



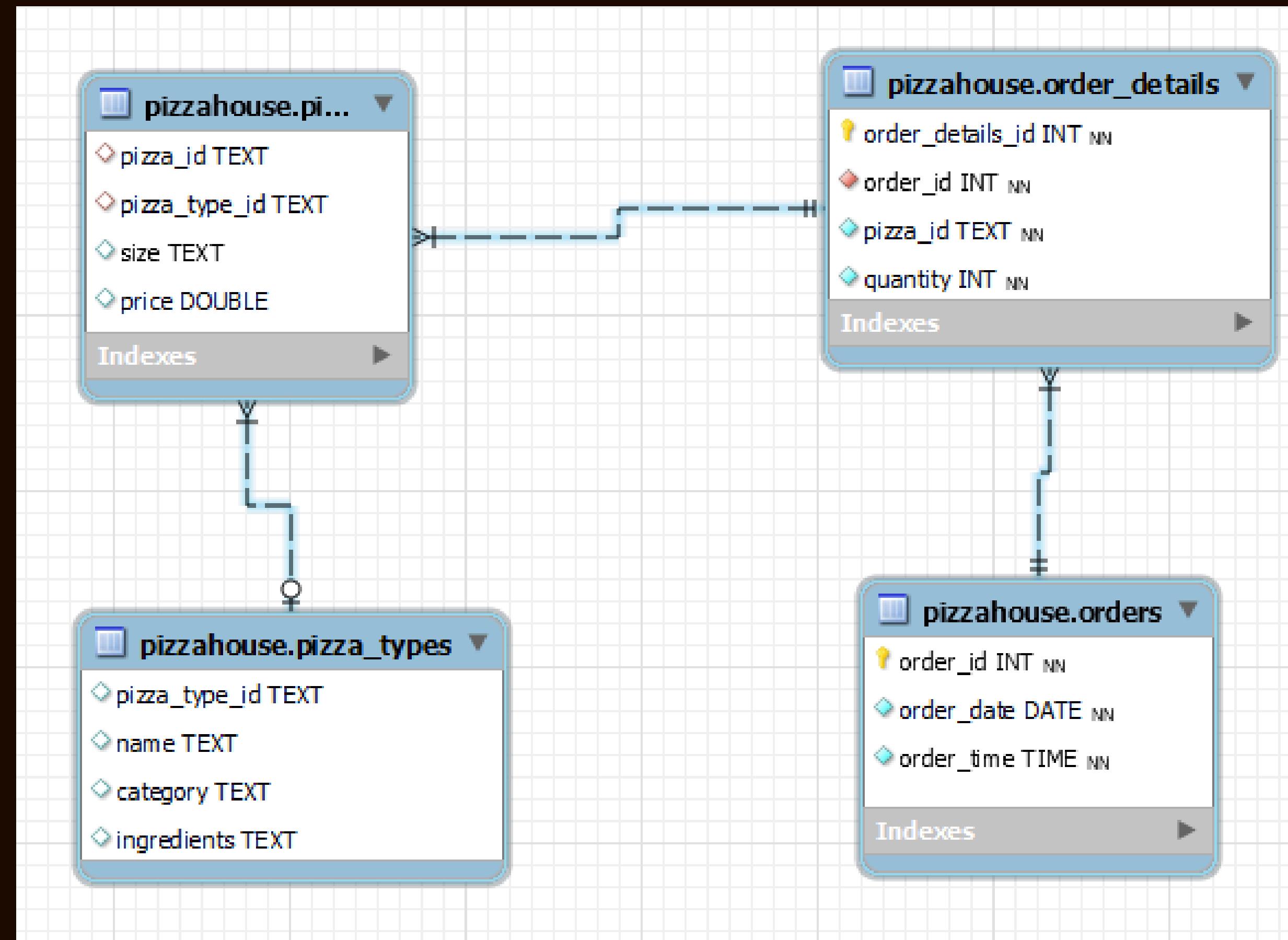
SQL CASE STUDY

PIZZA HOUSE - FARIDABAD

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ER DIAGRAM



PIZZAS

Table - 1

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
dkn_alfredo_s	dkn_alfredo	S	12.75
dkn_alfredo_m	dkn_alfredo	M	16.75
dkn_alfredo_l	dkn_alfredo	L	20.75
dkn_pesto_s	dkn_pesto	S	12.75
dkn_pesto_m	dkn_pesto	M	16.75
dkn_pesto_l	dkn_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
thai_ckn_l	thai_ckn	L	20.75
big_meat_s	big_meat	S	12
big_meat_m	big_meat	M	16
big_meat_l	big_meat	L	20.5

PIZZA TYPES

Table - 2

pizza_type_id	name	category	ingredients
bbq_dkn	The Barbecue Chicken Pizza	Chicken	Barbecued Chicken, Red Peppers, Green Pepp...
cali_dkn	The California Chicken Pizza	Chicken	Chicken, Artichoke, Spinach, Garlic, Jalapeno P...
dkn_alfredo	The Chicken Alfredo Pizza	Chicken	Chicken, Red Onions, Red Peppers, Mushrooms...
dkn_pesto	The Chicken Pesto Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Spinach, Garl...
southw_dkn	The Southwest Chicken Pizza	Chicken	Chicken, Tomatoes, Red Peppers, Red Onions, ...
thai_dkn	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_cpclo	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, ...	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...
peppr_salami	The Pepper Salami Pizza	Supreme	Genoa Salami, Capocollo, Pepperoni, Tomatoes,...
prsc_argla	The Prosciutto and Arugula ...	Supreme	Prosciutto di San Daniele, Arugula, Mozzarella C...
sicilian	The Sicilian Pizza	Supreme	Coarse Sicilian Salami, Tomatoes, Green Olives, ...
soppressata	The Soppressata Pizza	Supreme	Soppressata Salami, Fontina Cheese, Mozzarell...

ORDERS

Table - 3

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
14	2015-01-01	13:14:19
15	2015-01-01	13:33:00
16	2015-01-01	13:34:07
17	2015-01-01	13:53:00
18	2015-01-01	13:57:08
19	2015-01-01	13:59:09
20	2015-01-01	14:03:08
21	2015-01-01	14:14:29

ORDER_DETAILS

Table - 4

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_dkn_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_dkn_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
16	9	green_garde...	1
17	9	ital_cpdlo_l	1
