ONLINE FOOD DELIVERY SQL PROJECT

DOMAIN: E-COMMERECE

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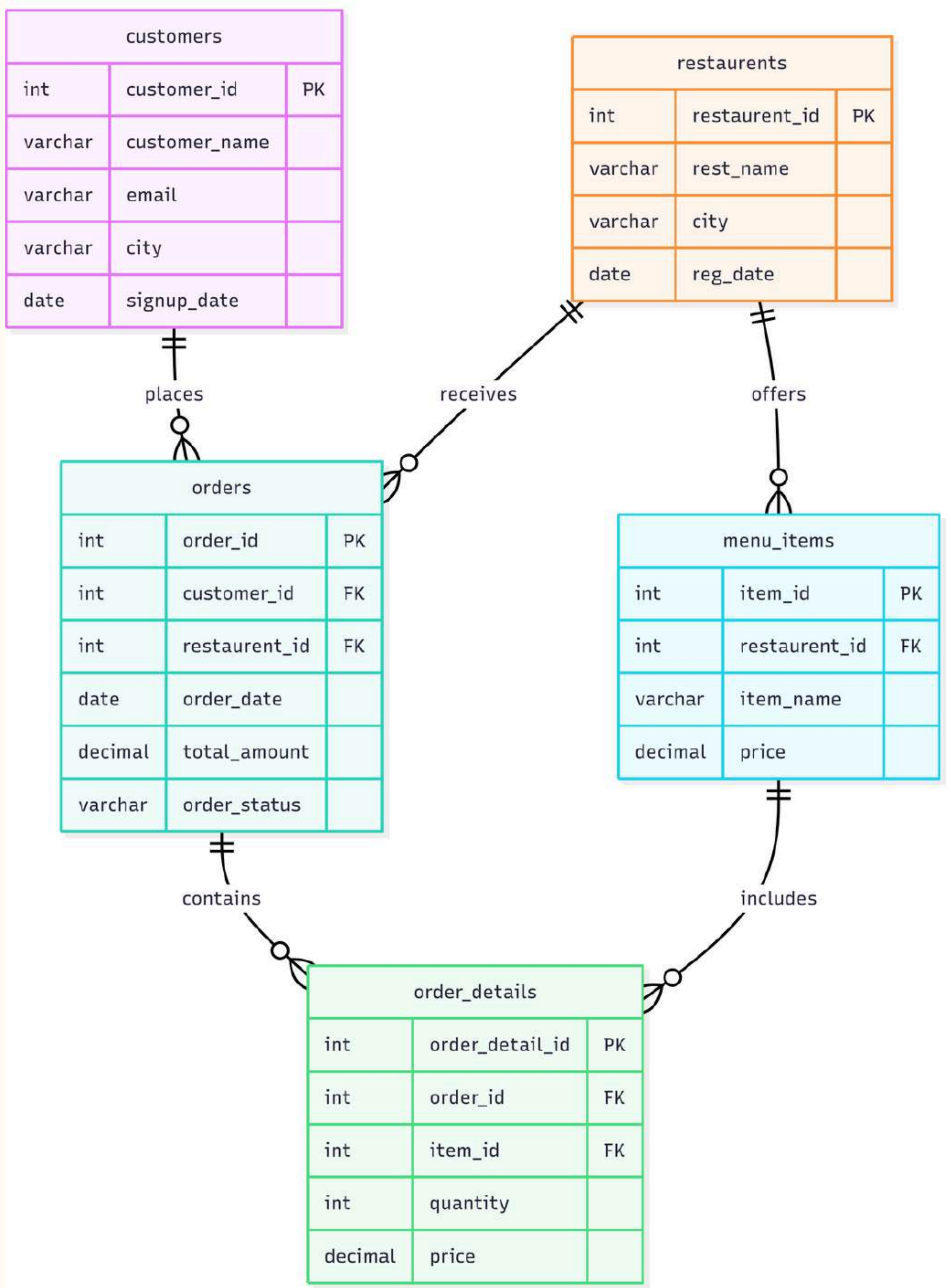
OBJECTIVE

The primary objective of this project is to analyze the provided online food delivery dataset to identify key trends and patterns related to customer engagement, restaurant operations, and menu item popularity. The insights gained can inform strategic business decisions, such as optimizing marketing campaigns, enhancing menu offerings, and improving operational efficiency.

DATASET DESCRIPTION

Table name	Description
customers	Customer details like ID, name, city
orders	Order-level details like date, amount
order_details	Line-item data for each orde
restaurants	Restaurent details like ID, name, city, registration_date
menu_items	menu_items like item_id, restaurant_id, item_name, price

ER Diagram Primary and Foreign Keys Relationships



customers		
int	customer_id	PK
varchar	customer_name	
varchar	email	
varchar	city	
date	signup_date	

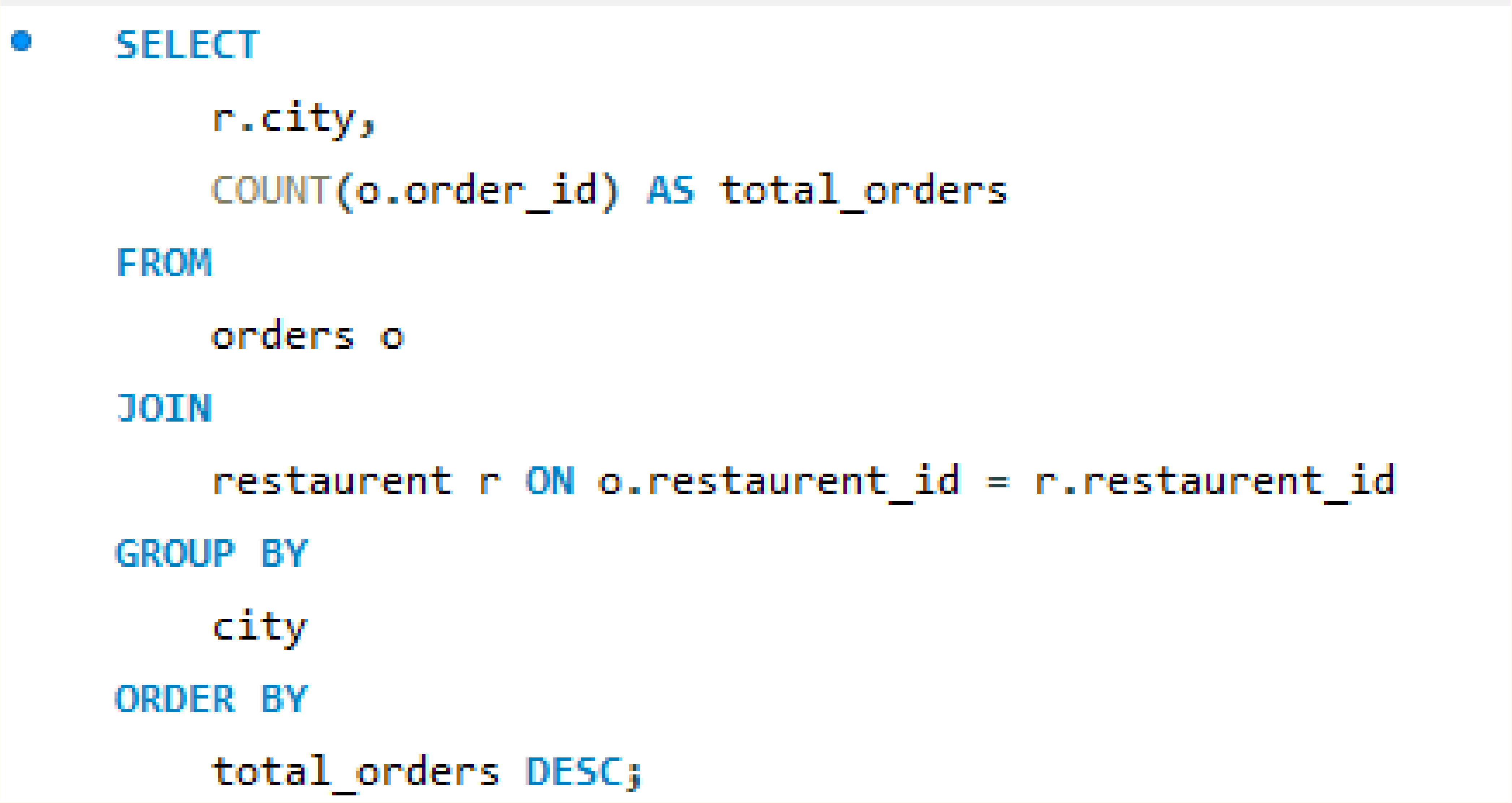
restaurents		
int	restaurent_id	PK
varchar	rest_name	
varchar	city	
date	reg_date	

orders		
int	order_id	PK
int	customer_id	FK
int	restaurent_id	FK
date	order_date	
decimal	total_amount	
varchar	order_status	

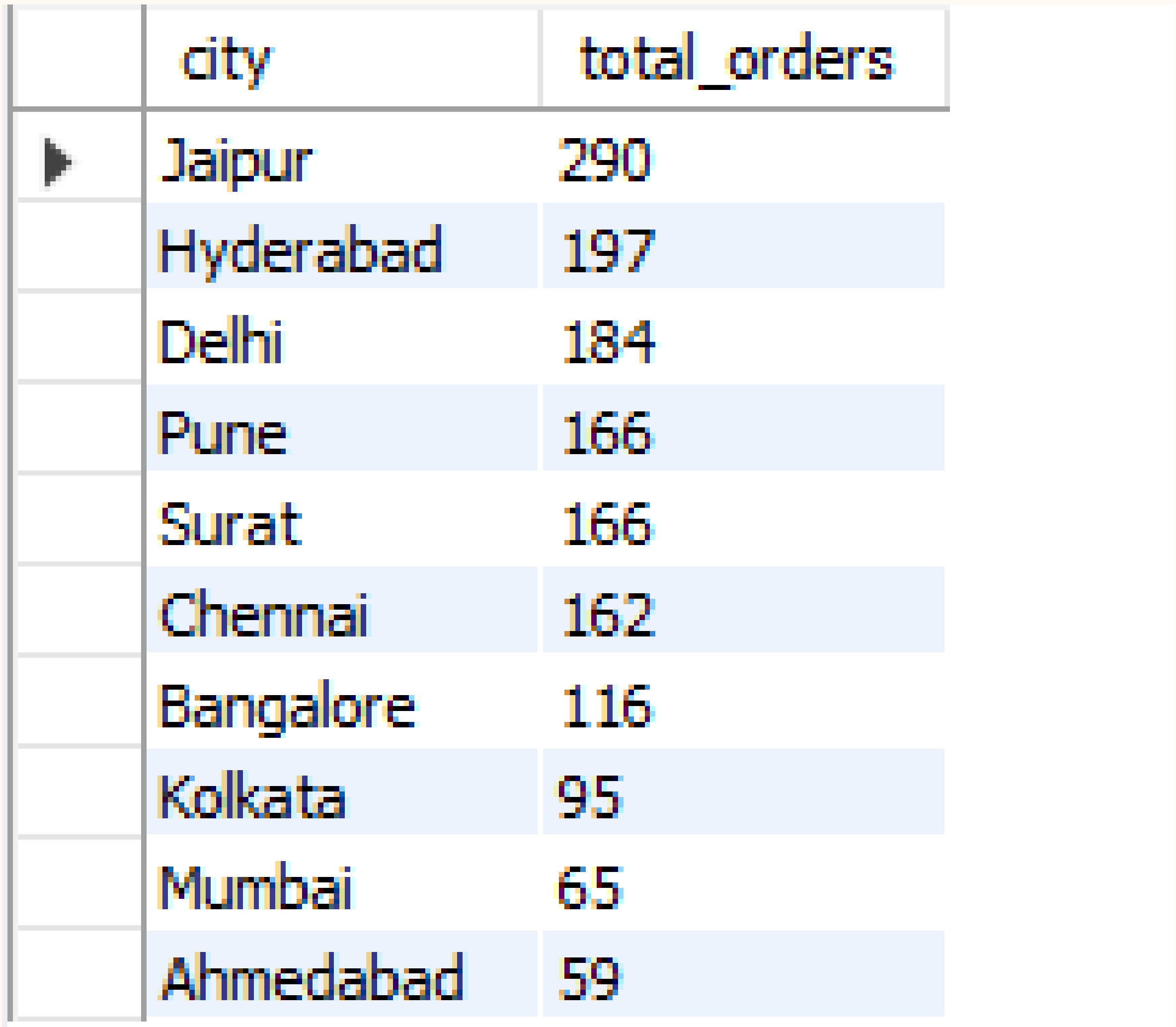
menu_items		
int	item_id	PK
int	restaurent_id	FK
varchar	item_name	
decimal	price	

order_details		
int	order_detail_id	PK
int	order_id	FK
int	item_id	FK
int	quantity	
decimal	price	

