



End-to-End Pizza Sales Data Analysis with SQL

RETRIEVE THE TOTAL NUMBER OF ORDERS PLACED.

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

Result Grid	
	total_orders
▶	21350



CALCULATE THE TOTAL REVENUE GENERATED FROM PIZZA SALES.

```
SELECT  
    ROUND(SUM(order_details.quantity * pizzas.price),  
        3) AS total_revenue  
FROM  
    order_details  
    JOIN  
    pizzas ON pizzas.pizza_id = order_details.pizza_id;
```

	total_revenue
▶	817860.05



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



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;
```

| Result Grid | Filter Rows:

	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.

```
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



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



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



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



GROUP THE ORDERS BY DATE AND CALCULATE THE AVERAGE NUMBER OF PIZZAS ORDERED PER DAY

```
SELECT  
    ROUND(AVG(quantity), 0) AS avg_pizzas_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;
```

	avg_pizzas_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
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 THE PERCENTAGE CONTRIBUTION OF EACH PIZZA TYPE TO TOTAL REVENUE.

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

Result Grid | Filter Rows:

	category	revenue_percentage
▶	Classic	26.91
	Supreme	25.46
	Chicken	23.96
	Veggie	23.68



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;
```

order_date	cum_revenue
2015-01-01	2713.850000000004
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	34343.5000000001
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



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

