SQL PROJECT

PIZZA SALES

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SQL solves the challenge of efficiently managing and retrieving structured data in relational databases. Before SQL, data storage was unstructured and difficult to query. SQL enables quick data retrieval using commands like **SELECT** and **JOIN**, ensuring accuracy and consistency. It streamlines data management with **INSERT, UPDATE,** and **DELETE** while enforcing relationships through foreign keys. SQL also enhances security with access controls **(GRANT, REVOKE).** Additionally, it supports analytics and reporting using **GROUP BY, HAVING,** and **ORDER BY**, helping businesses derive insights and make informed decisions. SQL is essential for handling large-scale data operations across industries.

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

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

total_revenue
▶ 817860.05

Identify the highest-priced 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 price DESC
LIMIT 1;
```

name	price
The Greek Pizza	35.95

Identify the most common pizza size ordered.

```sql
SELECT
    pizzas.size,
    COUNT(order_details.order_details_id) AS order_count
FROM
    pizzas
        JOIN
    order_details ON pizzas.pizza_id = order_details.pizza_id
GROUP BY pizzas.size
ORDER BY order_count DESC
LIMIT 1;
```

	size	order_count
▶	L	18526

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

```sql
SELECT
    pizza_types.name, SUM(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_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(order_details.quantity) AS quantity
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON pizzas.pizza_id = order_details.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), COUNT(order_id) AS order_count
FROM
    orders
GROUP BY HOUR(order_time)
ORDER BY HOUR(order_time) ASC;
```

hour(order_time)	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

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

```sql
SELECT
    category, COUNT(name)
FROM
    pizza_types
GROUP BY category;
```
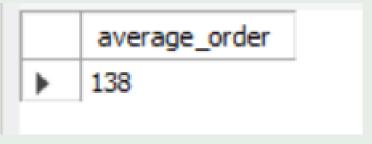
category	count(name)
Chicken	6
Classic	8
Supreme	9
Veggie	9

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

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

	average_order
▶	138

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

```sql
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
        JOIN
    order_details ON order_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(order_details.quantity * pizzas.price) /
    (SELECT ROUND(SUM(order_details.quantity * pizzas.price), 2) AS total_revenue
FROM order_details
JOIN pizzas
ON pizzas.pizza_id = order_details.pizza_id) * 100, 2) as revenue
FROM pizza_types
JOIN pizzas
ON pizza_types.pizza_type_id = pizzas.pizza_type_id
JOIN order_details
ON order_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 cummulative_revenue
from
(select orders.order_date,
round(sum(order_details.quantity * pizzas.price)) as revenue
from order_details join pizzas
on pizzas.pizza_id = order_details.pizza_id
join orders
on orders.order_id = order_details.order_id
group by order_date) as sales ;
```

order_date	cummulative_revenue
2015-01-01	2714
2015-01-02	5446
2015-01-03	8108
2015-01-04	9863
2015-01-05	11929
2015-01-06	14358
2015-01-07	16560
2015-01-08	19398
2015-01-09	21525
2015-01-10	23989
2015-01-11	25861
2015-01-12	27780
2015-01-13	29830
2015-01-14	32357
2015-01-15	34342
2015-01-16	36936
2015-01-17	39000
2015-01-18	40977
2015-01-19	43364

Result 3 ✕

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 ranks
from
(select pizza_types.category, pizza_types.name,
sum((order_details.quantity) * pizzas.price) as revenue
from pizza_types join pizzas
on pizza_types.pizza_type_id = pizzas.pizza_type_id
join order_details
on order_details.pizza_id = pizzas.pizza_id
group by pizza_types.category, pizza_types.name) as a ) as b
where ranks <=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

Thank you