Q1: Total Orders by City

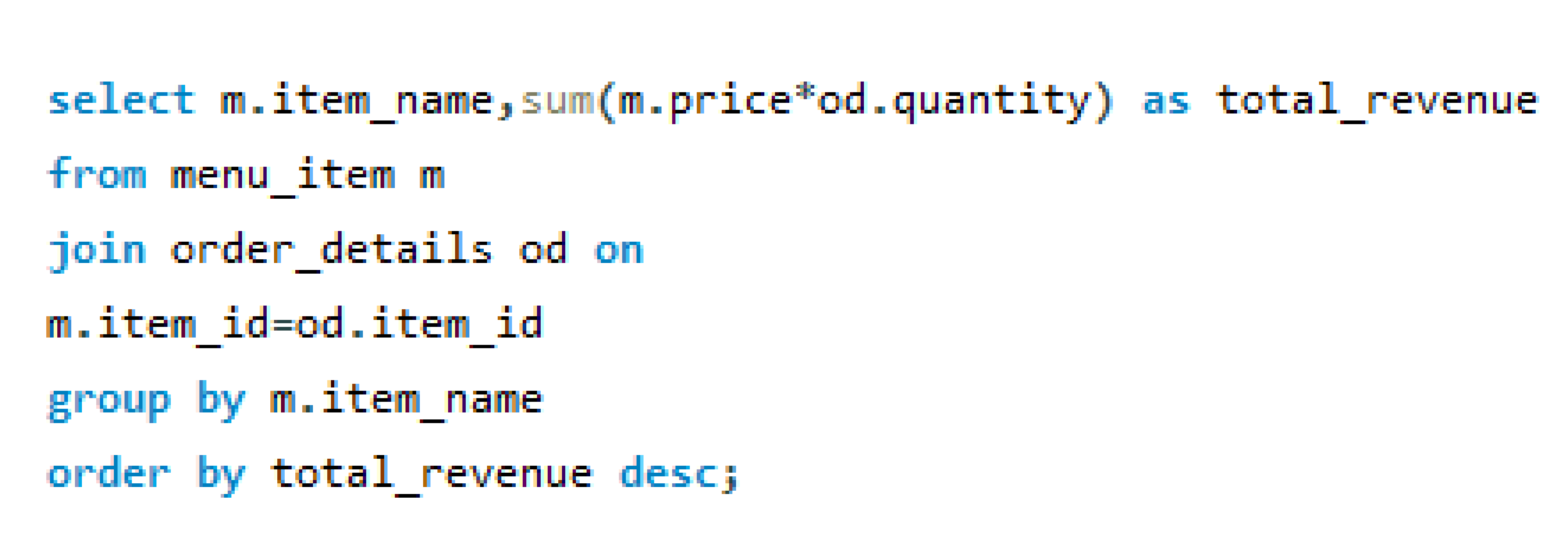


```
SELECT
    r.city,
    COUNT(o.order_id) AS total_orders
FROM
    orders o
JOIN
    restaurent r ON o.restaurent_id = r.restaurent_id
GROUP BY
    city
ORDER BY
    total_orders DESC;
```

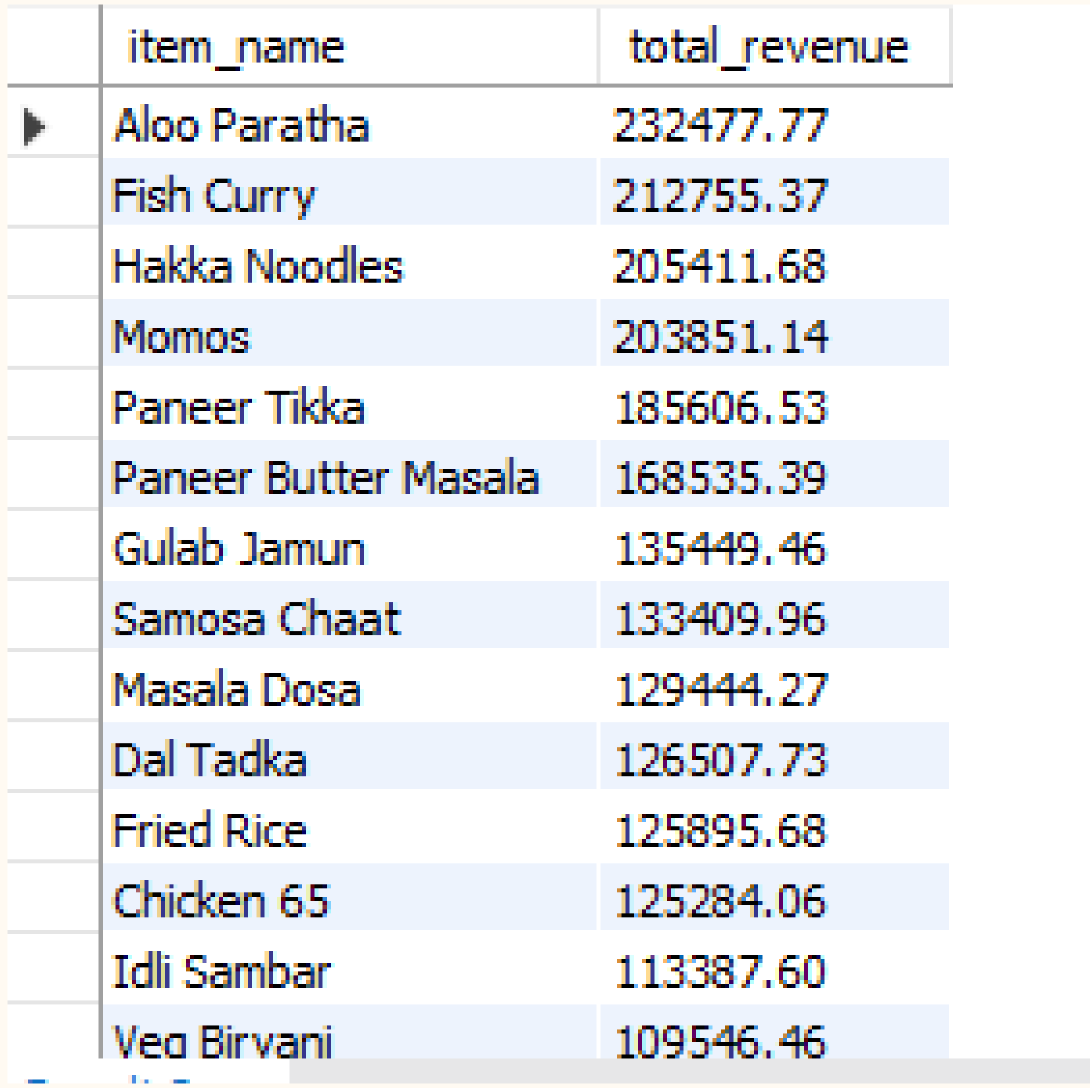


city	total_orders
Jaipur	290
Hyderabad	197
Delhi	184
Pune	166
Surat	166
Chennai	162
Bangalore	116
Kolkata	95
Mumbai	65
Ahmedabad	59

Q2.Revenue generated by each food item

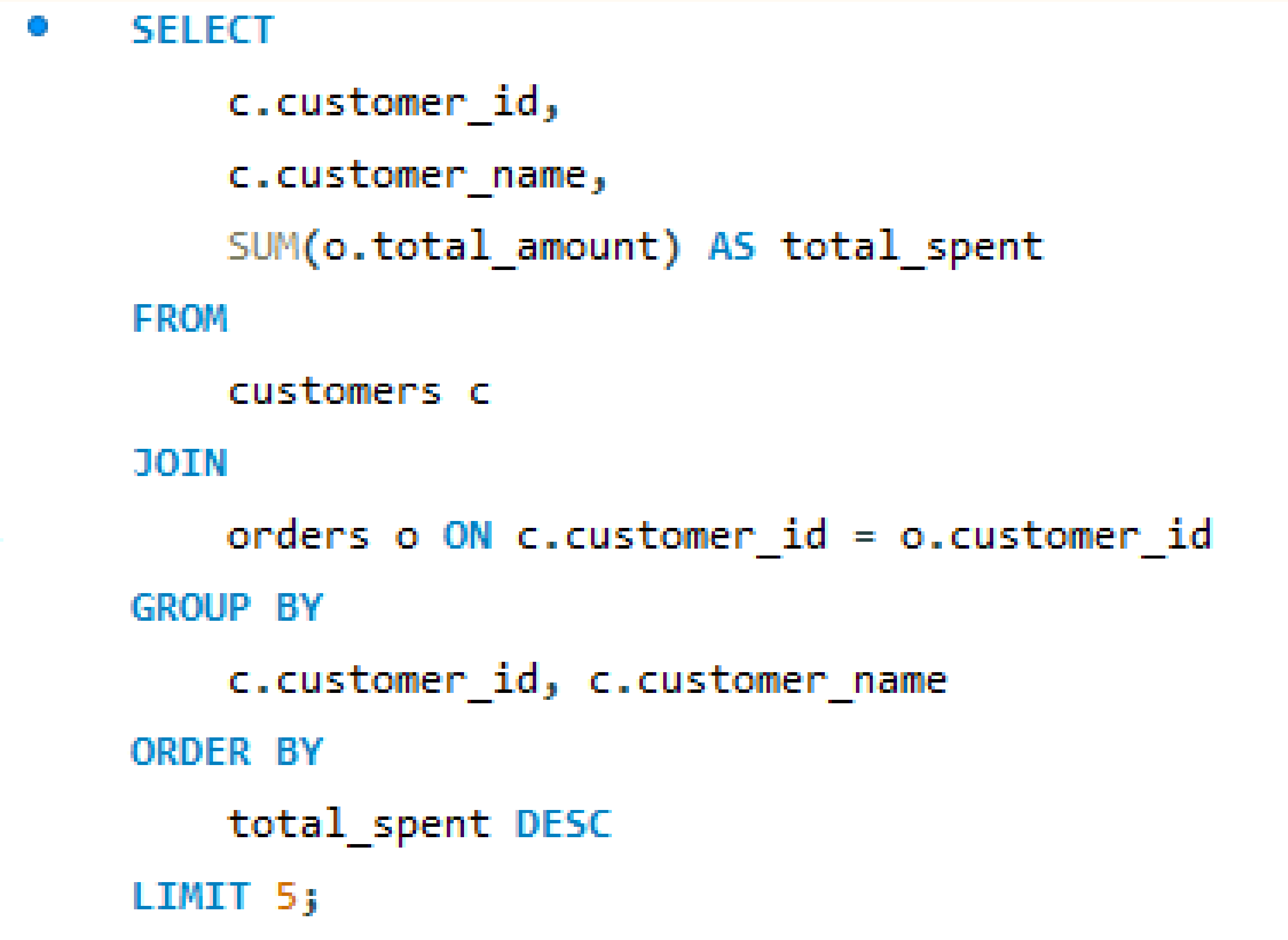


```
select m.item_name,sum(m.price*od.quantity) as total_revenue
from menu_item m
join order_details od on
m.item_id=od.item_id
group by m.item_name
order by total_revenue desc;
```

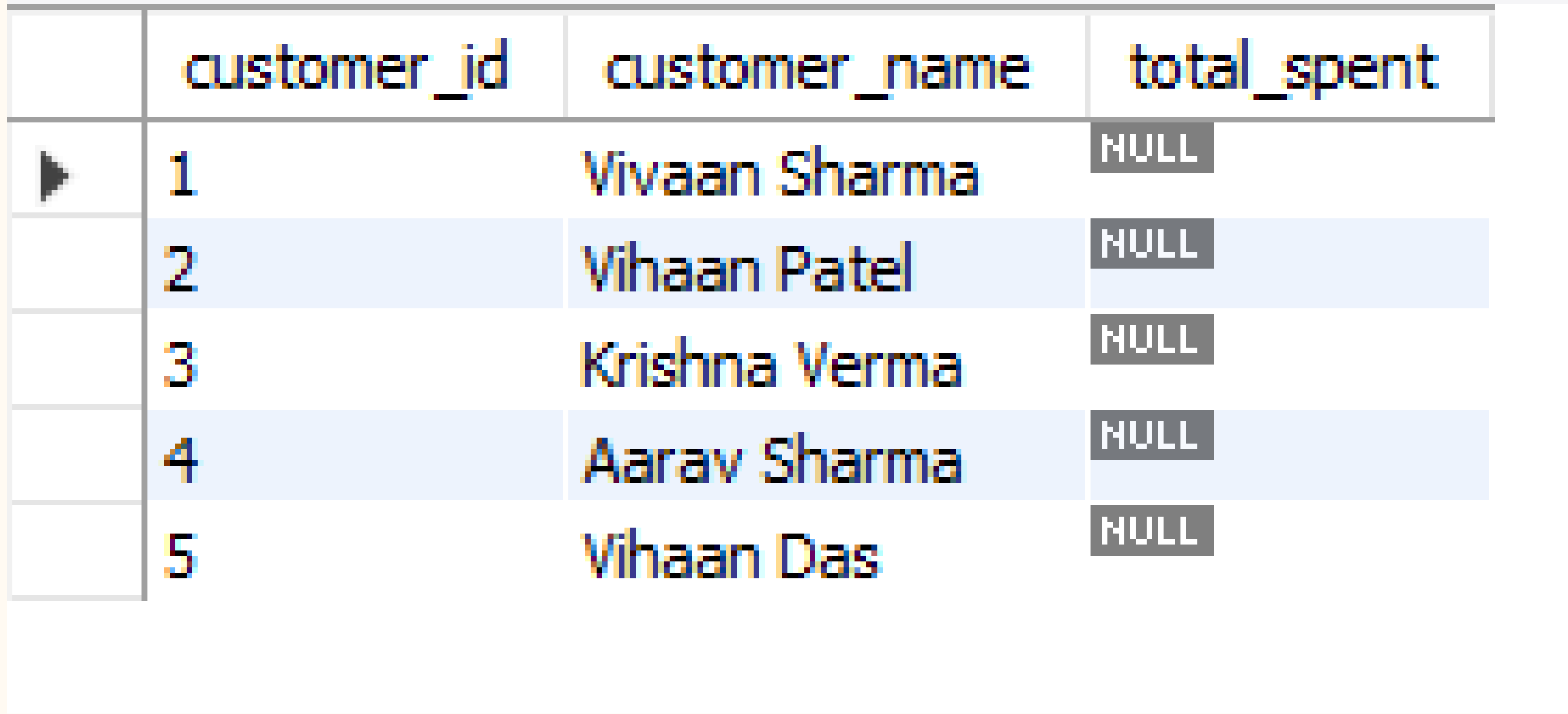


item_name	total_revenue
Aloo Paratha	232477.77
Fish Curry	212755.37
Hakka Noodles	205411.68
Momos	203851.14
Paneer Tikka	185606.53
Paneer Butter Masala	168535.39
Gulab Jamun	135449.46
Samosa Chaat	133409.96
Masala Dosa	129444.27
Dal Tadka	126507.73
Fried Rice	125895.68
Chicken 65	125284.06
Idli Sambar	113387.60
Veg Biryani	109546.46

