SQL PROJECT
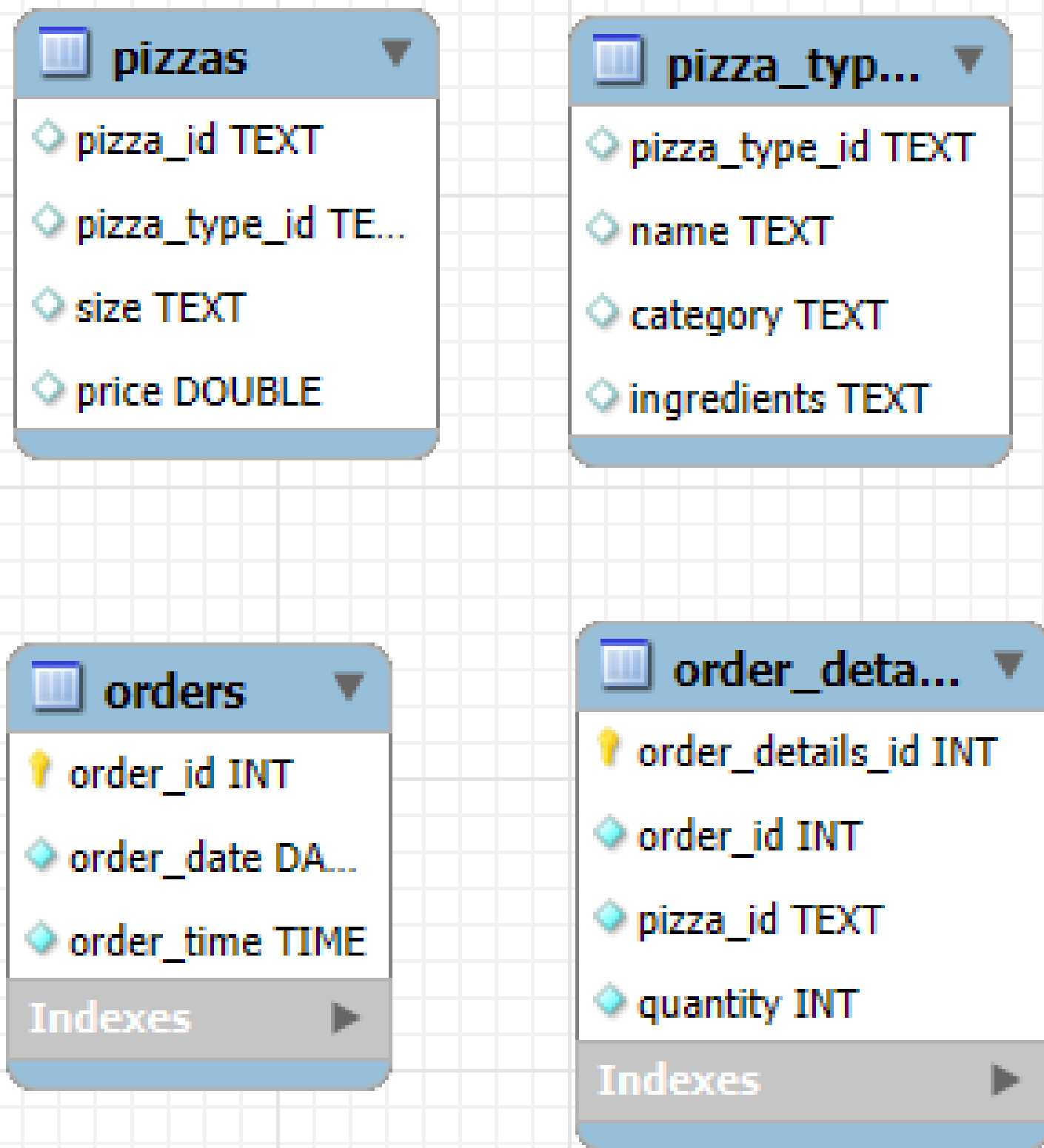
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PIZZA SALES

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INTRO

In this project, I have utilized SQL queries to solve questions that were related to Pizza sales.

