

PIZZA SALES ANALYSIS SQL

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DESCRIPTION

Data of a pizza shop's sales is given containing 4 tables having all the information related to the sales and we have to find out the solutions of the questions given using SQL Queries. Details of the table is given below:

- 1. Pizzas:** Contains pizza id,pizza_type_id,size,price.
- 2. Pizza_type:** Contains pizza_type_id,name,category ,ingredients.
- 3. Order_details:** Contains order_details_id,order_id,pizza_id,quantity
- 4. Orders:** Contains order_id,order_time,order_date

Retrieve the total number of orders placed

```
select count(order_id) from orders as Total_Orders;
```

Result Grid	
	count(order_id)
▶	21350

Calculate the total revenue generated from pizza sales

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

Result Grid	
	total_sales
▶	817860.05

Identify the highest-priced pizza.

SELECT

FROM

 pizza_types

JOIN

 pizzas **ON** pizza_types.pizza_type_id = pizzas.pizza_type_id

ORDER BY pizzas.price **DESC**

LIMIT 1;

Result Grid



Filter Rows:

	name	price
▶	The Greek Pizza	35.95

Identify the most common pizza size order

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;**

	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.

```
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;
```

Result Grid		Filter Rows:
	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 total quantity of each pizza category ordered.

```
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;
```

	category	quantity
▶	Classic	14888
	Veggie	11649
	Supreme	11987
	Chicken	11050

Determine the distribution of orders by hour of the day.

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

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

```
SELECT  
    category, COUNT(name)  
FROM  
    pizza_types  
GROUP BY category;
```

Result Grid		Filter Row
	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.

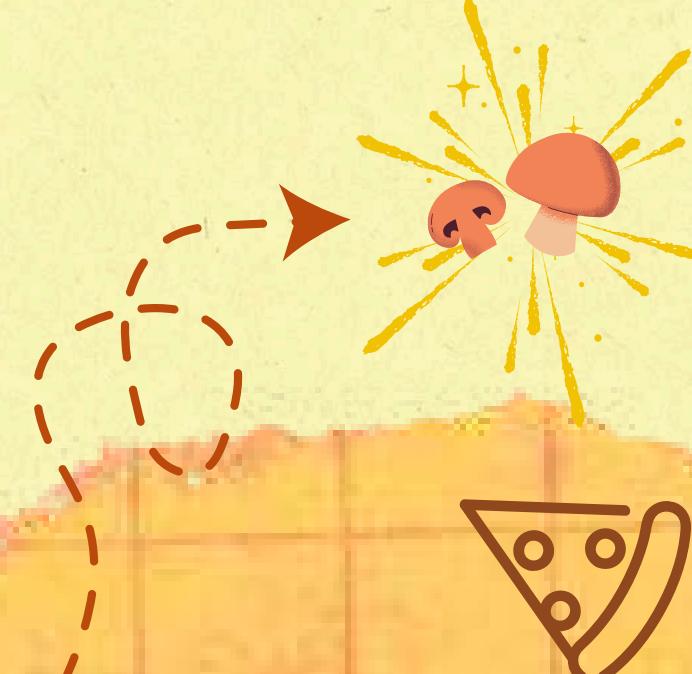
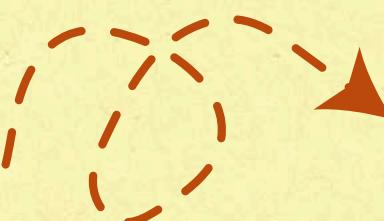
```
SELECT  
    ROUND(AVG(quantity),0) as Average_pizzas_Ordered_Per_Day  
FROM  
    (SELECT  
        orders.order_date, SUM(order_details.quantity) AS quantity  
    FROM  
        orders  
    JOIN order_details ON orders.order_id = order_details.order_id  
    GROUP BY orders.order_date) AS order_quantity;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

Result Grid	
	Average_pizzas_Ordered_Per_Day
▶	138

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

```
SELECT
    pizza_types.name,
    SUM(order_details.quantity * pizzas.price) AS revenue
FROM
    pizza_types
        JOIN
    pizzas ON pizzas.pizza_type_id = pizza_types.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;
```

Result Grid		
	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
    pizza_types.category,
    round(SUM(order_details.quantity * pizzas.price) / (SELECT
        ROUND(SUM(order_details.quantity * pizzas.price),
        2) AS total_sales
    )
    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

```
select order_date,  
sum(revenue) over (order by order_date) as cum_revenue  
from  
(Select orders.order_date ,  
sum(order_details.quantity*pizzas.price) as revenue  
from order_details join pizzas  
on order_details.pizza_id=pizzas.pizza_id  
join orders  
on orders.order_id=order_details.order_id  
group by orders.order_date) as sales;
```

Result Grid		
	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
	2015-01-06	14358.5
	2015-01-07	16560.7
	2015-01-08	19399.05
	2015-01-09	21526.4
	2015-01-10	23990.35000000002
	2015-01-11	25862.65
	2015-01-12	27781.7
	2015-01-13	29831.30000000003
	2015-01-14	32358.70000000004
	2015-01-15	34343.50000000001
	2015-01-16	36937.65000000001
	2015-01-17	39001.75000000001
	2015-01-18	40978.60000000006
	2015-01-19	43365.75000000001

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

```
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((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 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



Insights:

- The **Greek Pizza** is the **highest priced** pizza.
- **Most ordered** pizza is **Classic Deluxe Pizza** followed by Barbeque Chicken pizza.
- The Classic pizzas are ordered the most ,but the **top-3 pizzas** which are making **most revenue** are all from **Non-Veg Category**.
- The **average number** of pizzas ordered in a day is around **138**.
- The **Classic pizza** contributes about **26.9% to the total revenue**.
- The number of ordered received for Chicken pizza is the least among all the categories but still it the highest amount of revenue is coming from it.

Thank You