Q3.Top 5 Spending Customers

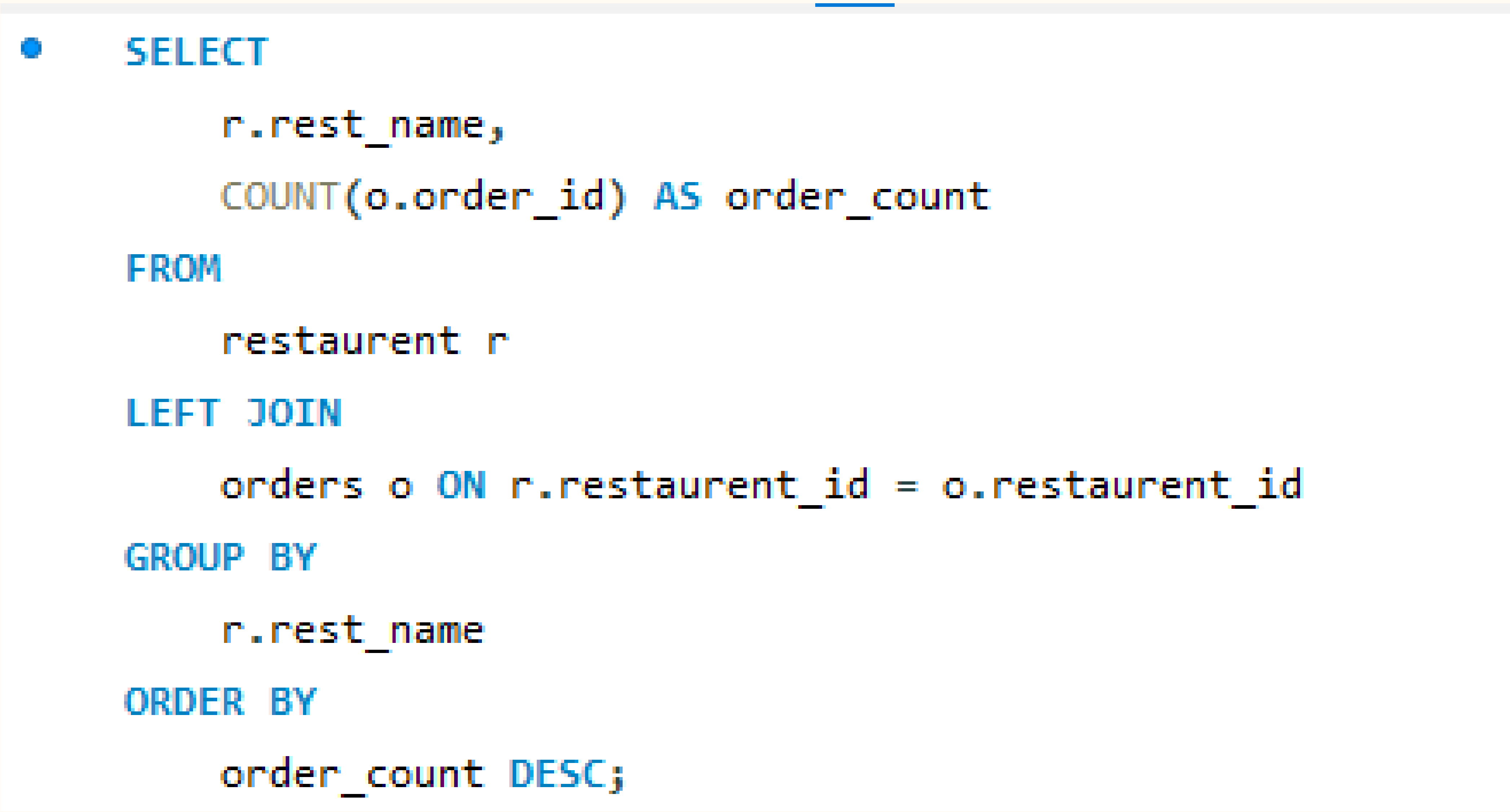


```
SELECT
    c.customer_id,
    c.customer_name,
    SUM(o.total_amount) AS total_spent
FROM
    customers c
JOIN
    orders o ON c.customer_id = o.customer_id
GROUP BY
    c.customer_id, c.customer_name
ORDER BY
    total_spent DESC
LIMIT 5;
```

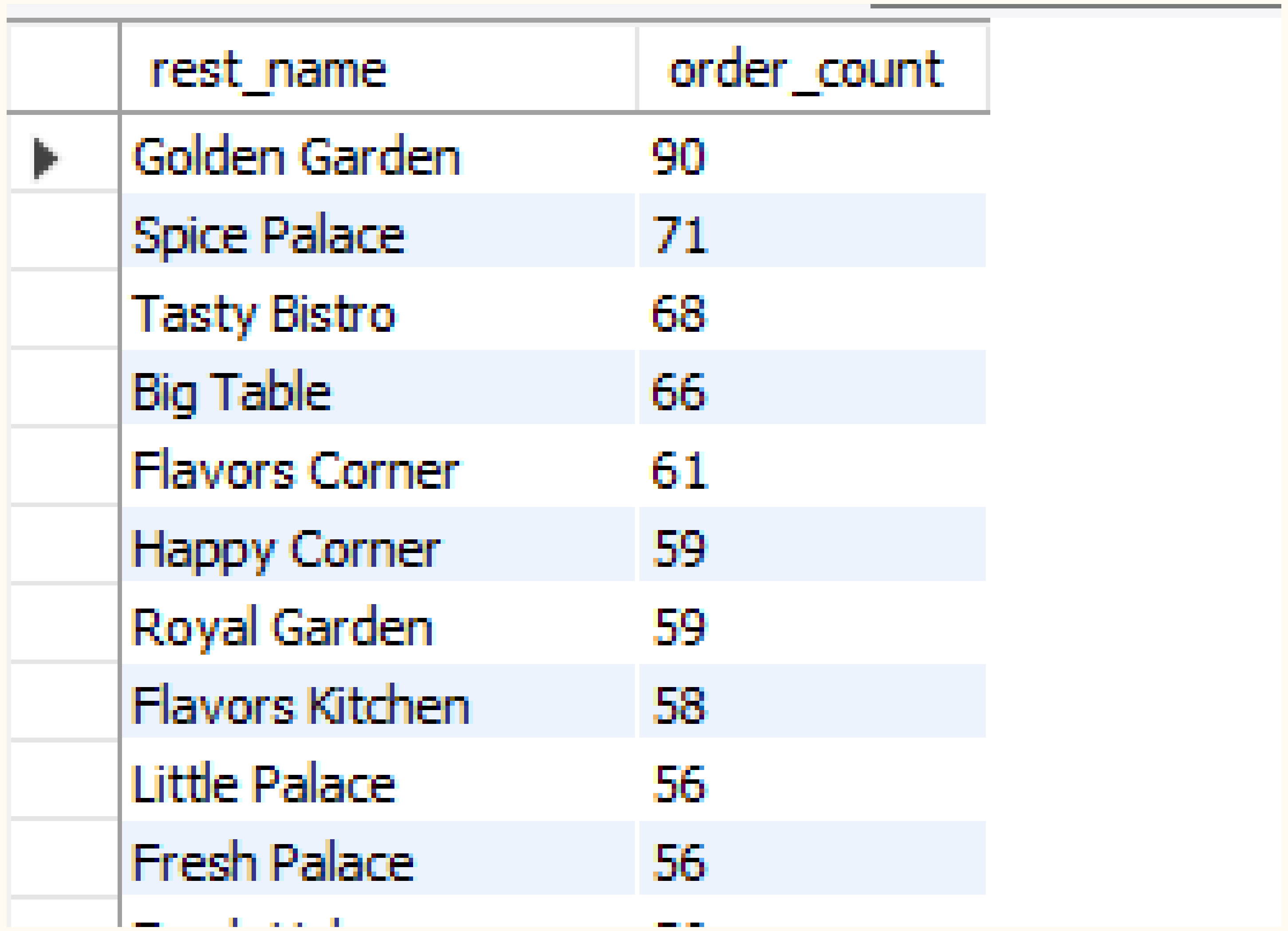


	customer_id	customer_name	total_spent
▶	1	Vivaan Sharma	NULL
	2	Vihaan Patel	NULL
	3	Krishna Verma	NULL
	4	Aarav Sharma	NULL
	5	Vihaan Das	NULL

Q4: Restaurant-wise Order Count

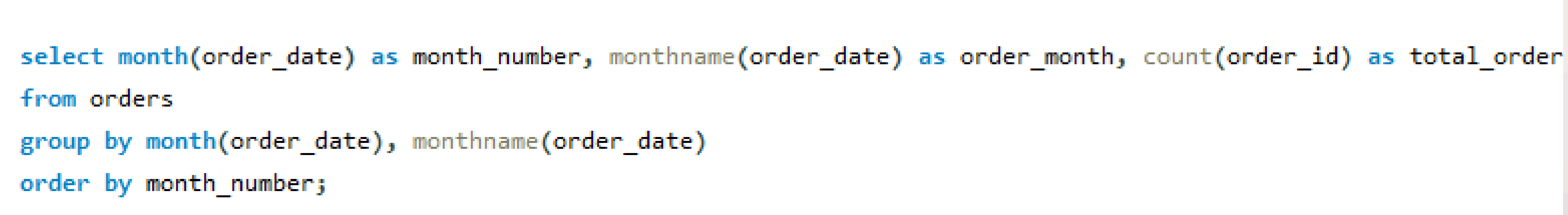


```
SELECT
    r.rest_name,
    COUNT(o.order_id) AS order_count
FROM
    restaurent r
LEFT JOIN
    orders o ON r.restaurent_id = o.restaurent_id
GROUP BY
    r.rest_name
ORDER BY
    order_count DESC;
```

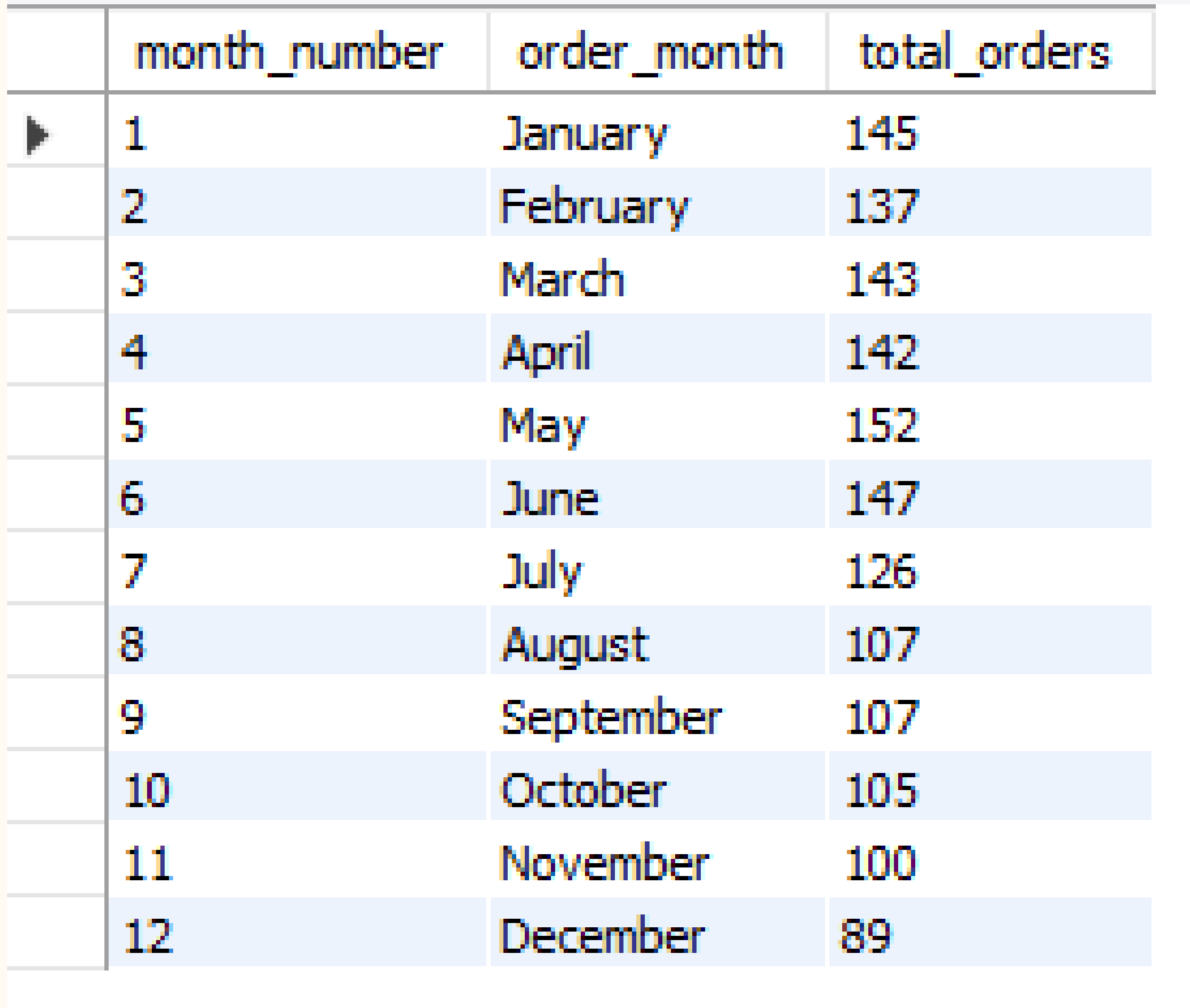


rest_name	order_count
Golden Garden	90
Spice Palace	71
Tasty Bistro	68
Big Table	66
Flavors Corner	61
Happy Corner	59
Royal Garden	59
Flavors Kitchen	58
Little Palace	56
Fresh Palace	56

