

# PizzaBox Sales Analysis

## 1) Viewing the Data

select \* from 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

select \* from 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

select \* from 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, ...

select \* from 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

2) Retrieve the total number of orders placed

SELECT

COUNT(order\_id) AS total\_orders

FROM

orders;

	total_orders
▶	21350

3) 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;

	total_sales
▶	817860.05

4) 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;

	name	price
▶	The Greek Pizza	35.95

5) 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;
```

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

6) 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;

	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

- 7) 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;

	category	quantity
▶	Classic	14888
	Supreme	11987
	Veggie	11649
	Chicken	11050

- 8) 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);

	hour	order_count
▶	11	1231
	12	2520
	13	2455
	14	1472
	15	1468

9) Join relevant tables to find the category-wise distribution of pizzas

SELECT

category, COUNT(name)

FROM

pizza\_types

GROUP BY category;

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

10) 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;

	round(avg(quantity),0)
▶	138

11) 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;
```

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

12) 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 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;

```

	category	revenue
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68

### 13) Analyse 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;

```

	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

14) 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