sales
3: The highest priced pizza.
4: The most common pizza size ordered.
5: The top 5 most ordered pizza types along their quantities.
6: The quantity of each pizza categories ordered.
7: The distribution of orders by hours of the day.
8: The category-wise distribution of pizzas.
9: The average number of pizzas ordered per day.
10: Top 3 most ordered pizza type base on revenue.
11: The percentage contribution of each pizza type to revenue.
12: The cumulative revenue generated over time.
13: The top 3 most ordered pizza type based on revenue for each pizza category.

1

The total number of order place

Query:

```
Select
        count(distinct(order_id)) as Total_orders
from orders;
```

Output

Total orders: 21350

	Total_orders
▶	21350

2

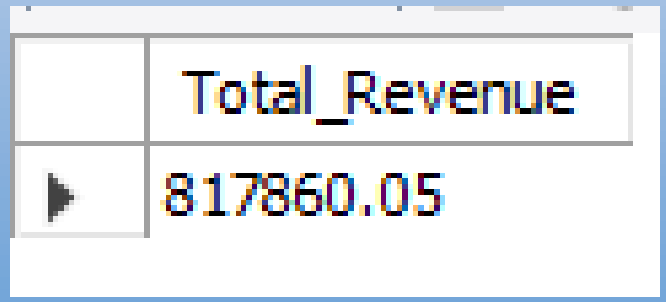
The total revenue generated from pizza sales.

Query:

```
Select  Round(sum(od. quantity*P.price),2 ) as
Total_Revenue
 from
        Order_details as od
         JOIN
         Pizzas as P
on od.Pizza_id = P.pizza_id;
```

Output

Total Revenue: 817860.05



	Total_Revenue
▶	817860.05

3

The highest priced pizza.

Query:

```
Select pt.name, p.price
from
        Pizza_types as pt
        JOIN
        Pizzas as p
on pt.pizza_type_id = p. pizza_type_id
Order by price DESC
Limit 1;
```

Output

The Greek Pizza = 35.95

	name	price
▶	The Greek Pizza	35.95

4

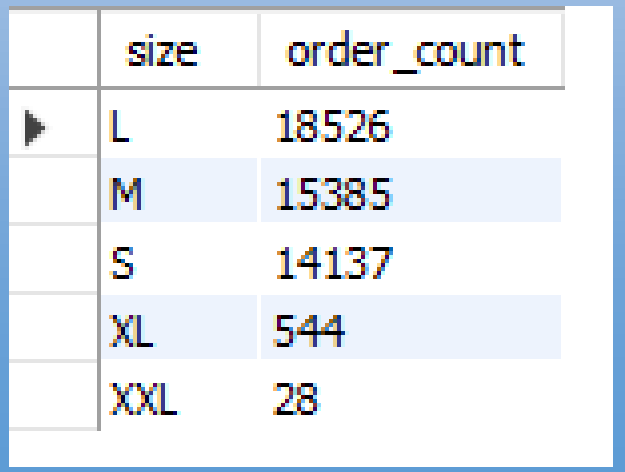
The most common pizza size ordered.

Query:

```
Select p.size, count(od.order_id) as order_count
from
        Order_details as od
         JOIN
         Pizzas as p
on od.pizza_id = p.pizza_id
Group by size
Order by order_count DESC;
```

Output

Size	Order_count
L	18526
M	15385
S	14137
XL	544
XXL	28



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

5

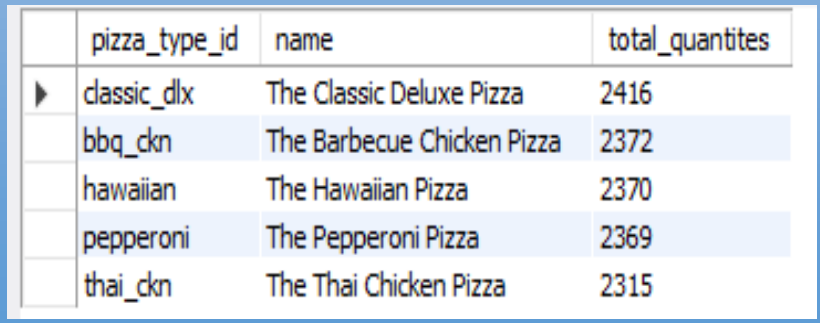
The top 5 most ordered pizza types along their quantities.