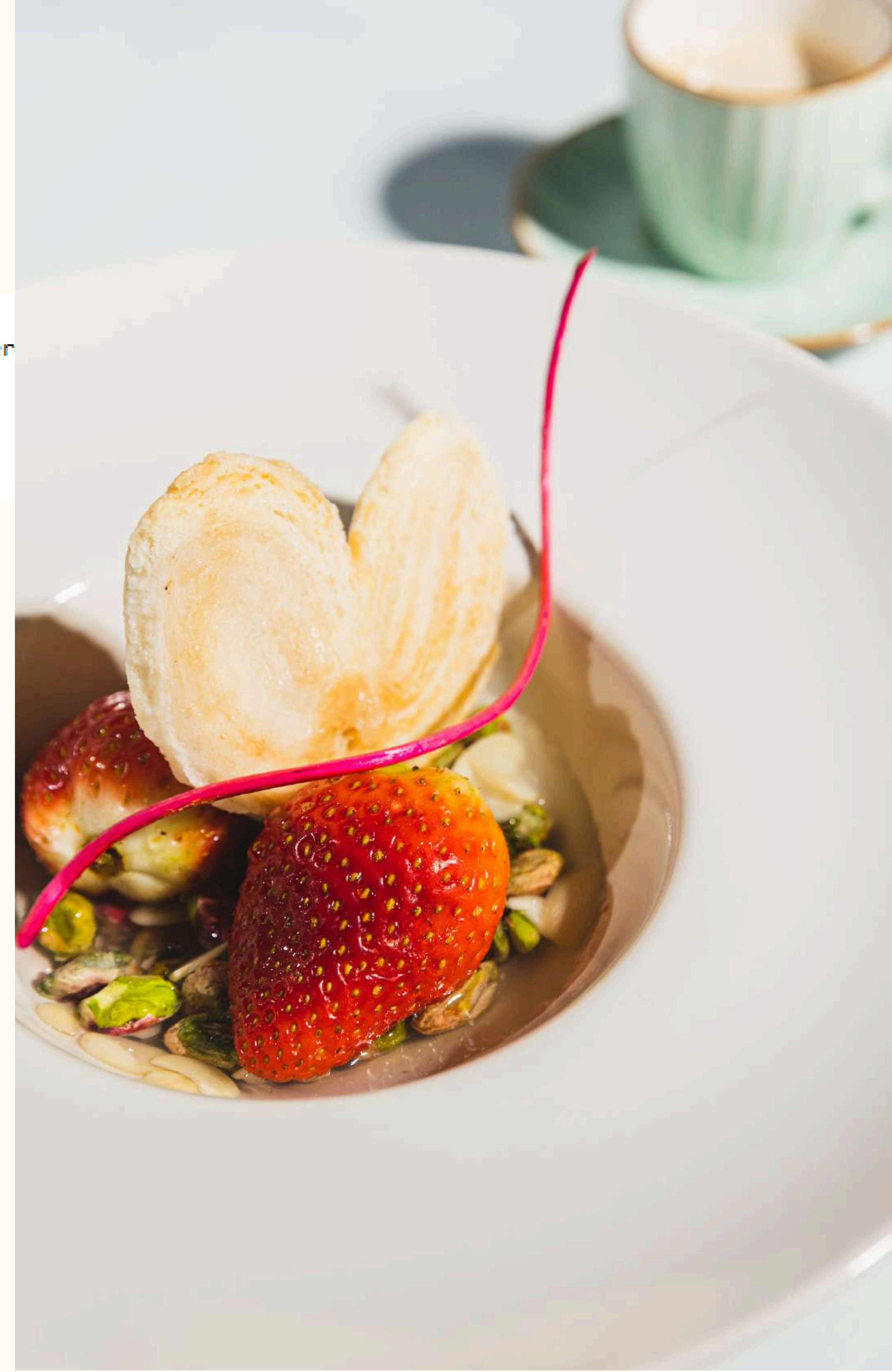
Q5.Monthly order trends



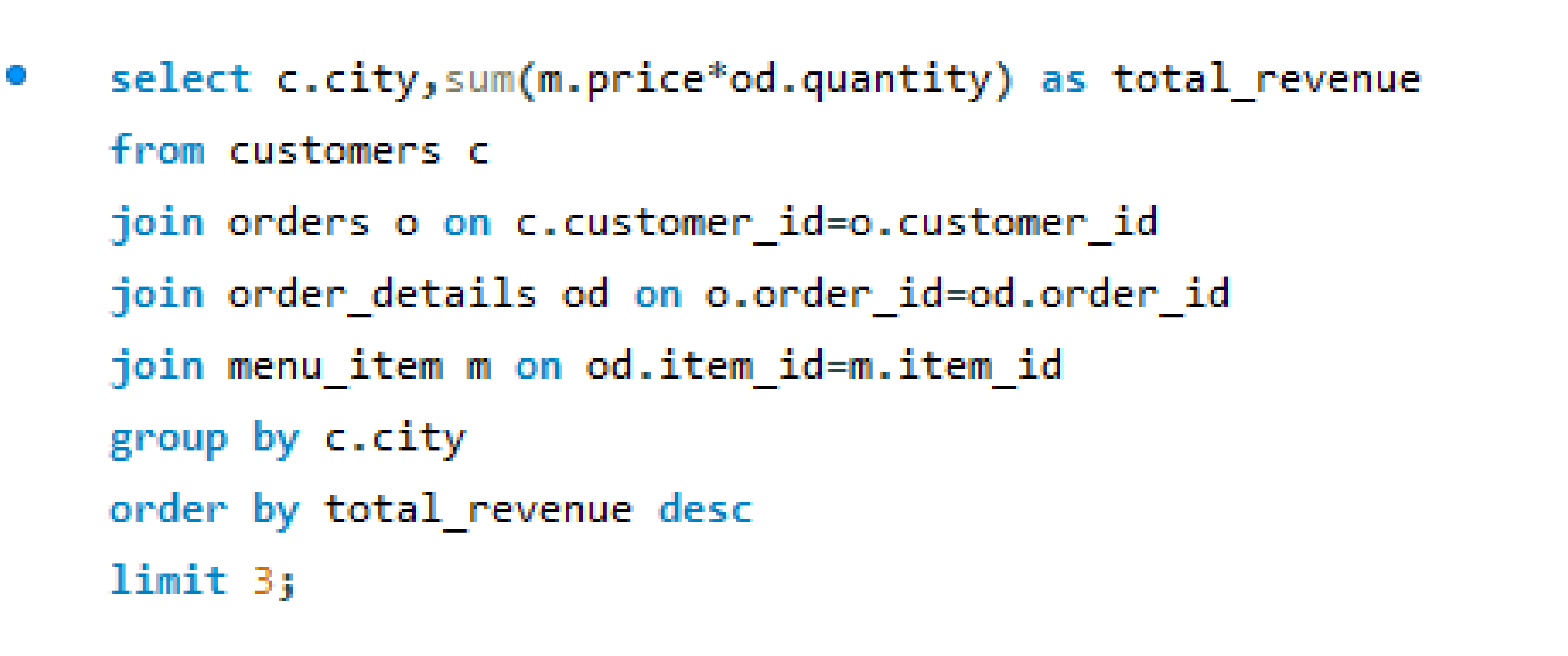
```
select month(order_date) as month_number, monthname(order_date) as order_month, count(order_id) as total_order
from orders
group by month(order_date), monthname(order_date)
order by month_number;
```



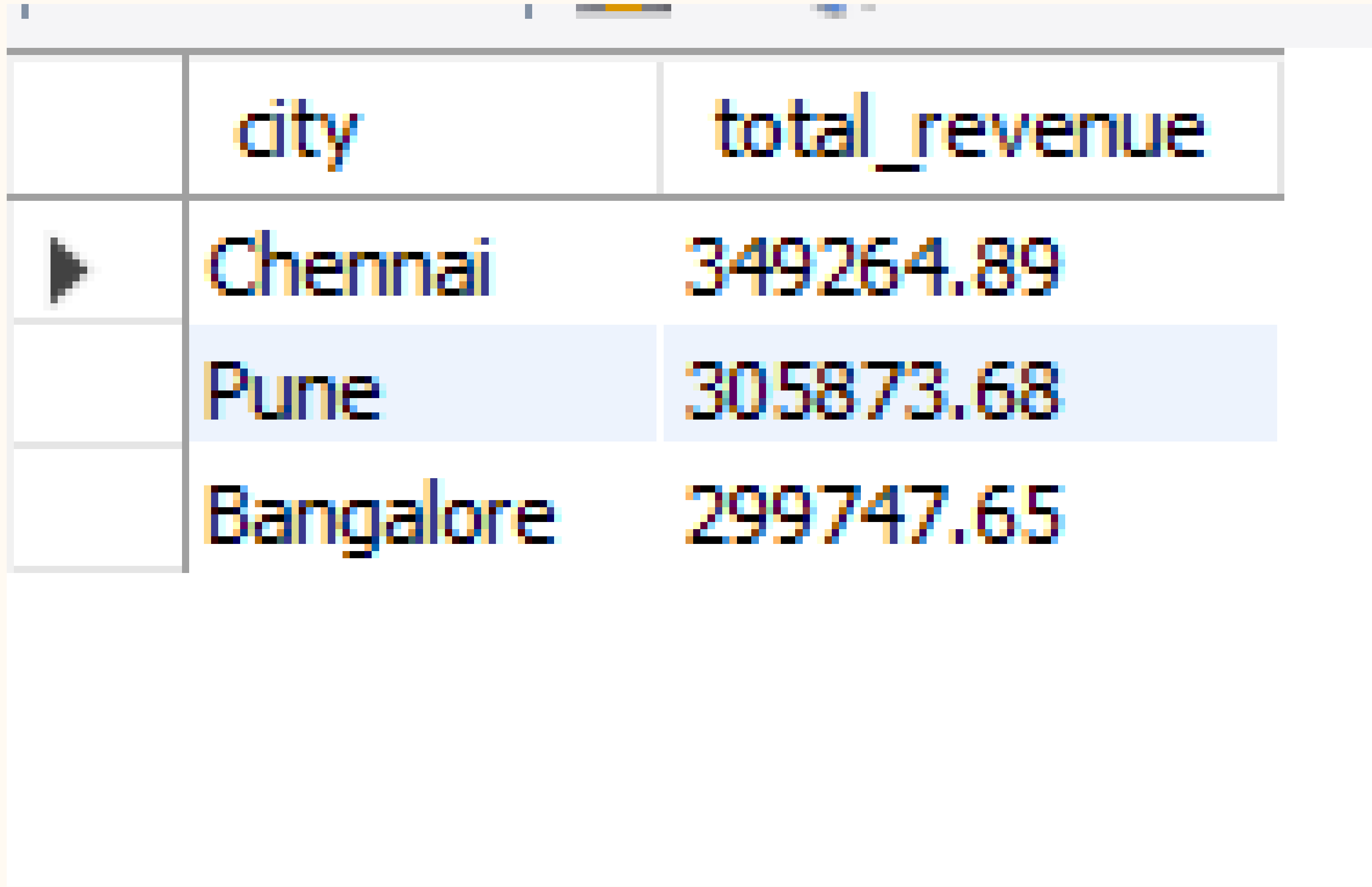
month_number	order_month	total_orders
1	January	145
2	February	137
3	March	143
4	April	142
5	May	152
6	June	147
7	July	126
8	August	107
9	September	107
10	October	105
11	November	100
12	December	89



Q6.Top 3 cities by revenue

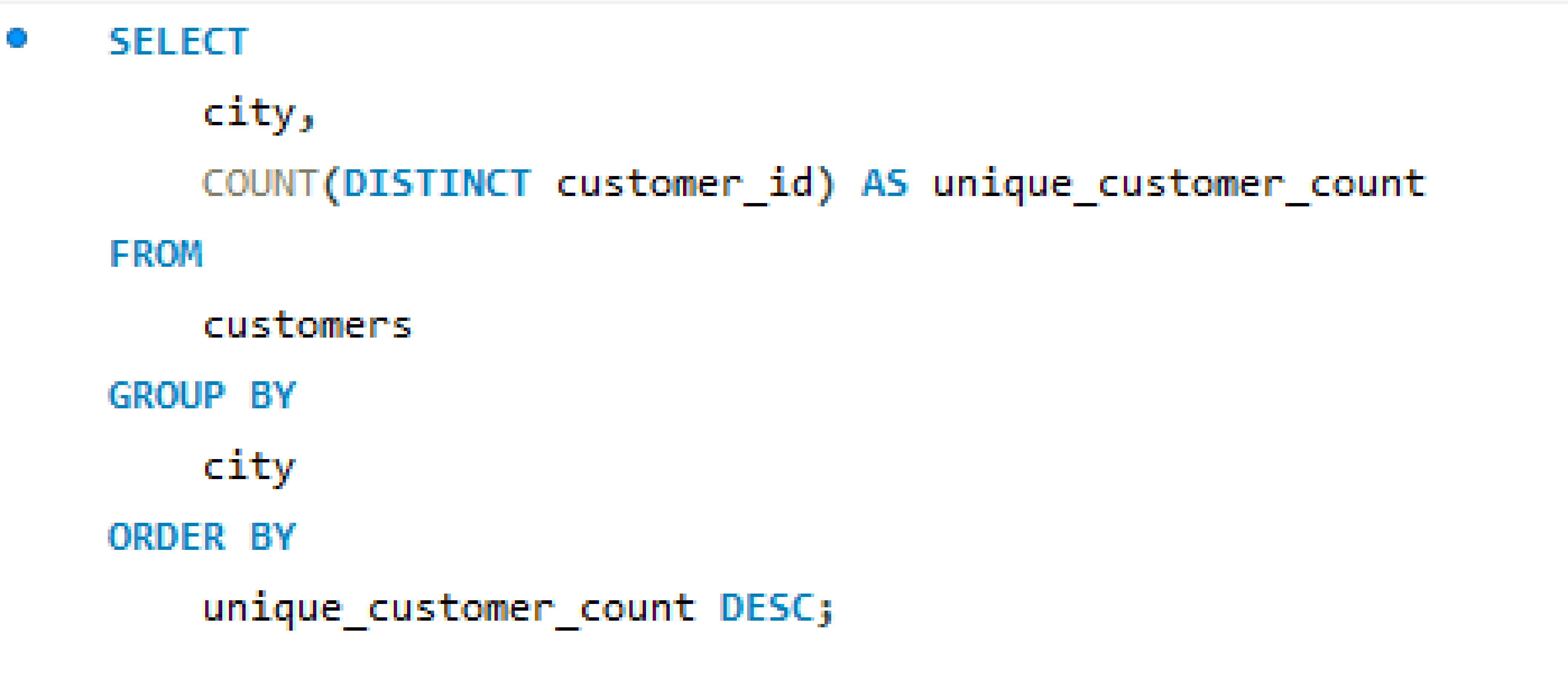


```
select c.city,sum(m.price*od.quantity) as total_revenue
from customers c
join orders o on c.customer_id=o.customer_id
join order_details od on o.order_id=od.order_id
join menu_item m on od.item_id=m.item_id
group by c.city
order by total_revenue desc
limit 3;
```

