To perform a comprehensive analysis and generate valuable insights from the provided dataset, here are a set of SQL query questions that would allow you to analyze various aspects of your data. These questions are designed to help identify trends, understand customer preferences, and guide decision-making in the restaurant and food delivery industry.

Focused Dilivering Industry :-Zomato

**1. Which delivery partner has the highest order volume?**

* Purpose: Understand which delivery partner is handling the most orders, helping optimize delivery partner selection.

SELECT partner\_name,count(order\_id) as 'Volume' FROM delivery\_partner as d

join oders as o

on d.partner\_id=o.partner\_id

GROUP BY partner\_name

ORDER BY Volume DESC

LIMIT 1;

**2. What is the total sales revenue per restaurant?**

* Purpose: Assess the sales performance of each restaurant.

SELECT r\_name ,sum(amount) as 'Revenue' FROM restaurants as r

join orders as o

ON r.r\_id=o.r\_id

GROUP BY r\_name

ORDER BY Revenue DESC;

**3. What are the top-selling food items?**

* Purpose: Identify which food items are the most popular, helping with inventory and marketing decisions.

SELECT \* FROM food;

SELECT T.f\_name,COUNT(T.order\_id) as 'Top sell food' FROM (

SELECT o.order\_id,f.f\_name,f.f\_id,o.amount FROM orders as o

JOIN order\_details as od ON O.order\_id=od.order\_id

JOIN food as f ON OD.f\_id=f.f\_id )T

GROUP BY T.f\_name

ORDER BY COUNT(T.order\_id) DESC

LIMIT 5;

**4. What is the average delivery rating by partner?**

* Purpose: Evaluate the performance of delivery partners based on customer ratings.

SELECT dp.partner\_name,AVG(o.delivery\_rating) as 'Avg\_rating' FROM orders as o

JOIN delivery\_partner as dp

ON o.partner\_id=dp.partner\_id

GROUP BY dp.partner\_name

ORDER BY Avg\_rating DESC;

**5. Which restaurants have the highest customer satisfaction based on ratings?**

* Purpose: Determine the restaurant performance based on customer satisfaction ratings.

SELECT r.r\_name,ROUND(AVG(o.restaurant\_rating),2) as 'Avg\_rating' FROM restaurants as r

JOIN orders as o

ON r.r\_id=o.r\_id

GROUP BY r.r\_name

ORDER BY Avg\_rating DESC

LIMIT 1;

**6. What is the average order value for each restaurant?**

* Purpose: Measure the average revenue per order for each restaurant.

SELECT r.r\_name,Avg(o.amount) as 'Avg\_value' FROM orders as o

JOIN restaurants as r

ON r.r\_id=o.r\_id

GROUP BY r.r\_name

ORDER BY Avg\_value DESC;

**7. What is the total number of orders by food type?**

* Purpose: Understand demand based on food type (e.g., vegetarian, non-vegetarian, etc.) and identify trends.

SELECT f.type,sum(o.order\_id) as 'count\_order',RANK() OVER(ORDER BY sum(o.order\_id) desc) FROM food AS f

JOIN order\_details as od

ON f.f\_id=od.f\_id

JOIN orders as o

ON od.order\_id=o.order\_id

GROUP BY f.type;

**8. Which food items have the highest average rating?**

* Purpose: Identify the most well-reviewed dishes.

SELECT f.f\_name,AVG(o.delivery\_rating) AS 'AvgRating' FROM food AS f

JOIN order\_details as od

ON f.f\_id=od.f\_id

JOIN orders as o

ON od.order\_id=o.order\_id

GROUP BY f.f\_name

ORDER BY AvgRating DESC ;

**9. What is the average delivery time per restaurant?**

* Purpose: Identify which restaurants have faster or slower delivery times, potentially impacting customer satisfaction.

SELECT r.r\_name,AVG(o.delivery\_time) AS 'AvgDeliveryTime' FROM orders as o

JOIN restaurants as r

ON r.r\_id=o.r\_id

GROUP BY r.r\_name

ORDER BY AvgDeliveryTime ASC;

**10. What are the peak times for orders based on delivery date and time?**

* Purpose: Analyze the busiest periods (e.g., time of day, days of the week) for planning resources like staffing and promotions.

