PIZZA HUT

INTRODUCTION

In this project , i worked on pizza sales data and analyzed pizza sales using SQL to identify top selling pizzas, peak order times and revenue trends. applied basic to advance queries to generate meaningful business insights.

SHODWE
pizza Hut

Problems

Basic:

1. Retrieve the total number of orders placed.
2. Calculate the total revenue generated from pizza sales.
3. Identify the highest-priced pizza.
4. Identify the most common pizza size ordered.
5. List the top 5 most ordered pizza types along with their quantities.

Intermediate:

6. Join the necessary tables to find the total quantity of each pizza category ordered.
7. Determine the distribution of orders by hour of the day.
8. Join relevant tables to find the category-wise distribution of pizzas.
9. Group the orders by date and calculate the average number of pizzas ordered per day.
10. Determine the top 3 most ordered pizza types based on revenue.

Advanced:

11. Calculate the percentage contribution of each pizza type to total revenue.
12. Analyze the cumulative revenue generated over time.
13. Determine the top 3 most ordered pizza types based on revenue for each pizza category.

SHODWE
Pizza Hut

1. Retrieve the total number of orders placed.

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

Result Grid

total_orders
21350

SHODWE
Pizza Hut

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

SHODWE
Pizza Hut

Home About Contact

3. 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;
```

Result Grid | Filter Rows:

	name	price
▶	The Greek Pizza	35.95

SHODWE
Pizza Hut

4. Identify the most common pizza size ordered.

```
select quantity, count(order_details_id)
from order_details group by quantity;

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 | Filte

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

SHODWE
Pizza Hut

5. 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

SHODWE
Pizza Resto

6. Join the necessary tables to find the 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 order_details.pizza_id = pizzas.pizza_id
group by pizza_types.category order by quantity desc;
```

Result Grid

category	quantity
Classic	14888
Supreme	11987
Veggie	11649
Chicken	11050

SHODWE
Pizza Hut

7. 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 | Filter

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

SHODWE
Pizza Hut

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 Row

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

SHODWE
Pizza Resto

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

```
select round(avg (quantity), 0) as avg_pizza_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 | Filter Rows:

avg_pizza_ordered_per_day
138

SHODWE
Pizza Hut

10. 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 | Filter Rows:

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

SHODWE
Pizza Resto

11. 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 )  * 100,0) 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;
```

Result Grid | Filter Rows:

category	revenue
Classic	27
Supreme	25
Veggie	24
Chicken	24

SHODWE
Pizza Hut

12. 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 | Filter Rows:

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	23990.350000000002

SHODWE
Pizza Hut

13. 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((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;
```

Result Grid | Filter Rows:

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

Business insights

Operational insights:

Top selling pizzas types - The classic deluxe pizza, the Barbeque chicken ,the Hawaiian ,the pepperoni, Thai chicken pizzas are top 5 most ordered pizzas and it shows the strong customers preference.

Peak Order time - most of the orders come in around lunch (12 - 1pm) and evening (5 - 6pm), so staff scheduling and kitchen preparation should be managed in those hours.

Best selling category - classic and chicken pizzas are ordered the most compared to other categories, so these should never run out of stock.

Size preference - customers seems to prefer large pizza the most, so base preparation and packaging should focus more on large sizes.

Daily average sales - on average the restaurant sells 138 pizzas per day, which gives a good idea of how much base and toppings need to be prepared daily.

Strategic insights:

Revenue - Classic category has highest contribution in total revenue which is 27 percent of total.

Top selling pizzas drive sales - pizzas with most orders should be positioned as "signature items" in promotion.

Offers and deals - in peak hours, family deals and combo offers could bring in even more revenue.

Low performing pizzas - low selling pizzas like XXL size pizzas can either be promoted with discount or need menu adjustment.