

Pizza Sales Analysis using SQL

Introduction

Hi , folks !

**I am work on the pizza
sales Analysis the SQL
Project**

Schema

1. Pizzas

	pizza_id	pizza_type_id	size	price
▶	bbq_dkn_s	bbq_dkn	S	12.75
	bbq_dkn_m	bbq_dkn	M	16.75
	bbq_dkn_l	bbq_dkn	L	20.75
	cali_dkn_s	cali_dkn	S	12.75
	cali_dkn_m	cali_dkn	M	16.75
	cali_dkn_l	cali_dkn	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_dkn_s	southw_dkn	S	12.75
	southw_dkn_m	southw_dkn	M	16.75
	southw_dkn_l	southw_dkn	L	20.75

2. Pizza_types

pizza_type_id	name	category	ingredients
bbq_ckn	The Barbecue Chicken Pizza	Chicken	Barbecued Chicken, Red Peppers, Green Pepp...
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 Big Meat 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, ...	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...
spicy_ital	The Spicy Italian Pizza	Supreme	Capocollo, Tomatoes, Goat Cheese, Artichokes,...
spinach_supr	The Spinach Supreme Pizza	Supreme	Spinach, Red Onions, Pepperoni, Tomatoes, Art...
five_cheese	The Five Cheese Pizza	Veggie	Mozzarella Cheese, Provolone Cheese, Smoked ...
four_cheese	The Four Cheese Pizza	Veggie	Ricotta Cheese, Gorgonzola Piccante Cheese, ...

3. Orders

	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
	22	2015-01-01	14:16:26
	23	2015-01-01	14:19:03
	24	2015-01-01	14:23:01
	25	2015-01-01	14:44:44

4. Order_deatails

	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
	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
	22	9	spin_pesto_l	1
	23	9	veggie_veg_s	1
	24	10	mexicana_l	1
	25	10	southw_ckn_l	1

Queries and Analysis

```
-- Retrieve the total number of orders placed
```

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

Result Grid	
	total_orders
▶	21350

```
1 -- calculated the total revenue generated from pizza sales.  
2  
3 • SELECT  
4     ROUND(SUM(order_details.quantity * pizzas.price),  
5             2) AS total_sales  
6 FROM  
7     order_details  
8     JOIN  
9         pizzas ON pizzas.pizza_id = order_details.pizza_id
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

total_sales
817860.05

-- identify the highest prices of the 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;

The screenshot shows the MySQL Workbench interface with a result grid. The grid has two columns: 'name' and 'price'. A single row is displayed, showing 'The Greek Pizza' in the 'name' column and '35.95' in the 'price' column. The 'Result Grid' tab is selected at the top. There are also 'Filter Rows:' and other interface elements visible.

	name	price
▶	The Greek Pizza	35.95

```
-- 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

```
1 -- join the necessary tables to find the
2 -- total quantity of each pizza category ordered.
3
4
5 • SELECT
6     pizza_types.category AS pizza_type_category,
7     SUM(order_details.quantity) AS quantity
8 FROM
9     pizza_types
10    JOIN
11     pizzas ON pizza_types.pizza_type_id = pizzas.pizza_type_id
12    JOIN
13     order_details ON order_details.pizza_id = pizzas.pizza_id
14 GROUP BY pizza_type_category
15 ORDER BY quantity DESC;
```

Result Grid | Filter Rows:

	pizza_type_category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

```
1 -- Determine the distribution of orders by hour of the day.  
2  
3  
4 • SELECT  
5     HOUR(order_time) AS hour, COUNT(order_id) AS order_count  
6 FROM  
7     orders  
8 GROUP BY HOUR(order_time);
```

	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

- group the orders by date and calculate the average number of pizzas ordered per day

ELECT

ROUND(AVG(quantity)) as avg_pizza_ordered_per_day

ROM

(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	
	avg_pizza_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

	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 pizzas.pizza_type_id = pizza_types.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	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

```
-- Analyze the cumulative revenue generated overtime.
```

```
• select order_date,  
round(sum(revenue) over (order by order_date),2 ) as cumulative_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	cumulative_revenue
▶	2015-01-01	2713.85
	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

-- 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

THANK
YOU