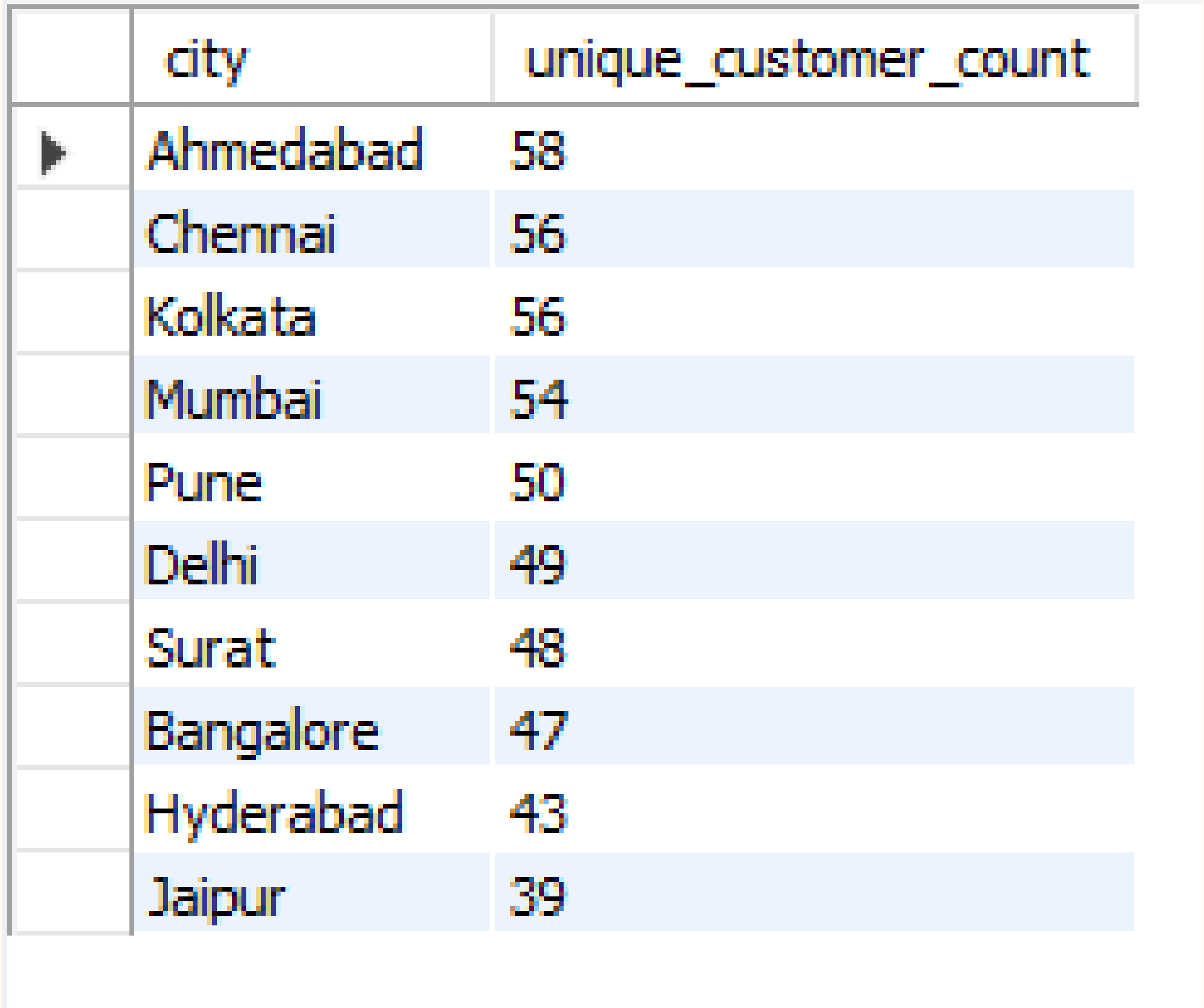


city	total_revenue
Chennai	349264.89
Pune	305873.68
Bangalore	299747.65

Q7: Number of Unique Customers Per City

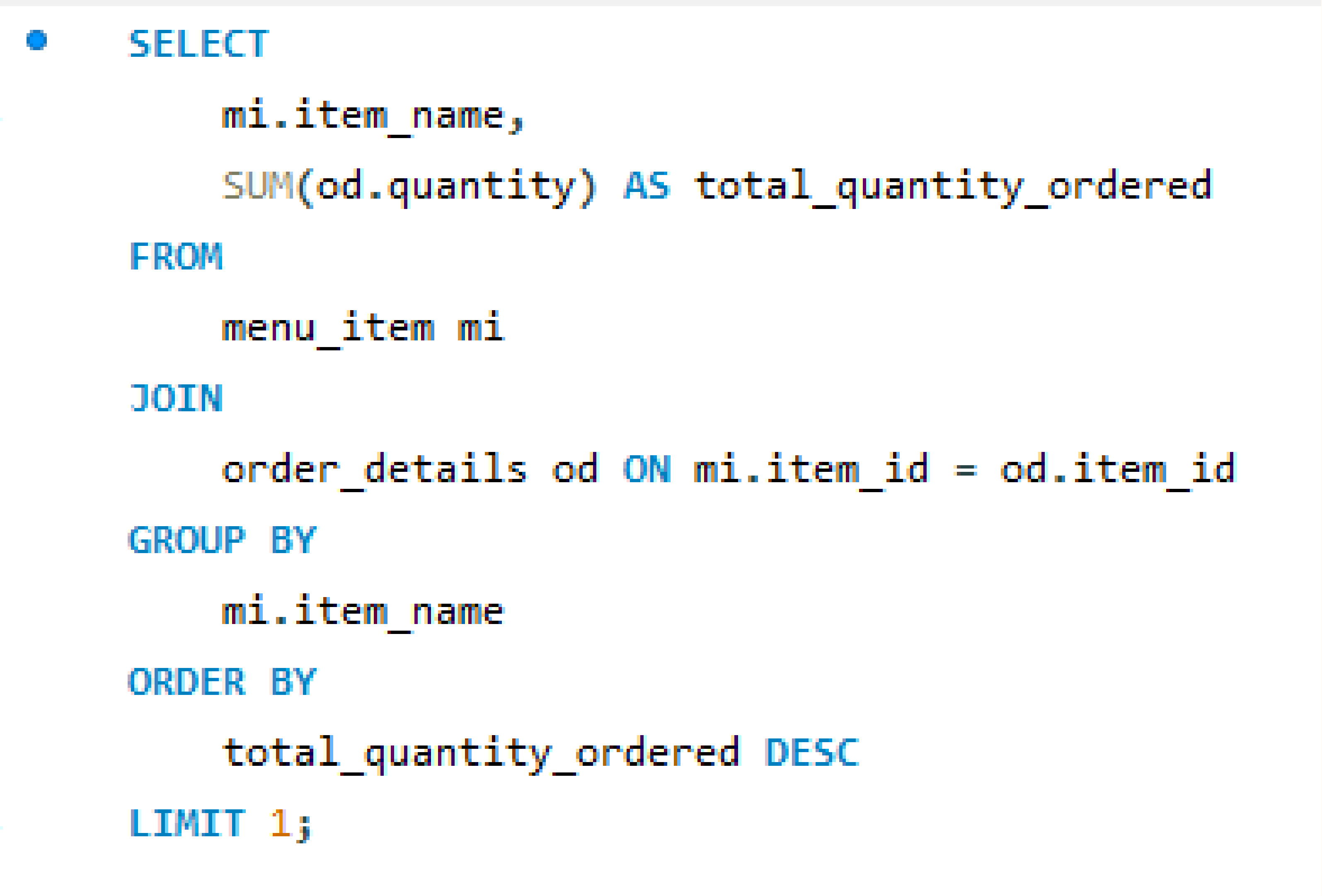


```
SELECT
    city,
    COUNT(DISTINCT customer_id) AS unique_customer_count
FROM
    customers
GROUP BY
    city
ORDER BY
    unique_customer_count DESC;
```

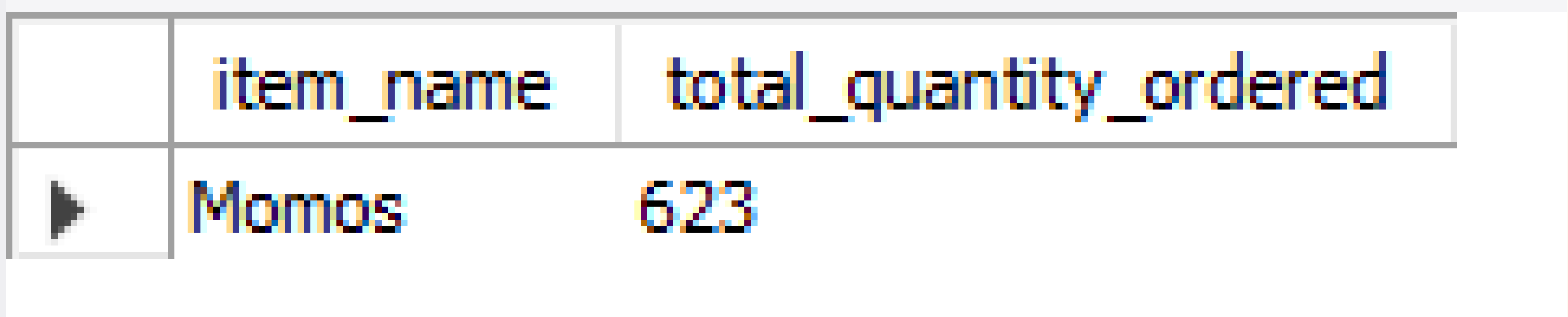


	city	unique_customer_count
▶	Ahmedabad	58
	Chennai	56
	Kolkata	56
	Mumbai	54
	Pune	50
	Delhi	49
	Surat	48
	Bangalore	47
	Hyderabad	43
	Jaipur	39

Q8.Most Frequently Ordered Items

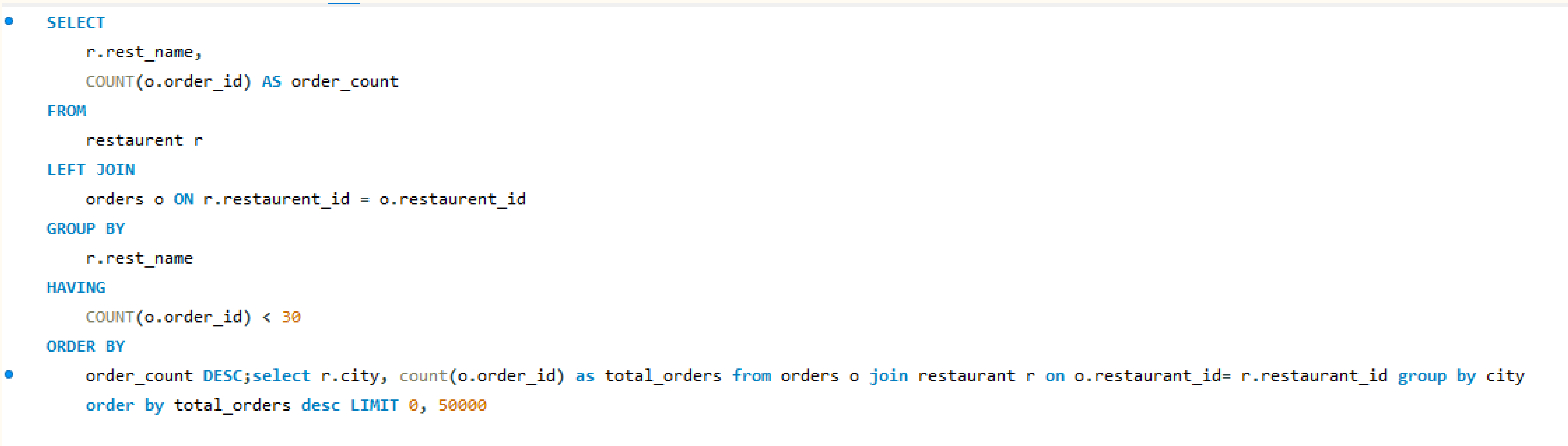


```
SELECT
    mi.item_name,
    SUM(od.quantity) AS total_quantity_ordered
FROM
    menu_item mi
JOIN
    order_details od ON mi.item_id = od.item_id
GROUP BY
    mi.item_name
ORDER BY
    total_quantity_ordered DESC
LIMIT 1;
```

