Zomato Sales Analysis

SQL PROJECT

Overview

The prime objective of this project is to understand how the purchase behaviour of a customer varies before and after becoming a member.

With the help of SQL queries we will analyze user behavior and identify factors that influence order frequency and spending on the food delivery app. Develop insights to optimize user acquisition, retention, and revenue generation strategies.

QUESTION 1

What is the total amount each customer spent on Zomato ?

```
select s.userid, sum(p.price) as amount_spent
from sales s left join product p
on s.product_id = p.product_id
group by s.userid
order by amount_spent desc;
```

OUTPUT:

	userid	amount_spent
▶	1	5230
	3	4570
	2	2510

QUESTION 2

How many days has each customer visited Zomato?

```
select userid, count(distinct created_date ) as num_visits
from sales
group by userid;
```

OUTPUT:

	userid	num_visits
▶	1	7
	2	4
	3	5

QUESTION 3

What was the first product purchased by each customer?

```
select userid,product_id
from(select *, rank() over(partition by userid order by created_date) as rnk
from sales ) as a
where rnk=1;
```

OUTPUT:

	userid	product_id
▶	1	1
	2	1
	3	1

QUESTION 4

What is the most purchased item on the menu and how many times was it purchased by each customer?

```
 with recursive most_bought_product as (
select product_id,count(*)as num_sold from sales
group by product_id
order by num_sold desc
limit 1)
select s.userid ,s.product_id, count(s.product_id) as times_Purchased
from sales s join most_bought_product mbp
on s.product_id = mbp.product_id
group by s.userid,s.product_id
order by s.userid;
```

OUTPUT:

	userid	product_id	times_Purchased
▶	1	2	3
	2	2	1
	3	2	3

QUESTION 5

Which item was the most popular for each customer?

```
select userid,product_id from(
select userid, product_Id, count(*) as cnt ,
rank() over(partition by userid order by count(*) desc) as rnk
from sales group by userid,product_id
)as a where rnk=1;
```

OUTPUT:

	userid	product_id
▶	1	2
	2	3
	3	2

QUESTION 6

Which item was first purchased by a customer after they became a member?

```
select* from(select userid, product_Id,
rank() over(partition by userid order by created_date) as rnk from
(select s.userid, s.product_id,s.created_date,g.gold_signup_date
from sales s join goldusers_signup g
on s.userid  = g.userid and s.created_date>=g.gold_signup_date) as c ) as d
where rnk=1;
```

OUTPUT:

	userid	product_id	rnk
▶	1	3	1
	3	2	1

QUESTION 7

Which item was purchased by customer just before they became a member?

```
select* from(select userid, product_Id,
rank() over(partition by userid order by created_date desc) as rnk from
(
select s.userid, s.product_id,s.created_date,g.gold_signup_date
from sales s join goldusers_signup g
on s.userid  = g.userid and s.created_date<g.gold_signup_date
) as c ) as d
where rnk=1;
```

OUTPUT:

	userid	product_id	rnk
▶	1	2	1
	3	2	1

QUESTION 8

What is the total no. of orders placed and amount spent by each customer before becoming a member?

```
select c.userid, count(c.product_id) as cnt, sum(p.price) as amount from
(
select s.userid, s.product_id,s.created_date,g.gold_signup_date
from sales s join goldusers_signup g
on s.userid  = g.userid and s.created_date<g.gold_signup_date
) as c join product p on c.product_id =p.product_id
group by c.userid;
```

OUTPUT:

	userid	cnt	amount
▶	3	3	2720
	1	5	4030

QUESTION 9

- Buying each product generates certain points on zomato where 5rs = 2 Zomato points and each product has different points . For p1 5rs = 1 point, p2 10rs = 5 points,p3 5rs = 1 point, based on this information , calculate the point collected by each customer and for which product most points have been given.

```
select product_id, ceiling(sum(total_spent/amount)) as points from
(select c.*, (case when product_id = 1 then 5
             when product_id =2 then 2
             when product_Id = 3 then 5  else 0 end) as amount
             from(select s.userid,s.product_id, sum(p.price) as total_spent
from sales s join product p
on s.product_id  = p.product_id
group by s.userid,s.product_id
order by s.userid,s.product_id) as c) as d group by product_id;
```