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**11. What is the total revenue generated by each delivery partner?**

* Purpose: Track the revenue contribution by each delivery partner for better performance evaluation and possible renegotiation of contracts.

SELECT dp.partner\_name,sum(o.amount) as 'Revenue' FROM orders as o

JOIN delivery\_partner as dp

ON dp.partner\_id=o.partner\_id

GROUP BY dp.partner\_name

ORDER BY Revenue DESC;

**12. Which menu items are being ordered together the most?**

* Purpose: Identify food combinations that customers tend to order together, helpful for promotions and bundle offers.

SELECT od1.f\_id AS food\_id\_1, od2.f\_id AS food\_id\_2, COUNT(\*) AS order\_pair\_count

FROM order\_details od1

JOIN order\_details od2 ON od1.order\_id = od2.order\_id AND od1.f\_id != od2.f\_id

GROUP BY food\_id\_1, food\_id\_2

ORDER BY order\_pair\_count DESC

LIMIT 5;

**13. What is the most popular cuisine across all restaurants?**

* Purpose: Evaluate which cuisines are most popular across the platform and guide menu expansion or marketing strategies.

SELECT r.cuisine,SUM(o.amount) as 'TOTAL' FROM restaurants as r

JOIN orders as o

ON o.r\_id=r.r\_id

GROUP BY r.cuisine

ORDER BY TOTAL DESC;

**14. What is the monthly revenue trend for each restaurant?**

* Purpose: Evaluate how restaurant sales change over time and identify seasonal trends.

SELECT MONTHNAME(date) as 'MonthName',r.r\_name,SUM(o.amount) as 'Revenue' FROM orders AS o

JOIN restaurants AS r

ON r.r\_id=o.r\_id

GROUP BY MonthName ,r.r\_name

ORDER BY MonthName DESC,Revenue desc;

**15. What is the most ordered food item during a specific time of day (e.g., lunch or dinner)?**

* Purpose: Analyze consumer preferences based on the time of day.

#Unavailable data source

**16. What is the average delivery rating by order amount?**

* Purpose: Understand if there is any correlation between the order amount and customer delivery rating.

select amount,AVG(delivery\_rating) as 'AVGR' from orders

group by amount

ORDER BY amount DESC;

**17. What is the repeat customer rate for each restaurant?**

* Purpose: Measure customer loyalty and identify the restaurants that have a high return customer base.

SELECT r.r\_name,

(count(distinct o.user\_id)/count(o.user\_id))\*100 as 'RepeatRate'

FROM restaurants as r

JOIN orders as o

ON r.r\_id=o.r\_id

GROUP BY r.r\_name;

**18. Which food items have the highest return on investment (ROI) based on price and sales?**

* Purpose: Identify food items that provide the highest margin or ROI relative to their price and sales.

SELECT f.f\_name,SUM(o.amount-m.price) as 'TotalReturn' FROM orders as o

JOIN menu as m

ON m.r\_id=o.r\_id

JOIN food as f

on m.f\_id=f.f\_id

GROUP BY f.f\_name

ORDER BY TotalReturn DESC;

**19. What are the most common delivery times across different restaurants?**

* Purpose: Identify trends in delivery times across various restaurants to spot inefficiencies or performance gaps.

SELECT r.r\_name , AVG(o.delivery\_time) AS 'Average' FROM orders as o

JOIN restaurants as r

on r.r\_id= o.r\_id

GROUP BY r.r\_name;

**20. What is the average number of items ordered per order by restaurant?**

* Purpose: Understand how many items are typically ordered from each restaurant.

SELECT od.order\_id,r.r\_name,COUNT(od.id) as 'CountPerOrder' FROM orders as o

JOIN order\_details as od

ON o.order\_id=od.order\_id

JOIN restaurants as r

ON r.r\_id=o.r\_id

GROUP BY o.order\_id,r.r\_name;

**21. What is the percentage of orders that were delivered late by each delivery partner?**

* Purpose: Evaluate the performance of delivery partners and identify those who may need improvements in their delivery time.

/\*SELECT \* FROM orders AS O

JOIN restaurants AS r

ON o.r\_id=r.r\_id; \*/

#Data source not Available

**22. What is the average delivery time during peak vs off-peak hours?**

* Purpose: Determine whether delivery times increase during busy hours and help with operational adjustments.