EER DIAGRAM

pizzas
- ◇ pizza_id TEXT
- ◇ pizza_type_id TE...
- ◇ size TEXT
- ◇ price DOUBLE

pizza_typ...
- ◇ pizza_type_id TEXT
- ◇ name TEXT
- ◇ category TEXT
- ◇ ingredients TEXT

orders
- 🔑 order_id INT
- ◇ order_date DA...
- ◇ order_time TIME

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order_deta...
- 🔑 order_details_id INT
- ◇ order_id INT
- ◇ pizza_id TEXT
- ◇ quantity INT

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- **Related column between Pizzas & Pizza types**

  pizza type id

- **Related column between Orders & Order details**

  order id

- **Related column between Pizzas & Order details**

  pizza id

NOTE : These related columns between two tables can be used to solve advanced queries where there's a need to join two or more tables in order to take values from two different tables.

TABLES

pizzas

pizza_id	pizza_type_id	size	price
bbq_ckn_s	bbq_ckn	S	12.75
bbq_ckn_m	bbq_ckn	M	16.75
bbq_ckn_l	bbq_ckn	L	20.75
cali_ckn_s	cali_ckn	S	12.75
cali_ckn_m	cali_ckn	M	16.75
cali_ckn_l	cali_ckn	L	20.75
ckn_alfredo_s	ckn_alfredo	S	12.75
ckn_alfredo_m	ckn_alfredo	M	16.75
ckn_alfredo_l	ckn_alfredo	L	20.75
ckn_pesto_s	ckn_pesto	S	12.75
ckn_pesto_m	ckn_pesto	M	16.75
ckn_pesto_l	ckn_pesto	L	20.75
southw_ckn_s	southw_ckn	S	12.75
southw_ckn_m	southw_ckn	M	16.75
southw_ckn_l	southw_ckn	L	20.75
thai_ckn_s	thai_ckn	S	12.75
thai_ckn_m	thai_ckn	M	16.75

Pizza types

pizza_type_id	name	category	ingredients
bbq_ckn	The Barbecue Chicken Pizza	Chicken	Barbecued Chicken, Red Peppers, Green Peppe...
cali_ckn	The California Chicken Pizza	Chicken	Chicken, Artichoke, Spinach, Garlic, Jalapeno P...
ckn_alfredo	The Chicken Alfredo Pizza	Chicken	Chicken, Red Onions, Red Peppers, Mushrooms...
ckn_pesto	The Chicken Pesto Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Spinach, Garl...
southw_ckn	The Southwest Chicken Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Red Onions, ...
thai_ckn	The Thai Chicken Pizza	Chicken	Chicken, Pineapple, Tomatoes, Red Peppers, T...
big_meat	The Big Meat Pizza	Classic	Bacon, Pepperoni, Italian Sausage, Chorizo Sau...
classic_dlx	The Classic Deluxe Pizza	Classic	Pepperoni, Mushrooms, Red Onions, Red Peppe...
hawaiian	The Hawaiian Pizza	Classic	Sliced Ham, Pineapple, Mozzarella Cheese
ital_cpdlo	The Italian Capocollo Pizza	Classic	Capocollo, Red Peppers, Tomatoes, Goat Chee...
napolitana	The Napolitana Pizza	Classic	Tomatoes, Anchovies, Green Olives, Red Onion...
pep_msh_pep	The Pepperoni, Mushroom, and ...	Classic	Pepperoni, Mushrooms, Green Peppers
pepperoni	The Pepperoni Pizza	Classic	Mozzarella Cheese, Pepperoni
the_greek	The Greek Pizza	Classic	Kalamata Olives, Feta Cheese, Tomatoes, Garli...
brie_carre	The Brie Carre Pizza	Supreme	Brie Carre Cheese, Prosciutto, Caramelized Oni...
calabrese	The Calabrese Pizza	Supreme	'Nduja Salami, Pancetta, Tomatoes, Red Onions...
ital_supr	The Italian Supreme Pizza	Supreme	Calabrese Salami, Capocollo, Tomatoes, Red O...

order

order_id	order_date	order_time
1	2015-01-01	11:38:36
2	2015-01-01	11:57:40
3	2015-01-01	12:12:28
4	2015-01-01	12:16:31
5	2015-01-01	12:21:30
6	2015-01-01	12:29:36
7	2015-01-01	12:50:37
8	2015-01-01	12:51:37
9	2015-01-01	12:52:01
10	2015-01-01	13:00:15
11	2015-01-01	13:02:59
12	2015-01-01	13:04:41
13	2015-01-01	13:11:55

Order details

order_details_id	order_id	pizza_id	quantity
1	1	hawaiian_m	1
2	2	classic_dlx_m	1
3	2	five_cheese_l	1
4	2	ital_supr_l	1
5	2	mexicana_m	1
6	2	thai_ckn_l	1
7	3	ital_supr_m	1
8	3	prsc_argla_l	1
9	4	ital_supr_m	1
10	5	ital_supr_m	1
11	6	bbq_ckn_s	1
12	6	the_greek_s	1
13	7	spinach_supr_s	1
14	8	spinach_supr_s	1
15	9	classic_dlx_s	1

QUESTIONS :

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.