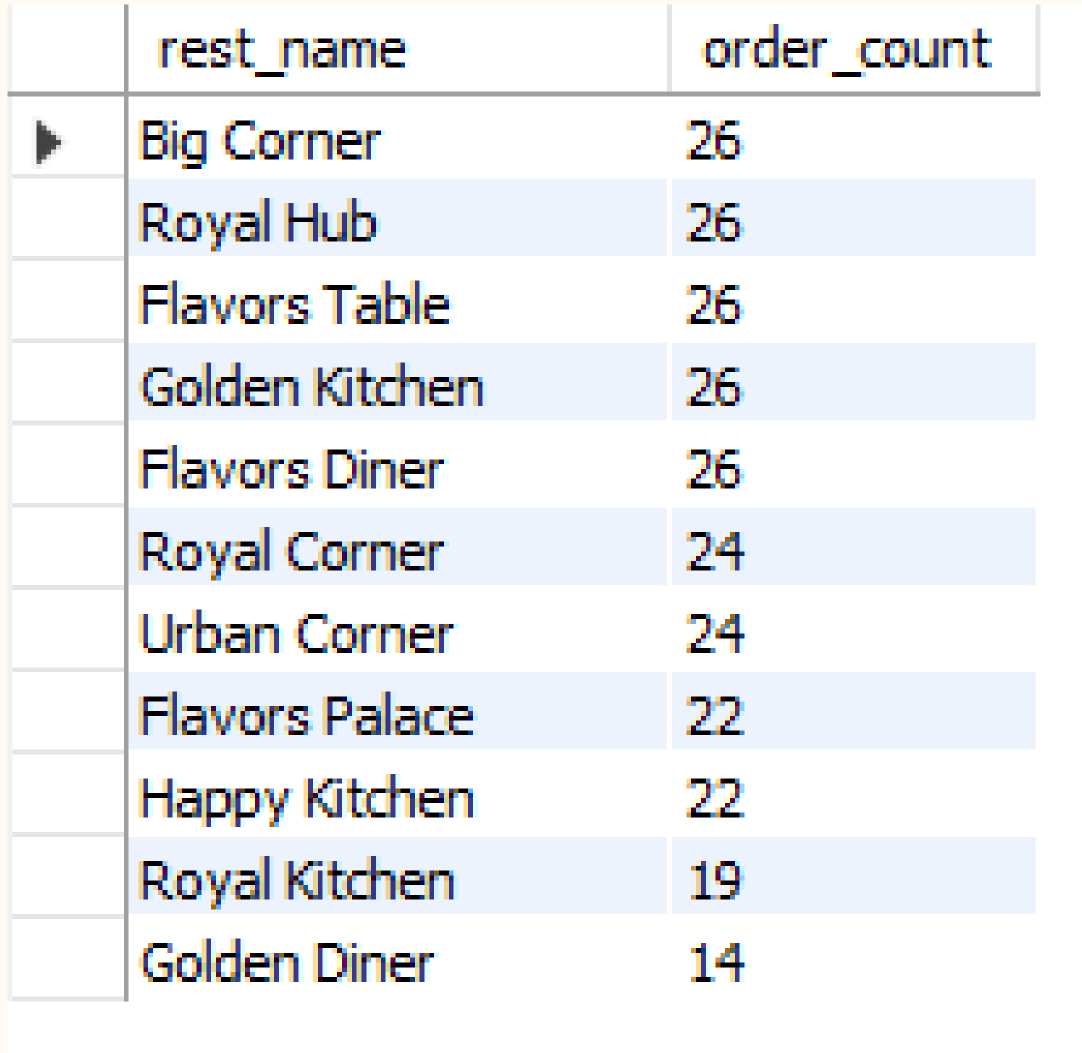


	item_name	total_quantity_ordered
▶	Momos	623

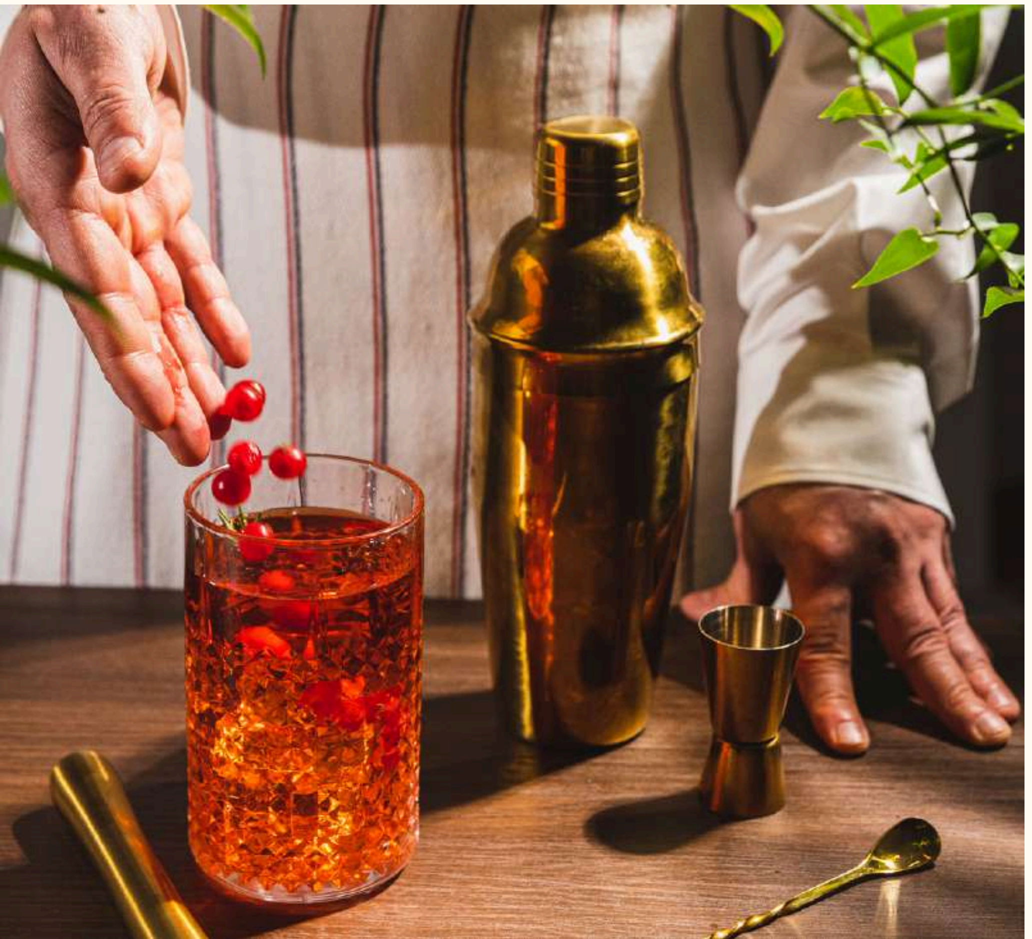
Q9.Restaurants with Low Order Counts (less than 30)



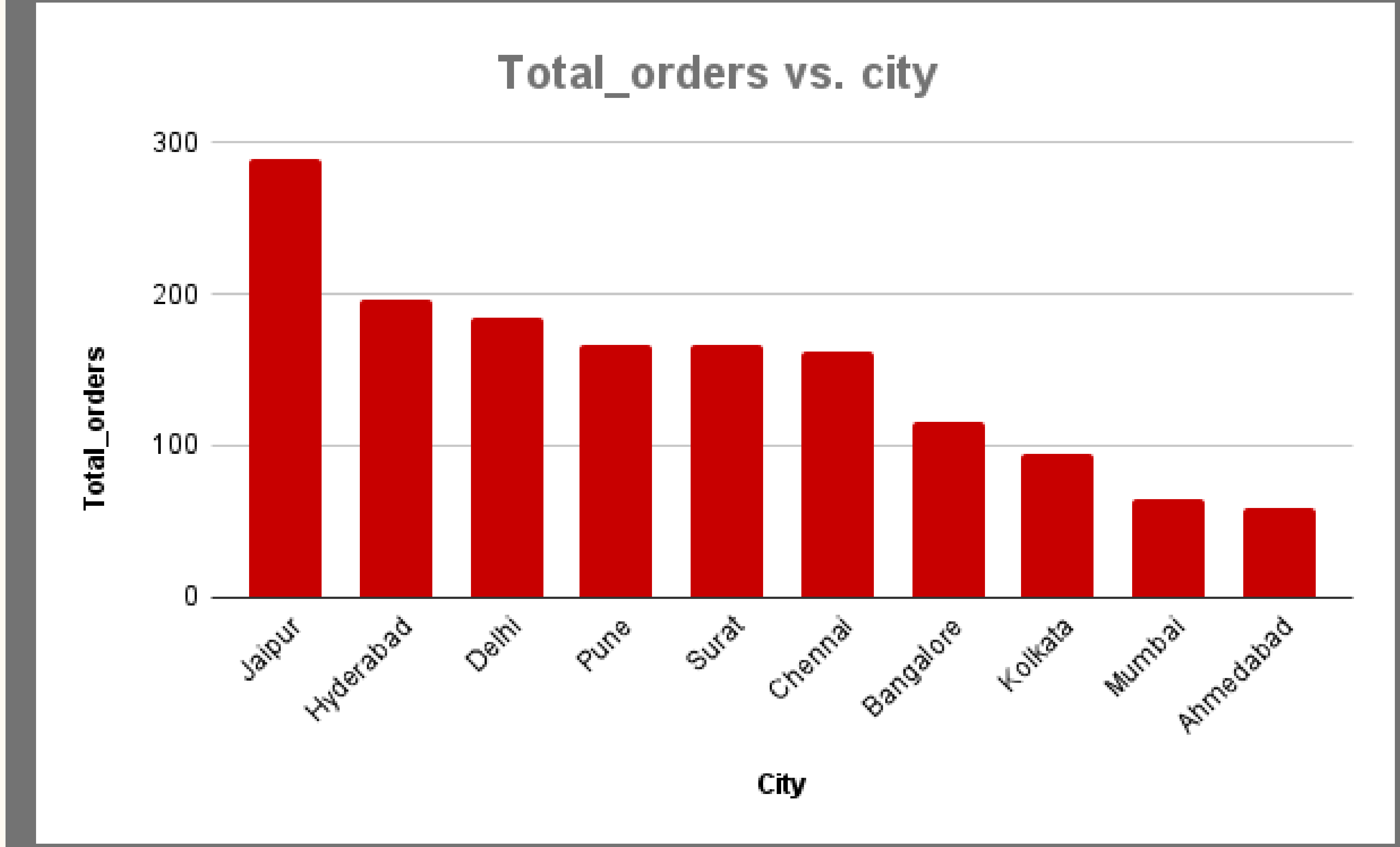
```
SELECT
    r.rest_name,
    COUNT(o.order_id) AS order_count
FROM
    restaurent r
LEFT JOIN
    orders o ON r.restaurent_id = o.restaurent_id
GROUP BY
    r.rest_name
HAVING
    COUNT(o.order_id) < 30
ORDER BY
    order_count DESC;select r.city, count(o.order_id) as total_orders from orders o join restaurant r on o.restaurant_id= r.restaurant_id group by city
    order by total_orders desc LIMIT 0, 50000
```



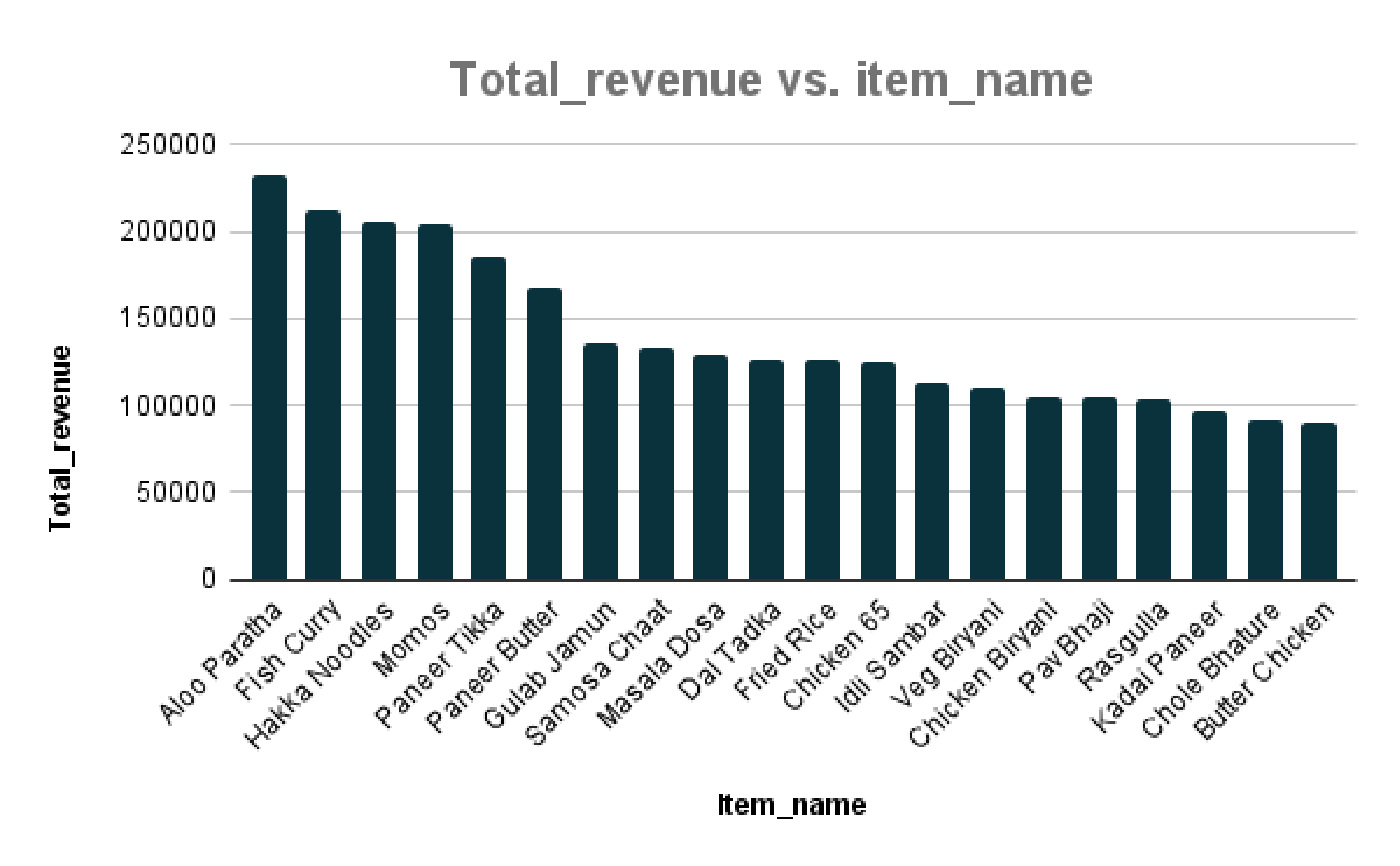
rest_name	order_count
Big Corner	26
Royal Hub	26
Flavors Table	26
Golden Kitchen	26
Flavors Diner	26
Royal Corner	24
Urban Corner	24
Flavors Palace	22
Happy Kitchen	22
Royal Kitchen	19
Golden Diner	14