SELECT

CASE

WHEN o.delivery\_time BETWEEN 11 AND 13 THEN "Peak\_Hours"

WHEN o.delivery\_time BETWEEN 18 AND 21 THEN "Peak\_Hours"

ELSE "Off\_Peak\_Hours"

END AS Time\_Period,

Avg(o.delivery\_time) as 'AverageTime'

FROM orders as o

GROUP BY Time\_Period;

#Due to some byes in data this is not right analysis for avg time for time period but this query

# help you in practisize the case operator concept

**23. What is the customer lifetime value (CLV) for each restaurant based on the total amount spent per customer?**

* Purpose: Calculate customer lifetime value (CLV) to identify which restaurants have more loyal and valuable customers.

SELECT r.r\_name,o.user\_id,SUM(o.amount) as 'Customer\_Lifetime\_Value' FROM orders as o

JOIN restaurants as r

ON r.r\_id=o.r\_id

GROUP BY r.r\_name,o.user\_id

ORDER BY Customer\_Lifetime\_Value DESC;

**24. What is the correlation between restaurant rating and delivery rating?**

* Purpose: Analyze if there's any correlation between restaurant ratings and delivery ratings, which might suggest that delivery quality impacts restaurant perception.

SELECT r.r\_name,AVG(o.delivery\_rating) as 'AvgDeliveryRating',

AVG(o.restaurant\_rating) AS 'AvgRestaurantRating'

FROM orders AS o

JOIN restaurants AS r

GROUP BY r.r\_name

ORDER BY AvgDeliveryRating DESC,AvgRestaurantRating DESC;

**25. Which food items have the highest variance in sales across different restaurants?**

* Purpose: Identify food items with fluctuating demand across different restaurants. This can help identify products with unstable performance.

SELECT f.f\_name, VARIANCE(m.price) AS 'price\_variance'

FROM food AS f

JOIN menu AS m ON f.f\_id = m.f\_id

GROUP BY f.f\_name

ORDER BY price\_variance DESC;

**26. Which restaurant has the highest proportion of repeat customers?**

* Purpose: Identify restaurants with a high level of customer retention, which could be indicative of superior service or food quality.

SELECT DAYNAME(date) AS 'DAYS' ,SUM(AMOUNT) AS 'TotalSales' FROM orders

GROUP BY DAYS

ORDER BY TotalSales DESC;

**27. What is the average amount spent per customer across different food types?**

* Purpose: Understand if customers spend more based on the type of food (e.g., vegetarian, non-vegetarian, etc.).

SELECT f.type, AVG(o.amount) AS avg\_spent\_per\_customer

FROM food f

JOIN order\_detail od ON f.food\_id = od.f\_id

JOIN `order` o ON od.order\_id = o.order\_id

GROUP BY f.type

ORDER BY avg\_spent\_per\_customer DESC;

**28. How do sales vary based on day of the week?**

* Purpose: Understand which days have the highest sales to optimize staffing and marketing for specific days.

SELECT DAYOFWEEK(o.date) AS day\_of\_week, SUM(o.amount) AS total\_sales

FROM `order` o

GROUP BY day\_of\_week

ORDER BY day\_of\_week;

**29. Which restaurant has the highest average food price?**

* Purpose: Identify which restaurants have a higher pricing strategy that could be aligned with premium offerings or targeted customer segments.

SELECT r\_id,avg(price) as 'AvgPrice' FROM menu

GROUP BY r\_id

ORDER BY AvgPrice DESC;

**30. How many orders are being canceled by customers, and which restaurant experiences the most cancellations?**

* Purpose: Track order cancellations, which could be valuable for understanding customer dissatisfaction or operational issues.

SELECT r.restorant\_name, COUNT(o.order\_id) AS canceled\_orders

FROM restaurant r

JOIN `order` o ON r.restorant\_id = o.r\_id

WHERE o.status = 'Cancelled'

GROUP BY r.restorant\_name

ORDER BY canceled\_orders DESC;

HERE I AM WRITE THE LOGIC FOR FIND THE CANCELLATION OF THE ORDER FOR DUFFRENT RESTAURANT BUT IN TABLE DATA IS NOT AVAILABLE FOR THIS QUERY