Query:

```
Select p.pizza_type_id, pt.name, count(od. quantity) as
total_quantites
from
        Pizzas as p
        LEFT JOIN
        Pizza_types as pt
on p.pizza_type_id= pt.pizza_type_id
         LEFT JOIN
         Order_details as od
on p.pizza_id=od.pizza_id
Group by pizza_type_id, name
Order by total_quantites desc
Limit 5;
```

Output

Pizza_type_id	Name	Total_quantites
classic_dlx	The Classic Deluxe Pizza	2416
bbq_ckn	The Barbecue Chicken Pizza	2372
hawaiian	The Hawaiian Pizza	2370
pepperoni	The Pepperoni Pizza	2369
thai_ckn	The Thai Chicken Pizza	2315



pizza_type_id	name	total_quantites
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bbq_ckn	The Barbecue Chicken Pizza	2372
hawaiian	The Hawaiian Pizza	2370
pepperoni	The Pepperoni Pizza	2369
thai_ckn	The Thai Chicken Pizza	2315

6

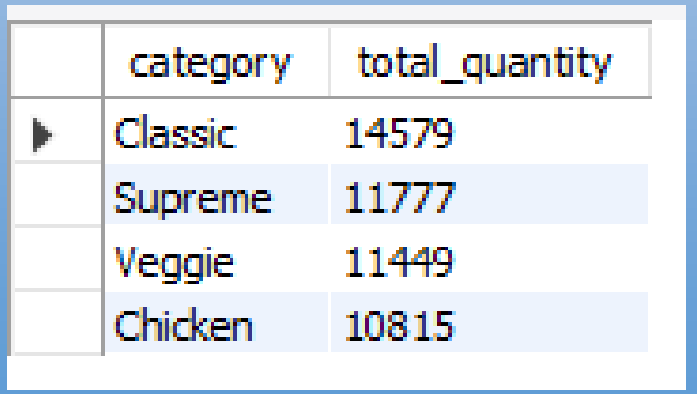
The quantity of each pizza categories ordered.

Query:

```
Select pt.category, count(od.quantity) as total_quantity
from
        Pizzas as p
        LEFT JOIN
        Pizza_types as pt
on p.pizza_type_id= pt.pizza_type_id
        LEFT JOIN
        Order_details as od
on p.pizza_id=od.pizza_id
Group by category
Order by total_quantity DESC;
```

Output

Category	Total_quantity
Classic	14579
Supreme	11777
Veggie	11449
Chicken	10815



	category	total_quantity
▶	Classic	14579
	Supreme	11777
	Veggie	11449
	Chicken	10815

7

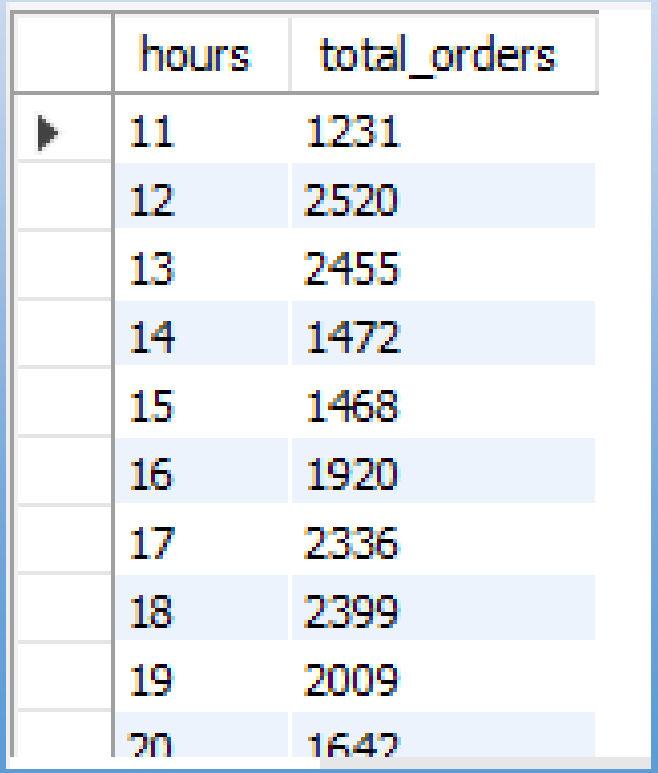
The distribution of orders by hours of the day.

Query:

```
Select Hour(`time`) as Hours , Count(order_id) as
total_orders
from
        Orders
Group by Hours;
```

Output

Hours	Total_orders
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



	hours	total_orders
▶	11	1231
	12	2520
	13	2455
	14	1472
	15	1468
	16	1920
	17	2336
	18	2399
	19	2009
	20	1642

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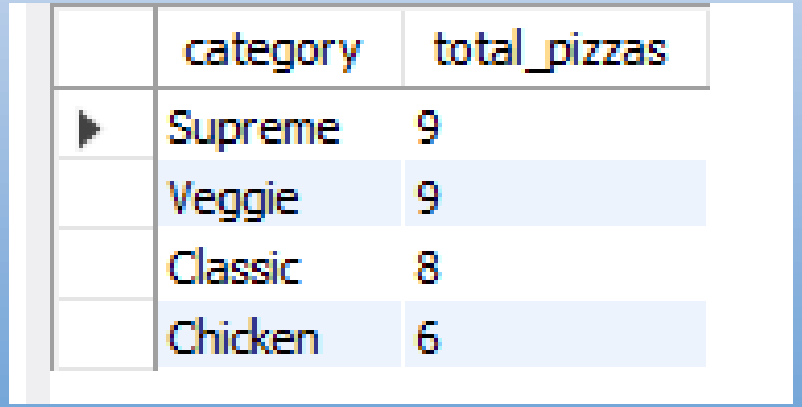
The category-wise distribution of pizzas

Query:

```
Select category, Count(name) as Total_pizzas
from
        Pizza_types
Group by category
Order by total_pizzas DESC;
```

Output

Category	Total_Pizzas
Supreme	9
Veggie	9
Classic	8
Chicken	6



	category	total_pizzas
▶	Supreme	9
	Veggie	9
	Classic	8
	Chicken	6

9

The average number of pizzas ordered per day.