OUTPUT:

	product_id	points
▶	1	980
	2	3045
	3	264

QUESTION 10

- Buying each product generates certain points on zomato where 5rs = 2 Zomato pointsand each product has different points . For p1 5rs = 1 point, p2 10rs = 5 points,p3 5rs = 1 point, based on this information , calculate the point collected by each customer and for which product most points have been given.

```
select userid,ceiling(sum(total_spent/amount)*2.5) as cashback_earned from
(select c.*, (case when product_id = 1 then 5
            when product_id =2 then 2
            when product_Id = 3 then 5  else 0 end) as amount
            from(select s.userid,s.product_id, sum(p.price) as total_spent
from sales s join product p
on s.product_id  = p.product_id
group by s.userid,s.product_id
order by s.userid,s.product_id) as c) as d
group by userid;
```

OUTPUT:

	userid	cashback_earned
▶	1	4573
	2	1908
	3	4243

QUESTION 11

In the 1st year(including joining_date) after a customer joins the gold membershipa customer earns 5 zomato points for every 10rs spent . Who earned more points 1 or 3and how many points did each of them earn?

```
select c.*
              from(select s.userid, ceiling(sum(p.price)/2 )as total_points
from sales s join product p
on s.product_id  = p.product_id
join goldusers_signup g on g.userid = s.userid
and s.created_date >=g.gold_signup_date
where s.created_date < date_add(g.gold_signup_date, interval 365 day)
group by s.userid
order by s.userid) as c;
```

OUTPUT:

	userid	total_points
▶	1	165
	3	435

QUESTION 12

Rank all the transactions of the customers based on order date

```
select e.*, case when rnk = 0 then 'na' else rnk end as rnkk from
(select *, rank() over(partition by userid order by created_date) as rnk
from sales;
```

OUTPUT:

	userid	created_date	product_id	rnk	rnkk
▶	1	2016-03-11	1	1	1
	1	2016-05-20	3	2	2
	1	2016-11-09	1	3	3
	1	2017-03-11	2	4	4
	1	2017-04-19	2	5	5
	1	2018-03-19	3	6	6
	1	2019-10-23	2	7	7
	2	2017-09-24	1	1	1
	2	2017-11-08	2	2	2
	2	2018-09-10	3	3	3
	2	2020-07-20	3	4	4
	3	2016-11-10	1	1	1
	3	2016-12-15	2	2	2
	3	2016-12-20	2	3	3
	3	2017-12-07	2	4	4
	3	2019-12-18	1	5	5

QUESTION 13

Rank all the transactions for each member after they became a zomato gold member for every non gold member transaction mark as ‘na’.

```
select e.*, case when rnk = 0 then 'na' else rnk end as rnkk from
 (select c.*, (case when gold_signup_date is null then 0 else
 rank() over(partition by userid order by created_date desc)
 end)  as rnk
from (select s.userid,s.product_id,s.created_date, g.gold_signup_date
from sales s left join goldusers_signup g
on s.userid = g.userid and s.created_date>=g.gold_signup_date
group by 1,2,3,4
order by s.userid) as c) as e;
```

OUTPUT:

	userid	product_id	created_date	gold_signup_date	rnk	rnkk
▶	1	2	2019-10-23	2017-09-22	1	1
	1	3	2018-03-19	2017-09-22	2	2
	1	2	2017-04-19	NULL	0	na
	1	2	2017-03-11	NULL	0	na
	1	1	2016-11-09	NULL	0	na
	1	3	2016-05-20	NULL	0	na
	1	1	2016-03-11	NULL	0	na
	2	3	2020-07-20	NULL	0	na
	2	3	2018-09-10	NULL	0	na
	2	2	2017-11-08	NULL	0	na
	2	1	2017-09-24	NULL	0	na
	3	1	2019-12-18	2017-04-21	1	1
	3	2	2017-12-07	2017-04-21	2	2
	3	2	2016-12-20	NULL	0	na
	3	2	2016-12-15	NULL	0	na
	3	1	2016-11-10	NULL	0	na

Insights

- P2 is the most purchased product
- Average no. of times a customer visited Zomato is 5.3 between the year 2016 and 2020.
- Average no. of orders placed by a customer before becoming a member is 4 .
- Average amount spent by a customer before becoming a member is Rs 3375.
- The maximum Zomato points were given for p2
- Average amount spent on Zomato is Rs 4103.
- Average cashback earned by customer is Rs 3574.

THANK YOU