VISUALIZATION & INSIGHTS

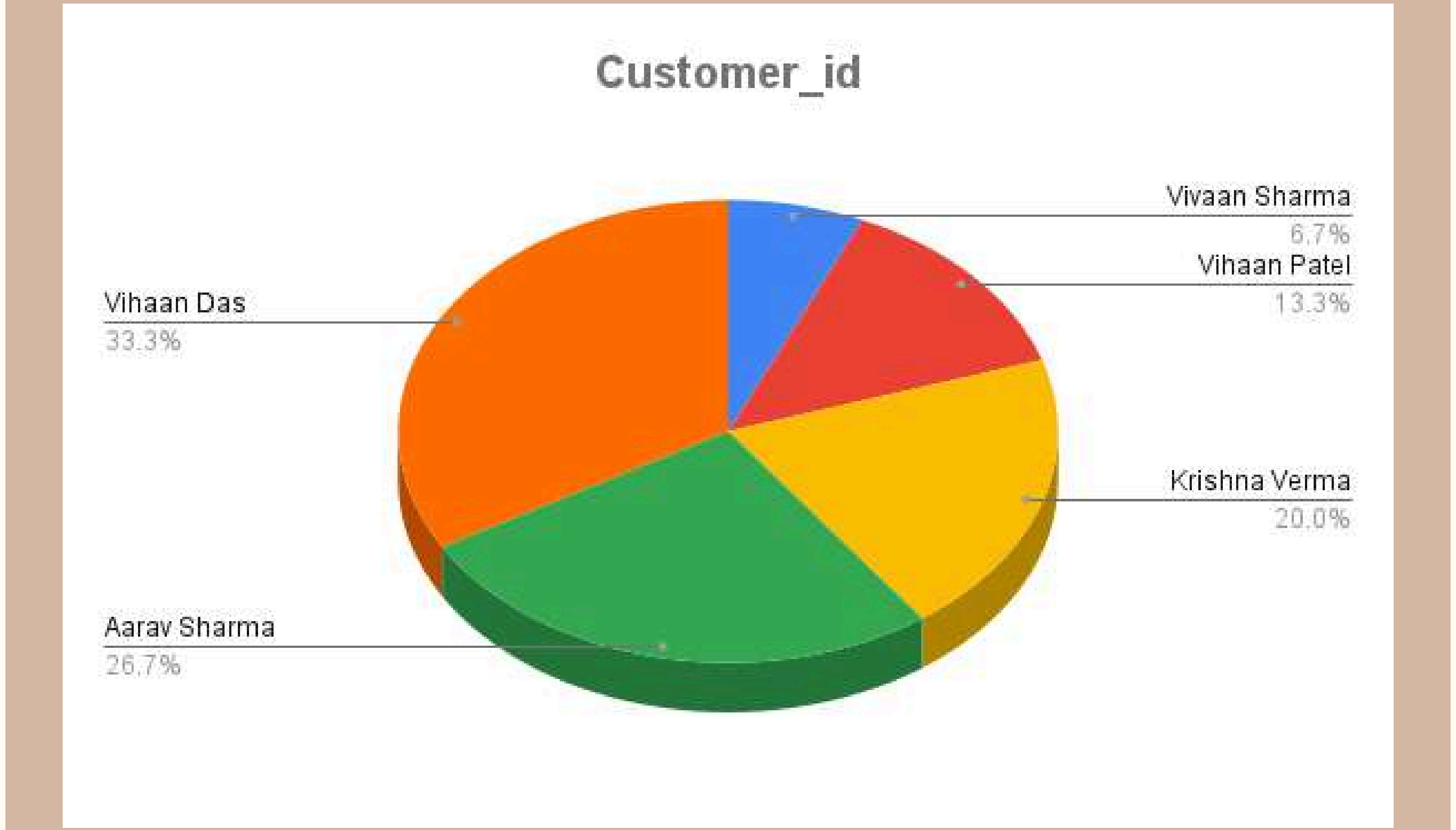


- Jaipur, Hyderabad, Delhi have the highest number of food orders compared to other cities.
- Active markets
- Expansion strategies

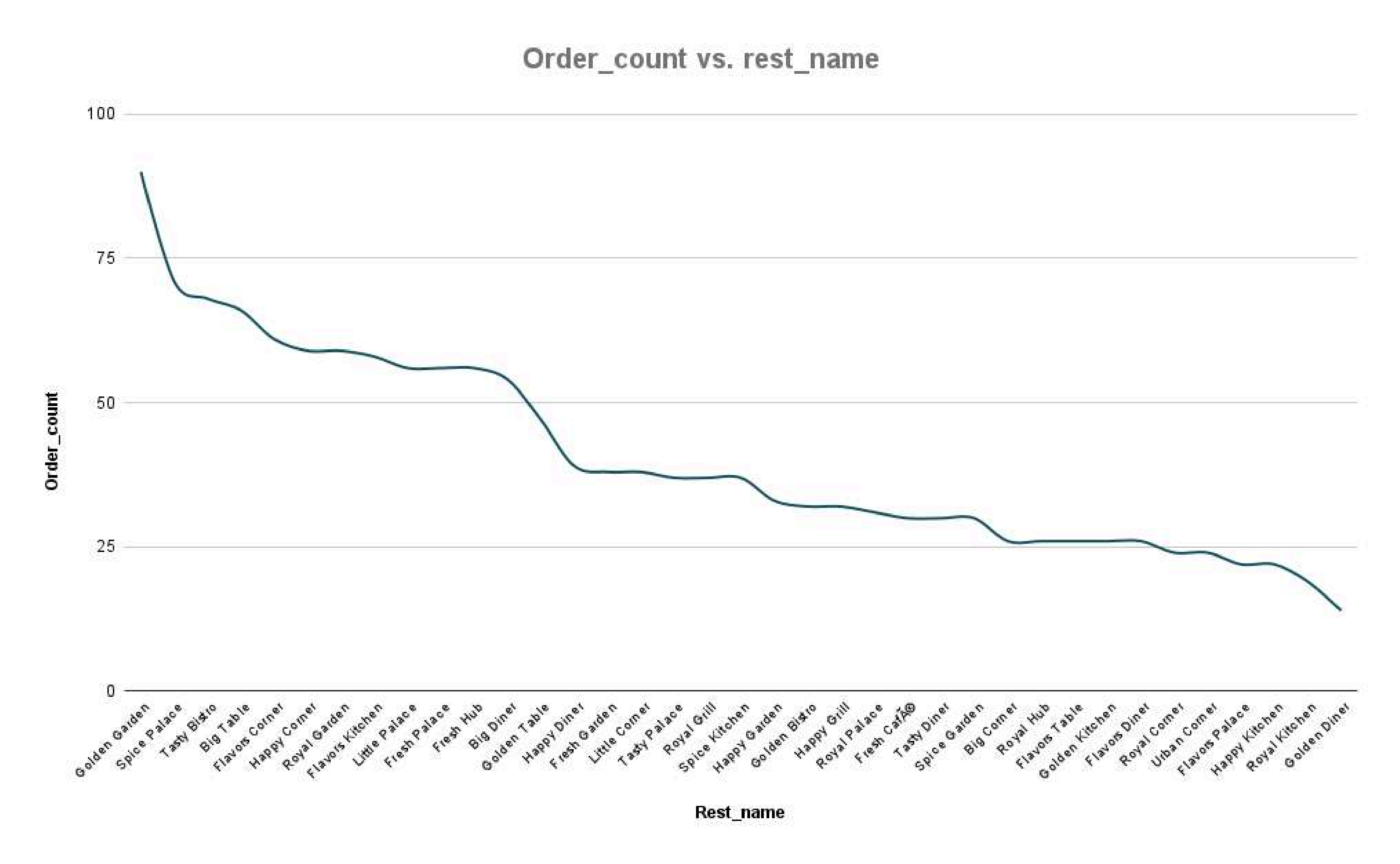


- Insights best performing food items
- Aloo paratha, fish curry, hakka noodles the top 3 food items generating highest revenue.
- Promote it more prominently on app.

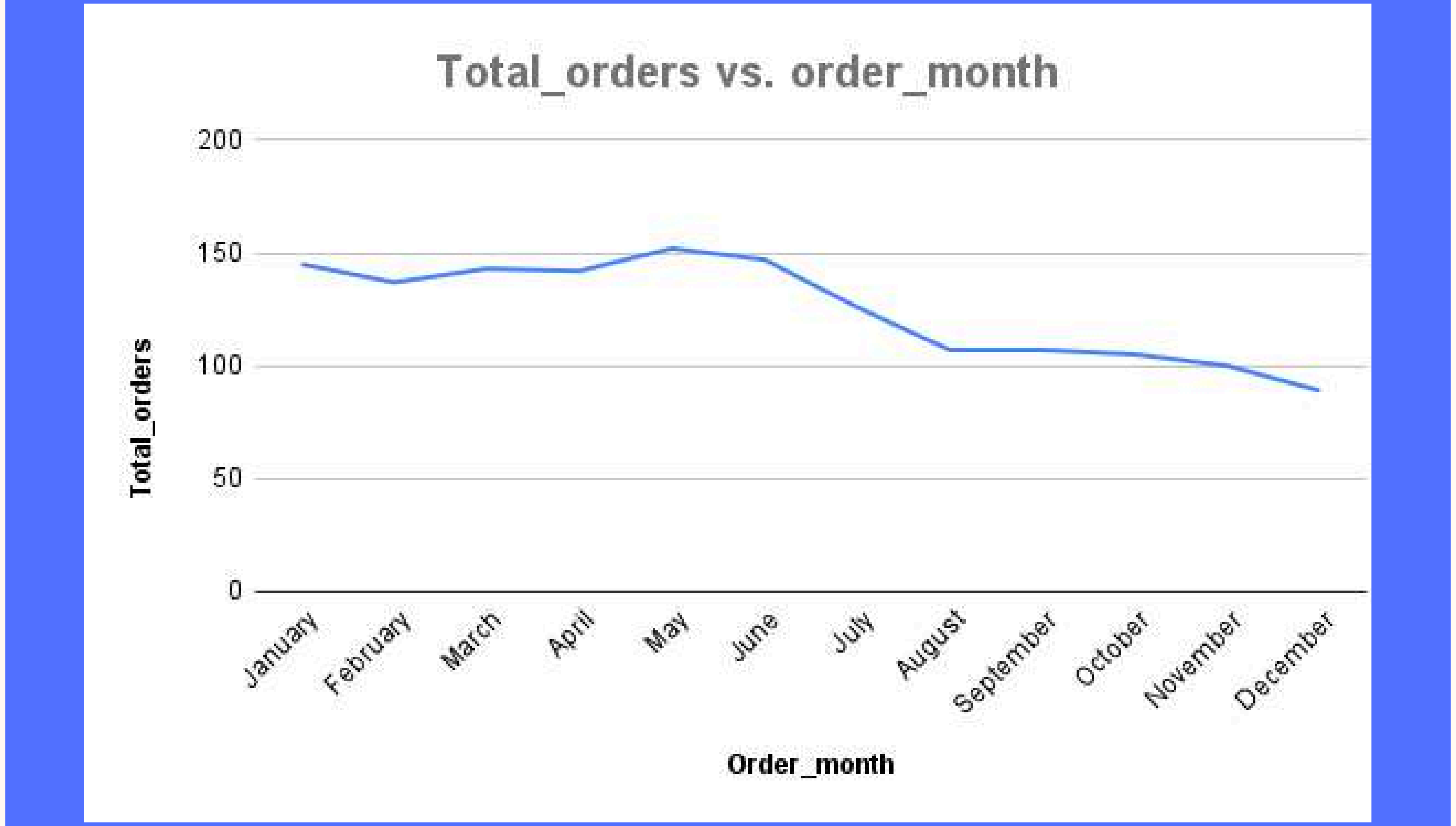
- High-Value Customer Identification
- Customer Loyalty Programs
- Feedback and Experience Improvement

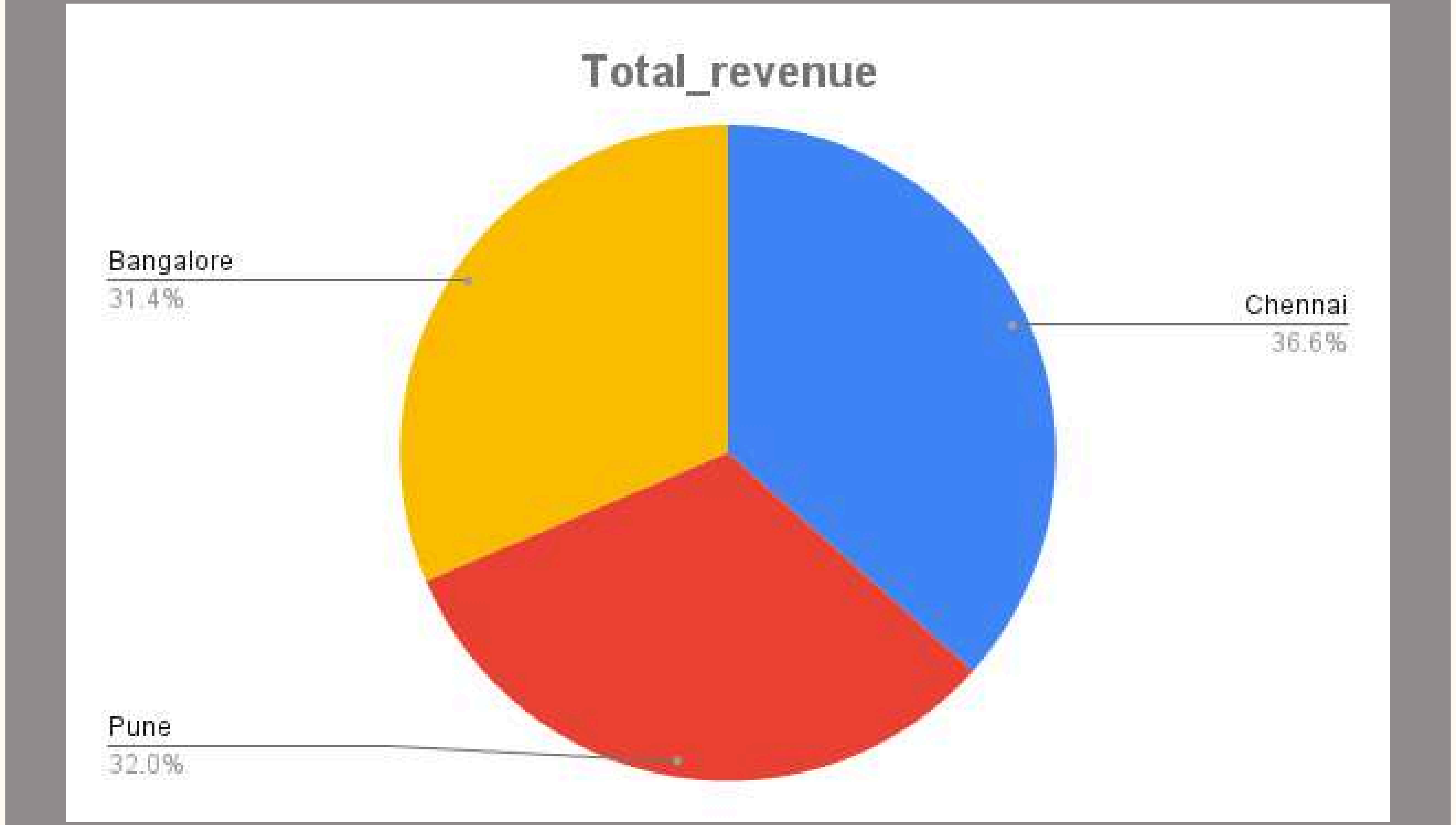


- Performance Benchmarking
- Operational Capacity Planning
- Support and Improvement Opportunities

