**drop table if exists sales;**

**CREATE TABLE sales(userid integer,created\_date date,product\_id integer);**

**INSERT INTO sales(userid,created\_date,product\_id)**

**VALUES (1,'2017-04-19',2),**

**(3,'2019-12-18',1),**

**(2,'2020-07-20',3),**

**(1,'2019-10-23',2),**

**(1,'2018-03-19',3),**

**(3,'2016=12-20',2),**

**(1,'2016-11-09',1),**

**(1,'2016-05-20',3),**

**(2,'2017-09-24',1),**

**(1,'2017-03-11',2),**

**(1,'2016-03-11',1),**

**(3,'2016-11-10',1),**

**(3,'2017-12-07',2),**

**(3,'2016-12-15',2),**

**(2,'2017-11-08',2),**

**(2,'2018-09-10',3);**

**SELECT \* FROM prateekdb.sales;**

**(what was the first product purchase by each customer?)**

**select \* from**

**(select \*,rank() over (partition by userid order by created\_date ) rnk from sales) a where rnk=1**

**(what is the most purchased item on the menu and how many times was it purchased by all customers?)**

**select userid,count(product\_id) as cnt from sales where product\_id =**

**(select product\_id from sales group by product\_id order by count(product\_id) desc limit 1)**

**group by userid;**

**'what is the total amount each customer spend on zomato'**

**select a.userid,sum(b.price) as total\_amount\_spend from sales a inner join product b on a.product\_id=b.product\_id**

**group by a.userid**

**(what was the first product purchase by each customer?)**

**select \* from**

**(select \*,rank() over (partition by userid order by created\_date ) rnk from sales) a where rnk=1**

**(which item was the most popular for each customer?)**

**select \* from**

**(select \*,rank() over (partition by userid order by cnt desc) as rnk from**

**(select userid,product\_id,count(product\_id) as cnt from sales group by userid,product\_id) as a) as b**

**where rnk=1**

**(which item purchased first by the customer after they became a member?)**

**select \* from**

**(select c.\*, rank() over (partition by userid order by created\_date) as rnk from**

**(select a.userid,a.created\_date,a.product\_id,b.gold\_signup\_date from sales as a inner join**

**goldusers\_signup as b on a.userid=b.userid and created\_date>=gold\_signup\_date) as c) as d where rnk=1;**

**(which item was purchased just before the customer became a member?)**

**select \* from**

**(select c.\*, rank() over (partition by userid order by created\_date desc) as rnk from**

**(select a.userid,a.created\_date,a.product\_id,b.gold\_signup\_date from sales as a inner join**

**goldusers\_signup as b on a.userid=b.userid and created\_date<=gold\_signup\_date) as c) as d where rnk=1;**

**(what is the total orders and amount spent for each member before they became a member?)**

**select userid,count(created\_date) as order\_purchased,sum(price) as total\_amt\_spent from**

**(select c.\*,d.price from**

**(select a.userid,a.created\_date,a.product\_id,b.gold\_signup\_date from sales as a inner join**

**goldusers\_signup as b on a.userid=b.userid and created\_date<=gold\_signup\_date) as c inner join product as d on c.product\_id=d.product\_id) as e**

**group by userid;**

**(If buying each product generates points for eg. 5rs=2 zomato point and each product has different purchasing points for eg. for P1**

**5rs = 1 zomato point, for P2 10rs = 5 zomato point and p3 5rs = 1 zomato point)**

**(calculate points collected by each customer and for which product most points have been given till now?)**

**select userid,sum(total\_points)\*2.5 total\_money\_earned from**

**(select e.\*, amt/point as total\_points from**

**(select d.\*,case when product\_id=1 then 5 when product\_id=2 then 2 when product\_id=3 then 5 else 0 end as point from**

**(select c.userid,c.product\_id,sum(price) amt from**

**(select a.\*,b.price from sales a inner join product b on a.product\_id=b.product\_id) c**

**group by userid,product\_id) d) e) f group by userid;**

**select \*, rank() over(order by total\_points\_earned desc) rnk from**

**(select product\_id,sum(total\_points) total\_points\_earned from**

**(select e.\*, amt/point as total\_points from**

**(select d.\*,case when product\_id=1 then 5 when product\_id=2 then 2 when product\_id=3 then 5 else 0 end as point from**

**(select c.userid,c.product\_id,sum(price) amt from**

**(select a.\*,b.price from sales a inner join product b on a.product\_id=b.product\_id) c**

**group by userid,product\_id) d) e) f group by product\_id)g;**

**(rnk all the transaction of the customer?)**

**select \*,rank() over(partition by userid order by created\_date)rnk from sales;**

**(rank all the transactions for each member whenever they are a zomato gold member for every non gold member transactions 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 a.userid,a.created\_date,a.product\_id,b.gold\_signup\_date from sales as a left join**

**goldusers\_signup as b on a.userid=b.userid and created\_date>=gold\_signup\_date)c)e;**