18	9	ital_supr_l	1
19	9	ital_supr_s	1
20	9	mexicana_s	1
21	9	spicy_ital_l	1

QUESTIONS TO SOLVE USING SQL QUERIES

----->>>>>

Q1. RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

```
SELECT COUNT(order_id) as total_orders FROM orders;
```

Result Grid	
	total_orders
▶	21350

Q2. 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

Q3. 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

Q4. 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
LIMIT 1;
```

Result Grid | Filter Rows:

	size	order_count
▶	L	18526

Q5. 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

Q6. 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 | Filter Rows:

	category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

Q7. 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 Rows: _____

	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

Q8. 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

Q9. 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;
```

The screenshot shows a MySQL Workbench interface with a result grid. The grid has two columns: the first column is empty, and the second column is labeled 'avg_pizza_ordered_per_day'. The value '138' is displayed in the second row of the grid.

	avg_pizza_ordered_per_day
▶	138

Q10. 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 `pizzahouse`
    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

Q11. CALCULATE THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.

```
SELECT
    pizza_types.category,
    (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 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	26.90596025566967
	Supreme	25.45631126009862
	Chicken	23.955137556847287
	Veggie	23.682590927384577

Q12. 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	23990.35000000002
	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
	2015-01-20	45763.65000000001
	2015-01-21	47804.20000000001
	2015-01-22	50300.90000000001
	2015-01-23	52724.60000000006
	2015-01-24	55013.85000000006

Q13. 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;
```

Result Grid | Filter Rows: Export

	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 !

