PIZZA SALES ANALYSIS USING SQL

INTRODUCTION

Purpose	The analysis aims to uncover sales trends, identify top-performing pizzas, and optimize business strategies by examining order volumes, revenue, and product preferences.
Data Refinement	Data from multiple tables (pizzas, pizza_types, orders, order_details) was cleaned and validated to ensure accuracy. This allowed for meaningful analysis of orders, pizza types, sizes, and prices.
Overview	The dataset includes order details, pizza pricing, and categories, enabling analysis of sales patterns, product performance, and revenue distribution.
SQL Queries & Analytics	SQL queries range from basic aggregation (e.g., total orders, sales) to intermediate joins and groupings (e.g., category-wise distribution, revenue by pizza type). Advanced techniques like CTEs and cumulative analysis provide deeper insights.
Expected Results	Insights may include top-selling pizzas, peak sales hours, revenue distribution, and customer preferences, guiding inventory and marketing strategies.
	

Basics

Q.1-Retrieve the total number of orders placed.

```
Select count(order_id) as total_orders from
orders;
```

Result Grid

total_orders
21350

Q.2-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

Q.3-Identify the highest-priced pizza.

```
SELECT pizza_types.name, pizzas.price FROM pizza_types JOI
pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
ORDER BY pizzas.price DESC LIMIT 1;
```

Result Grid | Filter Rc

name	price
The Greek Pizza	35.95

Q.4-Identify the most common pizza size ordered.

```
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;
```

Result Grid | Filt

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

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

```
SELECT pizza_types.name, SUM(order_details.quantity) AS
total_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
total_quantity DESC LIMIT 5;
```

Result Grid | Filter Rows:

name	total_quantity
The Classic Deluxe Pizza	2453
The Barbecue Chicken Pizza	2432
The Hawaiian Pizza	2422
The Pepperoni Pizza	2418
The Thai Chicken Pizza	2371

Q.6 Join the necessary tables to find the total quantity of each pizza category ordered.

```
SELECT pizza_types.name, SUM(order_details.quantity) AS
total_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 total_quantity DESC
LIMIT 5;
```

Result Grid | Filter Row

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

Q.7 Determine the distribution of orders by hour of the day.

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

Result Grid | Filter

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

Q.8 Join relevant tables to find the category-wise distribution of pizzas.

```
Select category , count(name) from
pizza_types group by category;
```

Result Grid | Filter Rows:

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

Q.9 Group the orders by date and calculate the average number of pizzas ordered per day.

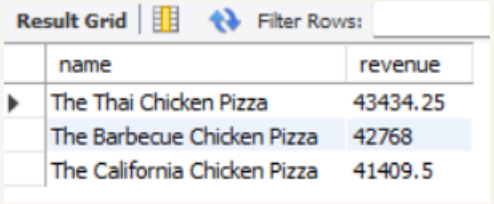
```
SELECT ROUND(AVG(quantity), 0) FROM   (SELECT orders.order_date,
SUM(order_details.quantity) AS quantity    FROM        orders    JOIN
order_details ON orders.order_id = order_details.order_id    GROUP BY
                orders.order_date) AS order_quantity;
```

Result Grid | Filter Rows:

	ROUND(AVG(quantity), 0)
▶	138

Q.10 Determine the top 3 most ordered pizza types based on revenue.

```
SELECT pizza_types.name, SUM(order_details.quantity * pizzas.price) AS
    revenueFROMpizza_types    JOIN pizzas ON pizzas.pizza_type_id =
          pizza_types.pizza_type_id   JOIN  order_details ON
order_details.pizza_id = pizzas.pizza_idGROUP BY pizza_types.name ORDER
                        BY revenue DESC LIMIT 3;
```


Result Grid | Filter Rows:

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

Advanced

Q.11 Calculate the percentage contribution of each pizza type to total revenue.

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

Result Grid | Filter Rows:

category	revenue
Classic	26.91
Supreme	25.46
Chicken	23.96
Veggie	23.68

Q.12 Analyze the cumulative revenue generated over time.

```
SELECT  order_date,SUM(revenue) OVER(ORDER BY
    order_date) AS sum_revenueFROM (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 | Filter Rows:

order_date	sum_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	23990.350000000002
2015-01-11	25862.65
2015-01-12	27781.7
2015-01-13	29831.300000000003
2015-01-14	32358.700000000004
2015-01-15	34343.50000000001
2015-01-16	36937.65000000001

Result 7

Q.13 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_idgroup
by pizza_types.category, pizza_types.name) as
a) as b where rn <=3;
```

Result Grid | Filter Rows: | Ex

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!