Query:

```
Select AVG(quantity)
from
        (select o.`date` as order_quantity, sum(od.quantity) as
quantity
from
        Order_details as od
        JOIN
        Orders as o
on od.order_id=o.order_id    group by 1) as
order_quantity;
```

Output

Average Quantity: 138.4749

	avg(quantity)
▶	138.4749

10

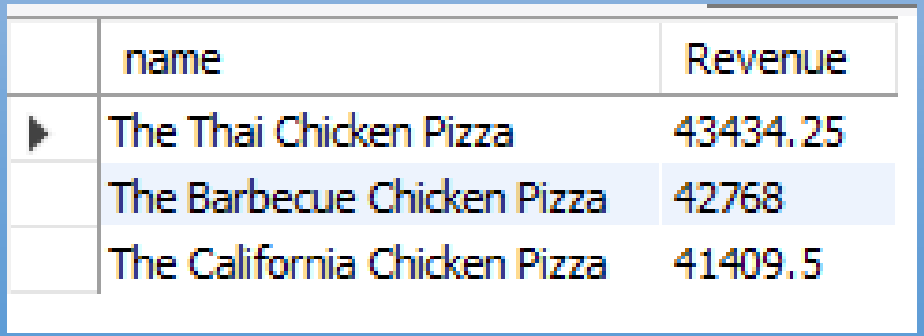
Top 3 most ordered pizza type base on revenue.

Query:

```
Select pt.name, SUM(od.quantity*p.price) as Revenue
from
        Pizza_types 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 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

Output



	name	Revenue
▶	The Thai Chicken Pizza	43434.25
	The Barbecue Chicken Pizza	42768
	The California Chicken Pizza	41409.5

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The percentage contribution of each pizza type to revenue.

Query:

```
Select pt.category, ROUND((sum(od.quantity*p.price)/(Select
ROUND(SUM(od.quantity*p.price),2) as total_revenue
from
        Order_details as od
        JOIN
        Pizzas as p
on od.pizza_id=p.pizza_id))*100,2) as Revenue_percentage
from
        Pizza_types 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 category
Order by revenue_percentage DESC;
```

Category	Revenue_Percentage
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

Output

	category	Revenue_percentage
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

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The cumulative revenue generated over time.

Query:

```
Select `date`,
SUM(revenue) OVER (order by `date`) as cum_revenue
from
        (Select o.`date`, ROUND(SUM (od.quantity*p.price),2) as revenue
from
        Orders as o
        JOIN
        Order_details as od
on o.order_id= od.order_id
        JOIN
        Pizzas as p
on p.pizza_id=od.pizza_id
Group by o.`date`) as sales;
```

Output

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	21526.399999999998
2015-01-10	23990.35

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

Query:

```
Select name, category, Total_revenue
from
        (Select name, category, Total_revenue, RANK()  OVER (Partition by category Order by
Total_revenue desc) as rn
from
       (SELECT pt.name, pt.category, ROUND(SUM(od. quantity*p.price), 2 )as  Total_Revenue
from
        Pizza_types 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 name, category) as a) as b
where rn<=3;
```

Name	Category	Total_revenue
The Thai Chicken Pizza	Chicken	43434.25
The Barbecue Chicken Pizza	Chicken	42768
The California Chicken Pizza	Chicken	41409.5
The Classic Deluxe Pizza	Classic	38180.5
The Hawaiian Pizza	Classic	32273.25
The Pepperoni Pizza	Classic	30161.75
The Spicy Italian Pizza	Supreme	34831.25
The Italian Supreme Pizza	Supreme	33476.75
The Sicilian Pizza	Supreme	30940.5
The Four Cheese Pizza	Veggie	32265.7
The Mexicana Pizza	Veggie	26780.75
The Five Cheese Pizza	Veggie	26066.5

Output

name	category	Total_revenue
The Thai Chicken Pizza	Chicken	43434.25
The Barbecue Chicken Pizza	Chicken	42768
The California Chicken Pizza	Chicken	41409.5
The Classic Deluxe Pizza	Classic	38180.5
The Hawaiian Pizza	Classic	32273.25
The Pepperoni Pizza	Classic	30161.75
The Spicy Italian Pizza	Supreme	34831.25
The Italian Supreme Pizza	Supreme	33476.75
The Sicilian Pizza	Supreme	30940.5
The Four Cheese Pizza	Veggie	32265.7

Conclusion

A well-maintained pizza sales database is essential for optimizing every aspect of a pizza business. By leveraging the data collected, businesses can enhance customer experiences, streamline operations, and make informed decisions that contribute to long-term success.

Thank You!!!