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.

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.

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

total_sales
▶ 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

Result Grid | Filter Rows:

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;
```

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.

```sql
SELECT pizza_types.name, SUM(order_details.quantity) AS total_quantities
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_quantities DESC
LIMIT 5;
```

Result Grid | Filter Rows:

name	total_quantities
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 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.category;
```

Result Grid | Filter Rows:

category	total_quantity
Classic	14888
Veggie	11649
Supreme	11987
Chicken	11050

DETERMINE THE DISTRIBUTION OF ORDERS BY HOUR OF THE DAY.

```sql
SELECT HOUR(order_time) AS Hour, COUNT(order_id) AS order_count

FROM orders

GROUP BY Hour;
```

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 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) 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;
```

	ROUND(AVG(quantity),0)
▶	138

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE.


```sql
SELECT pizza_types.name, SUM(pizzas.price * order_details.quantity) 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

CALCULATE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.

```sql
(SELECT SUM(pizzas.price * order_details.quantity)
FROM pizzas
JOIN order_details
ON pizzas.pizza_id = order_details.pizza_id);


SELECT pizza_types.category, ROUND(((SUM(pizzas.price * order_details.quantity) / (SELECT SUM(pizzas.price * order_details.quantity)
FROM pizzas
JOIN order_details
ON pizzas.pizza_id = order_details.pizza_id)) * 100),2) AS per_contribution
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;
```

Result Grid | Filter Rows:

category	per_contribution
Classic	26.91
Veggie	23.68
Supreme	25.46
Chicken	23.96

ANALYZE THE CUMULATIVE REVENUE GENERATED OVER TIME.

```sql
SELECT order_date, sales,
SUM(sales) OVER (ORDER BY order_date) AS cum_revenue
FROM
(SELECT orders.order_date, SUM(pizzas.price * order_details.quantity) AS sales
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 revenue;
```

order_date	sales	cum_revenue
2015-01-01	2713.8500000000004	2713.8500000000004
2015-01-02	2731.8999999999996	5445.75
2015-01-03	2662.3999999999996	8108.15
2015-01-04	1755.4500000000003	9863.6
2015-01-05	2065.95	11929.55
2015-01-06	2428.95	14358.5
2015-01-07	2202.2000000000003	16560.7
2015-01-08	2838.3499999999995	19399.05
2015-01-09	2127.3500000000004	21526.4

DETERMINE THE TOP 3 MOST ORDERED PIZZA TYPES BASED ON REVENUE FOR EACH PIZZA CATEGORY.

```sql
SELECT category, name, revenue, RK
FROM
(SELECT category, name, revenue,
DENSE_RANK() OVER (PARTITION BY category ORDER BY revenue desc) AS RK
FROM
(SELECT pizza_types.category, pizza_types.name, SUM(pizzas.price * order_details.quantity) 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 REV) AS A
WHERE RK <=3;
```

	category	name	revenue	RK
▶	Chicken	The Thai Chicken Pizza	43434.25	1
	Chicken	The Barbecue Chicken Pizza	42768	2
	Chicken	The California Chicken Pizza	41409.5	3
	Classic	The Classic Deluxe Pizza	38180.5	1
	Classic	The Hawaiian Pizza	32273.25	2
	Classic	The Pepperoni Pizza	30161.75	3
	Supreme	The Spicy Italian Pizza	34831.25	1
	Supreme	The Italian Supreme Pizza	33476.75	2
	Supreme	The Sicilian Pizza	30940.5	3
	Veggie	The Four Cheese Pizza	32265.70000000065	1
	Veggie	The Mexicana Pizza	26780.75	2
	Veggie	The Five Cheese Pizza	26066.5	3

THANK YOU...

--- Bonny Shah