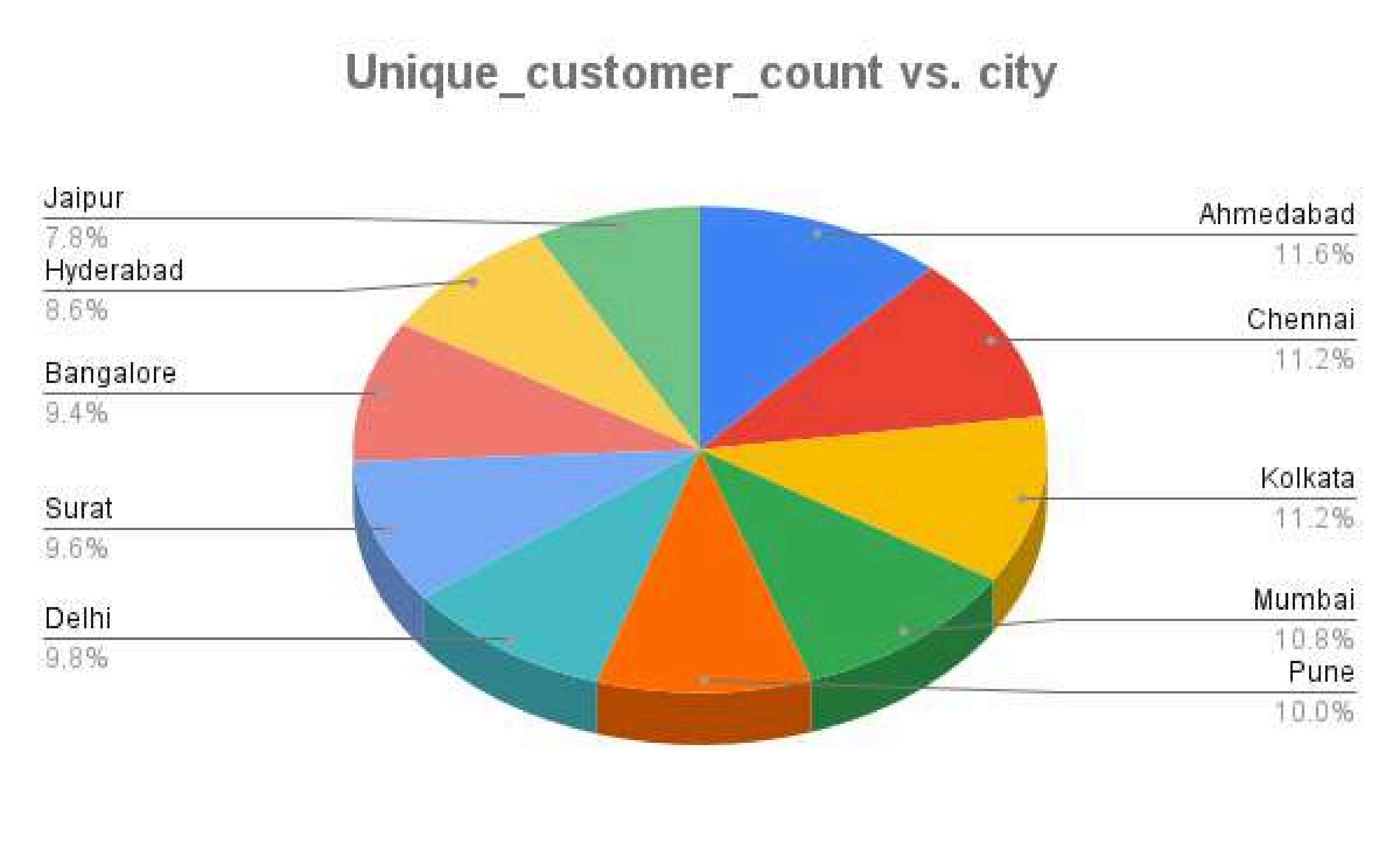


- Peak order months
- Impacts of festivals, holidays weather
- Plan time sensitive discounts or campigns.





- Strategic Market Focus
- Growth Opportunities
- Localized Marketing Campaigns

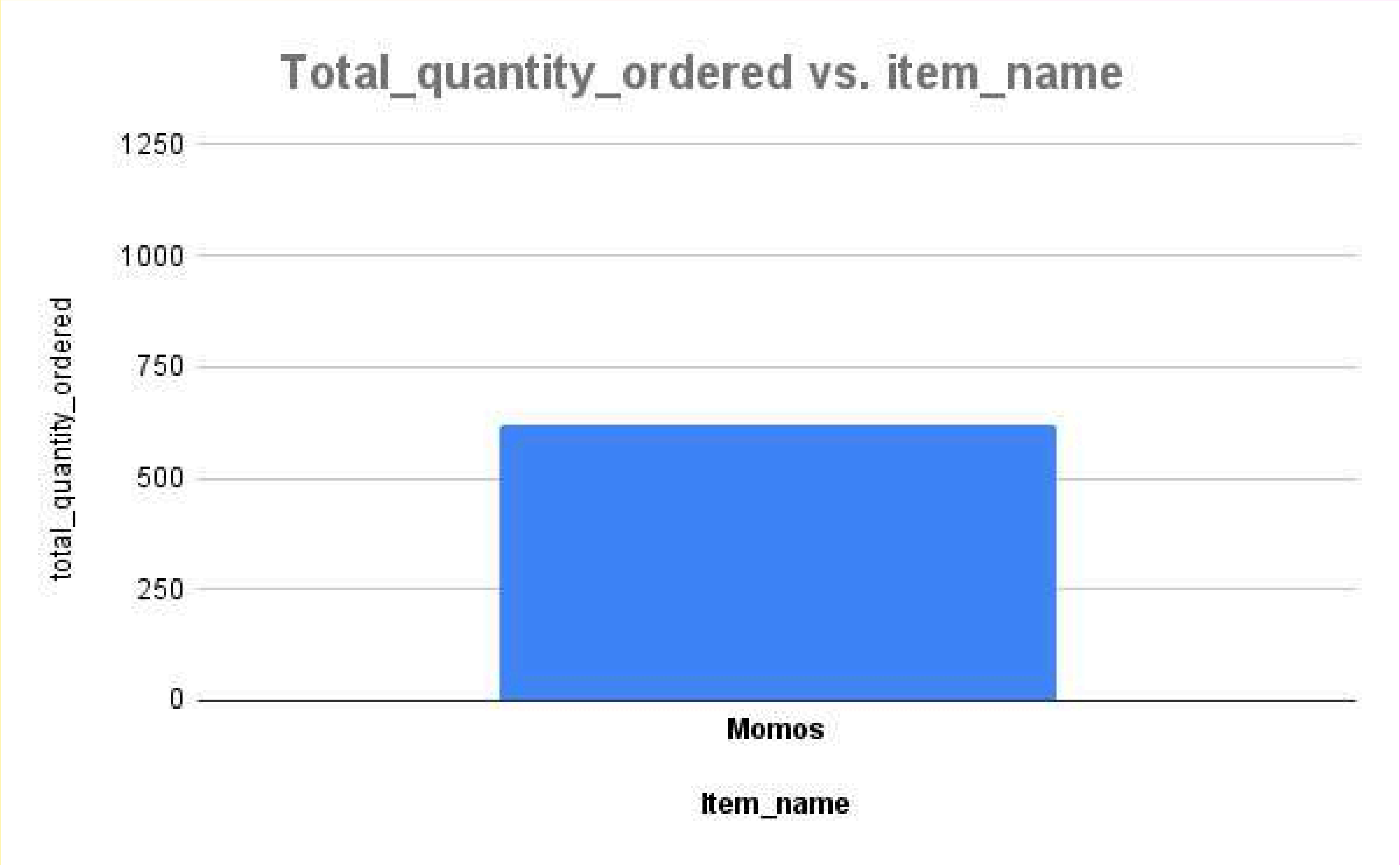


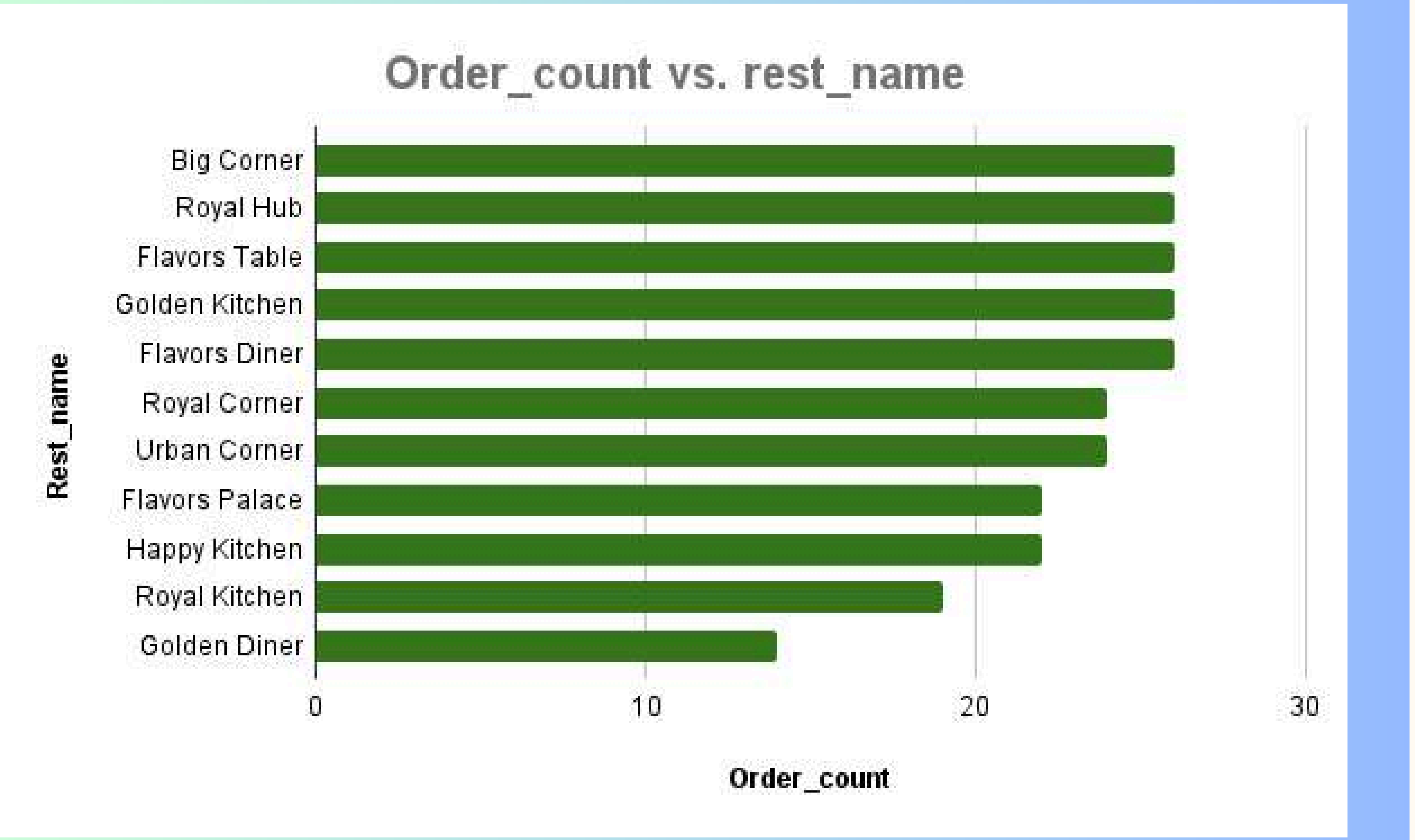
- Customer Reach Analysis
- Market Expansion Prioritization
- Targeted Engagement

"The ambience is pure class – calming, luxurious, and beautifully designed."

-Reese Miller

- Momo is the only one frequently ordered item
- Knowing the most frequently ordered item allows for better inventory management
- This item can be a strong candidate for bundling with other less popular items





- Underperforming Restaurant Identification
- This allows us to know order count of each restaurent
- Partnership Review

CONCLUSION

This project provides a foundational analysis of an online food delivery dataset, offering valuable insights into key operational aspects. By understanding customer sign-up trends, popular menu items and restaurants, and order patterns across different cities, the platform can make data-driven decisions. These insights can be leveraged to optimize marketing strategies, enhance customer satisfaction, foster restaurant partnerships, and ultimately drive business growth in the competitive food delivery market. The ER diagram further clarifies the relationships between different entities, which is crucial for database management and further complex queries.

The Mainers
FINE DINING
Entrees
NEW YORK STEAK
BEEF RIBS
LOBSTER NEW
POULET SWO
MAPLE BARBECUE
CHEESE AND BEEF CR
$30.00
$35.00
$40.00
$30.00

THANK YOU