ADVANCED SQL PROJECT

SWIGGY

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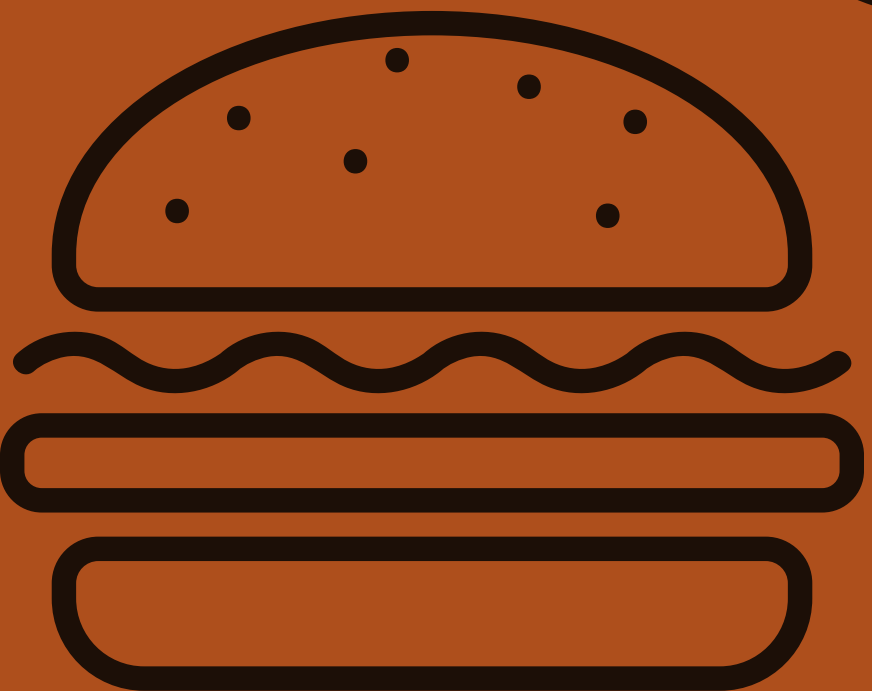

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INTRODUCTION

Swiggy is a leading food delivery platform in India, connecting customers with wide range of restaurants. By using data analytics, swiggy enhances its service, optimizing delivery and customer experience.

This SQL project focuses on analyzing Swiggy's data to uncover insights about customer behavior, restaurant performance, and delivery efficiency. Using advanced queries, the goal is to support better decision making for Swiggy's operations.

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Display all customers who live in 'Delhi'

```sql
SELECT
    customer_id, name
FROM
    customers
WHERE
    city = 'Delhi';
```

Understanding the distribution of customers by location helps Swiggy tailor its marketing strategies. By identifying a significant customer base in Delhi, Swiggy can focus on region specific promotions and optimize delivery services in the area to enhance customer satisfaction.

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FIND THE AVERAGE RATING OF ALL RESTAURANTS IN 'MUMBAI'.

```sql
SELECT
    ROUND(AVG(rating), 2) AS avg_rating
FROM
    restaurants
WHERE
    city = 'Mumbai';
```

Calculating average rating of restaurants in Mumbai helps Swiggy assess the overall quality of its restaurant partners in that region. This analysis enables Swiggy to identify potential areas for improvement, prioritize high-rated restaurants in recommendations, and enhance the overall customer experience.

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LIST ALL CUSTOMERS WHO HAVE PLACED AT LEAST ONE ORDER.

```sql
SELECT DISTINCT
    customers.customer_id, customers.name
FROM
    customers
        INNER JOIN
    orders ON customers.customer_id = orders.customer_id;
```

Identifying customers who have placed at least one order helps Swiggy recognize active users. This information is crucial for customer engagement, allowing Swiggy to target active customers with personalized offers and re-engage those who may have lapsed.

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DISPLAY THE TOTAL NUMBER OF ORDERS PLACED BY EACH CUSTOMER.

```sql
SELECT
    customers.customer_id,
    customers.name,
    COUNT(orders.order_id) total_orders
FROM
    customers
        LEFT JOIN
    orders ON customers.customer_id = orders.customer_id
GROUP BY customers.customer_id , customers.name;
```

Tracking the total number of orders placed by each customer provides insights into customer loyalty and engagement. Swiggy can use this data to reward frequent customers with loyalty programs and better understand customer retention trends.

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FIND THE TOTAL REVENUE GENERATED BY EACH RESTAURANT.

```sql
SELECT
    restaurants.restaurant_id,
    restaurants.name,
    COALESCE(SUM(orders.total_amount), 0) AS revenue
FROM
    restaurants
        LEFT JOIN
    orders ON restaurants.restaurant_id = orders.restaurant_id
GROUP BY restaurants.restaurant_id , restaurants.name;
```

This help Swiggy identify its top performing partners. This information is valuable for building stronger partnerships, negotiating better deals, and ensuring that high-revenue restaurants receive priority support.

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FIND THE TOP 5 RESTAURANTS WITH THE HIGHEST AVERAGE RATING.

```sql
SELECT
    restaurant_id, name, AVG(rating) avg_rating
FROM
    restaurants
GROUP BY restaurant_id , name
ORDER BY avg_rating DESC
LIMIT 5;
```

Identifying top 5 restaurants with highest average ratings helps Swiggy highlight and promote these restaurants. This boosts visibility for high-quality restaurants, enhancing customer satisfaction and driving more orders to these top performers.

