Mario’s Pizza

Summary: Mario's Pizza aims to expand its offerings by adding new pizza varieties and categories. They seek insights from their sales data, provided in a database with four tables: orders, order_details, pizzas, and pizza_type. The analysis will address key business questions to guide their scaling strategy.

1. **Retrieve the total number of orders placed.**

```
select count(distinct order_id) as 'total_ordersPlaced' from dbo.orders;
```

Results Messages

	total_ordersPlaced
1	21350

2. **Calculate the total revenue generated from pizza sales.**

```
select round(sum(det.quantity * piz.price),2) as 'total_revenue_from_pizzaSales'
from dbo.order_details as det
join dbo.pizzas as piz
on det.pizza_id = piz.pizza_id;
```

	total_revenue_from_pizzaSales
1	817860.05

3. **Identify the highest-priced pizza.**

```
select top 1
typ.name,
piz.price
from dbo.pizza_types as typ
join dbo.pizzas as piz
on typ.pizza_type_id = piz.pizza_type_id
order by piz.price desc;
```

	name	price
1	The Greek Pizza	35.9500007629395

4. **Identify the most common pizza size ordered.**

```
select top 1
piz.size, count(det.order_id) as 'most_common size ordered'
from dbo.pizzas as piz
join dbo.order_details as det
on piz.pizza_id = det.pizza_id
group by piz.size
order by count(size) desc;
```

	size	most_common size ordered
1	L	18526

5. **List the top 5 most ordered pizza types along with their quantities.**

```
select top 5
typ.name,
sum(det.quantity) as 'Total_quantity'
from dbo.pizza_types as typ
join dbo.pizzas as piz on typ.pizza_type_id = piz.pizza_type_id
join dbo.order_details as det on piz.pizza_id = det.pizza_id
group by
typ.name
order by sum(det.quantity) desc;
```

Results Messages

	name	Total_quantity
1	The Classic Deluxe Pizza	2453
2	The Barbecue Chicken Pizza	2432
3	The Hawaiian Pizza	2422
4	The Pepperoni Pizza	2418
5	The Thai Chicken Pizza	2371

6. **Find the total quantity of each pizza category ordered.**

```sql
select
typ.category,
sum(det.quantity) as 'total quantity'
from dbo.pizza_types as typ
join dbo.pizzas as piz on typ.pizza_type_id = piz.pizza_type_id
join dbo.order_details as det on det.pizza_id = piz.pizza_id
group by
typ.category
order by 'total quantity' desc;
```

Results Messages

	category	total quantity
1	Classic	14888
2	Supreme	11987
3	Veggie	11649
4	Chicken	11050

7. **Determine the distribution of orders by hour of the day.**

```sql
select
datepart(hh, time) as 'hours',
count(order_id) as 'orders/hrs'
from dbo.orders
group by datepart(hh, time)
order by count(order_id) desc;
```

Results Messages

	hours	orders/hrs
1	12	2520
2	13	2455
3	18	2399
4	17	2336
5	19	2009
6	16	1920
7	20	1642
8	14	1472
9	15	1468
10	11	1231
11	21	1198
12	22	663
13	23	28
14	10	8
15	9	1

8. **Find the category-wise distribution of pizzas.**

```
select
category,
count(name) as 'pizzas/category'
from dbo.pizza_types
group by category;
```

	category	pizzas/category
1	Chicken	6
2	Classic	8
3	Supreme	9
4	Veggie	9

9. **Group the orders by date and calculate the average number of pizzas ordered per day.**

```
select avg(quantity) as "Avg pizzas ordered/day"
from
(select
ord.date,
sum(det.quantity) as "quantity"
from dbo.orders as ord
join dbo.order_details as det on ord.order_id = det.order_id
group by
ord.date)
as "order_quantity";
```

Results Messages

	Avg pizzas ordered/day
1	138

10. Determine the top 3 most ordered pizza types based on revenue.

```
select top 3
typ.name,
sum((det.quantity * piz.price)) as "Revenue"
from dbo.pizza_types as typ
join dbo.pizzas as piz on typ.pizza_type_id = piz.pizza_type_id
join dbo.order_details as det on piz.pizza_id = det.pizza_id
group by
typ.name
order by Revenue desc ;
```

	name	Revenue
1	The Thai Chicken Pizza	43434.25
2	The Barbecue Chicken Pizza	42768
3	The Californa Chicken Pizza	41409.5

11. Calculate the percentage contribution of each pizza type to total revenue.

```
select
typ.category,
Round( sum((det.quantity * piz.price)) / (select sum(det.quantity * piz.price)
from dbo.pizza_types as typ join dbo.pizzas as piz on typ.pizza_type_id = piz.pizza_type_id
join dbo.order_details as det on piz.pizza_id = det.pizza_id ) * 100, 2) as "Revenue"

from dbo.pizza_types as typ
join dbo.pizzas as piz on typ.pizza_type_id = piz.pizza_type_id
join dbo.order_details as det on piz.pizza_id = det.pizza_id
group by
typ.category
order by Revenue desc;
```

	category	Revenue
1	Classic	26.91
2	Supreme	25.46
3	Chicken	23.96
4	Veggie	23.68

12. Analyze the cumulative revenue generated over time.

```
select date, sum(Revenue)
over(order by date) as "Cumulative Revenue"
from
(select
ord.date,
sum((det.quantity * piz.price)) as "Revenue"
from dbo.order_details as det
join dbo.pizzas as piz on det.pizza_id = piz.pizza_id
join dbo.orders as ord on ord.order_id = det.order_id
group by
ord.date)
as "sales";
```

Results Messages

	date	Cumulative Revenue
1	2015-01-01	2713.8500228882
2	2015-01-02	5445.7500038147
3	2015-01-03	8108.15000724792
4	2015-01-04	9863.60000801086
5	2015-01-05	11929.5500087738
6	2015-01-06	14358.5000114441
7	2015-01-07	16560.700012207
8	2015-01-08	19399.0500183105
9	2015-01-09	21526.4000225067
10	2015-01-10	23990.350025177
11	2015-01-11	25862.6500263214
12	2015-01-12	27781.7000274658

Query executed successfully.

13. Determine the top 3 most ordered pizza types based on revenue for each pizza category.

```
select category, name, revenue
from
(select category, name, revenue, rank() over(partition by category order by revenue desc) as
from
(select
typ.category,
typ.name,
sum((det.quantity * piz.price)) as "revenue"
from dbo.pizza_types as typ
join dbo.pizzas as piz on typ.pizza_type_id = piz.pizza_type_id
join dbo.order_details as det on piz.pizza_id = det.pizza_id
group by
typ.category,
typ.name ) as a) as b
where rn <= 3;
```

Results | Messages

	category	name	revenue
1	Chicken	The Thai Chicken Pizza	43434.25
2	Chicken	The Barbecue Chicken Pizza	42768
3	Chicken	The Californa Chicken Pizza	41409.5
4	Classic	The Classic Deluxe Pizza	38180.5
5	Classic	The Hawaiian Pizza	32273.25
6	Classic	The Pepperoni Pizza	30161.75
7	Supreme	The Spicy Italian Pizza	34831.25
8	Supreme	The Italian Supreme Pizza	33476.75
9	Supreme	The Sicilian Pizza	30940.5
10	Veggie	The Four Cheese Pizza	32265....
11	Veggie	The Mexicana Pizza	26780.75
12	Veggie	The Five Cheese Pizza	26066.5