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DISPLAY ALL CUSTOMERS WHO HAVE NEVER PLACED AN ORDER.

```sql
SELECT
    customers.customer_id, customers.name
FROM
    customers
        LEFT JOIN
    orders ON customers.customer_id = orders.customer_id
WHERE
    orders.customer_id IS NULL;
```

Recognizing customers who never placed an order allows Swiggy to understand potential barriers to conversion. Swiggy can use this data to design targeted campaign aimed at converting these users in to active customers.

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FIND THE NUMBER OF ORDERS PLACED BY EACH CUSTOMER IN 'MUMBAI'.

```sql
SELECT
    customers.customer_id,
    customers.name,
    COUNT(orders.order_id) total_orders
FROM
    customers
        LEFT JOIN
    orders ON orders.customer_id = customers.customer_id
WHERE
    customers.city = 'Mumbai'
GROUP BY customers.customer_id , customers.name;
```

Analyzing the number of orders placed by customers in Mumbai gives Swiggy insights into regional demand. This helps optimize restaurant listings, delivery operations, and marketing efforts in Mumbai, ensuring that the city's specific needs are met effectively.

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DISPLAY ALL ORDERS PLACED IN THE LAST 30 DAYS.

```sql
SELECT
    *
FROM
    orders
WHERE
    order_date >= CURDATE() - INTERVAL 30 DAY;
```

Reviewing orders placed in the last 30 days helps Swiggy track recent customer activity and demand trends. This is crucial for adjusting delivery capacities, identifying peak times, and ensuring that Swiggy stays responsive to current market synamics.

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LIST ALL DELIVERY PARTNERS WHO HAVE COMPLETED MORE THAN 1 DELIVERY

```sql
SELECT DISTINCT
    deliverypartners.partner_id, deliverypartners.name
FROM
    deliverypartners
        JOIN
    orderdelivery ON deliverypartners.partner_id = orderdelivery.partner_id
        JOIN
    deliveryupdates ON orderdelivery.order_delivery_id = deliveryupdates.delivery_id
WHERE
    deliveryupdates.status = 'Delivered';
```

Identifying delivery partners who have completed more than one delivery helps Swiggy measure the performance and reliability of its delivery workforce. This information is used to reward top-performing partners, ensuring quality service, and optimize delivery operations.

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FIND THE CUSTOMERS WHO HAVE PLACED ORDERS ON EXACTLY THREE DIFFERENT DAYS.

```sql
SELECT
    customers.customer_id,
    customers.name,
    COUNT(orders.order_date)
FROM
    customers
        JOIN
    orders ON customers.customer_id = orders.customer_id
GROUP BY customers.customer_id , customers.name
HAVING COUNT(DISTINCT orders.order_date) = 3;
```

Finding customers who have placed orders on exactly three different days provides Swiggy with insights into moderate engagement levels. Swiggy can target these customers with offers or incentives to increase their order frequency and convert them into loyal customers.

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FIND THE DELIVERY PARTNER WHO HAS WORKED WITH THE MOST DIFFERENT CUSTOMERS

```sql
SELECT
    deliverypartners.partner_id,
    deliverypartners.name,
    COUNT(DISTINCT orders.customer_id) customer_count
FROM
    deliverypartners
        JOIN
    orderdelivery ON deliverypartners.partner_id = orderdelivery.partner_id
        JOIN
    orders ON orderdelivery.order_id = orders.order_id
GROUP BY deliverypartners.partner_id , deliverypartners.name
ORDER BY customer_count DESC
LIMIT 1;
```

Identifying the delivery partner who worked with most different customers helps Swiggy recognize highly efficient partners. This analysis supports delivery partner training and reward programs, ensuring a consistent and high quality customer experience.

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IDENTIFY CUSTOMERS WHO HAVE THE SAME CITY AND HAVE PLACED ORDERS AT THE SAME RESTAURANTS, BUT ON DIFFERENT DATES.

```sql
SELECT
    c1.name AS customer1,
    c2.name AS customer2,
    c1.city AS city1,
    c2.city AS c2,
    restaurants.name
FROM
    customers AS c1
        JOIN
    orders AS o1 ON c1.customer_id = o1.customer_id
        JOIN
    orders AS o2 ON o2.restaurant_id = o1.restaurant_id
        JOIN
    customers AS c2 ON c1.city = c2.city AND c1.name <> c2.name
        AND o2.customer_id = c2.customer_id
        JOIN
    restaurants ON o1.restaurant_id = restaurants.restaurant_id
WHERE
    o1.order_date <> o2.order_date;
```

Finding customers who share the same city and have ordered from the same restaurants on different dates allows Swiggy to uncover popular dining trends. This insight can be used to enhance restaurant recommendations and predict future customer behavior, leading to more personalized service.

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CONCLUSION

This project demonstrates the power of SQL in uncovering valuable insights from Swiggy's data. By analyzing customer orders, restaurant ratings, and delivery partner performance, we can identify patterns and trends that help Swiggy make informed decisions. These insights contribute to improving customer satisfaction, optimizing operations, and driving the overall success of the platform.

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