

Drop table if exists goldusers_signup;

CREATE TABLE goldusers_signup(UserID integer, Gold_Signup_Date date);

INSERT INTO goldusers_signup(UserID, Gold_Signup_Date)

VALUES

(1,'09-22-2017'),

(3,'04-21-2017'),

(2,'06-14-2018'),

(4,'08-05-2019'),

(5,'03-25-2016'),

(6,'11-22-2019'),

(7,'08-14-2018'),

(8,'06-05-2020'),

(9,'04-03-2017'),

(10,'10-17-2018');

Drop table if exists users;

CREATE TABLE users(UserID integer, Signup_Date date);

```
INSERT INTO users(UserID, Signup_Date)
```

```
VALUES
```

```
(1,'09-02-2014'),
```

```
(2,'01-15-2015'),
```

```
(3,'04-11-2014'),
```

```
(4,'11-30-2015'),
```

```
(5,'09-12-2017'),
```

```
(6,'02-08-2018'),
```

```
(7,'07-30-2016'),
```

```
(8,'04-22-2019'),
```

```
(9,'12-05-2017'),
```

```
(10,'02-15-2018'),
```

```
(11,'09-20-2016');
```

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,'04-19-2017',2),

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(6,'01-05-2023',2),

(7,'03-14-2022',1),

(8,'08-01-2021',3),

(9,'12-25-2020',1),

(10,'06-30-2022',2),

(11,'11-11-2023',3),

(12,'09-07-2022',2),

(13,'07-20-2023',1),

(14,'05-12-2024',3),

(15,'04-18-2023',1);

Drop table if exists product;

CREATE TABLE product(Product_ID integer, Product_Name text, Price integer);

INSERT INTO product(Product_ID, Product_Name, Price)

VALUES

(1,'p1',980),

(2,'p2',870),

(3,'p3',330),

(4,'p4',450),

(5,'p5',720),

(6,'p6',880),

(7,'p7',620),

(8,'p8',890),

(9,'p9',400),

(10,'p10',770),

(11,'p11',520),

(12,'p12',980),

(13,'p13',630),

(14,'p14',840),

(15,'p15',920),

(16,'p16',330);

Select * from sales;

Select * from product;

Select * from goldusers_signup;

Select * from users;

	UserID	Created_Date	Product_ID
1	1	2017-04-19	2
2	3	2019-12-18	1
3	2	2020-07-20	3
4	1	2019-10-23	2
5	1	2018-03-19	3
6	3	2016-12-20	2
7	1	2016-11-09	1
8	1	2016-05-20	3
9	2	2017-09-24	1
10	1	2017-03-11	2
11	1	2016-03-11	1
12	3	2016-11-10	1
13	3	2017-12-07	2
14	3	2016-12-15	2
15	2	2017-11-08	2
16	2	2018-09-10	3
17	6	2023-01-05	2
18	7	2022-03-14	1
19	8	2021-08-01	3
20	9	2020-12-25	1
21	10	2022-06-30	2
22	11	2023-11-11	3
23	12	2022-09-07	2
24	13	2023-07-20	1
25	14	2024-05-12	3
26	15	2023-04-18	1

	Product_ID	Product_Name	Price
1	1	p1	980
2	2	p2	870
3	3	p3	330
4	4	p4	450
5	5	p5	720
6	6	p6	880
7	7	p7	620
8	8	p8	890
9	9	p9	400
10	10	p10	770
11	11	p11	520
12	12	p12	980
13	13	p13	630
14	14	p14	840
15	15	p15	920
16	16	p16	330

	UserID	Signup_Date
1	1	2014-09-02
2	2	2015-01-15
3	3	2014-04-11
4	4	2015-11-30
5	5	2017-09-12
6	6	2018-02-08
7	7	2016-07-30
8	8	2019-04-22
9	9	2017-12-05
10	10	2018-02-15
11	11	2016-09-20

	UserID	Gold_Signup_Date
1	1	2017-09-22
2	3	2017-04-21
3	2	2018-06-14
4	4	2019-08-05
5	5	2016-03-25
6	6	2019-11-22
7	7	2018-08-14
8	8	2020-06-05
9	9	2017-04-03
10	10	2018-10-17

1.WHAT IS THE TOTAL AMOUNT EACH CUSTOMER SPENT ON ZOMATO?

Select a.UserID,sum(b.Price) Total_amt_Spent from sales a inner join product b on
a.Product_ID=b.Product_ID

Group by a.UserID

OUTPUT

	UserID	Total_amt_Spent
1	1	5230
2	2	2510
3	3	4570
4	6	870
5	7	980
6	8	330
7	9	980
8	10	870
9	11	330
10	12	870
11	13	980
12	14	330
13	15	980

2.HOW MANY DAYS HAS EACH CUSTOMER VISITED ZOMATO?

Select UserID,count(distinct Created_Date) Distinct_Days from sales group by UserID

OUTPUT

	UserID	Distinct_Days
1	1	7
2	2	4
3	3	5
4	6	1
5	7	1
6	8	1
7	9	1
8	10	1
9	11	1
10	12	1
11	13	1
12	14	1
13	15	1

3. WHAT WAS THE FIRST PRODUCT PURCHASED BY EACH CUSTOMER?

Select * from

(select *, rank() over(partition by UserID order by Created_Date) rnk from sales) a Where rnk = 1

OUTPUT

	UserID	Created_Date	Product_ID	rnk
1	1	2016-03-11	1	1
2	2	2017-09-24	1	1
3	3	2016-11-10	1	1
4	6	2023-01-05	2	1
5	7	2022-03-14	1	1
6	8	2021-08-01	3	1
7	9	2020-12-25	1	1
8	10	2022-06-30	2	1
9	11	2023-11-11	3	1
10	12	2022-09-07	2	1
11	13	2023-07-20	1	1
12	14	2024-05-12	3	1
13	15	2023-04-18	1	1

4. WHAT IS THE MOST PURCHASED ITEM ON THE MENU AND HOW MANY TIMES WAS IT PURCHASED BY ALL CUSTOMERS?

Select UserID, count(Product_ID) cnt from sales where Product_ID = (select top 1 Product_ID from sales group by Product_ID order by count(Product_ID) desc)

Group by UserID

OUTPUT

	UserID	cnt
1	1	3
2	2	1
3	3	3
4	6	1
5	10	1
6	12	1

5. WHICH ITEM IS MOST POPULAR FOR EACH CUSTOMER?

Select*from

(select *,rank() over(partition by UserID order by cnt desc) rnk from

(select UserID,Product_ID,count(Product_ID) cnt from sales group by UserID,Product_ID)a)b

Where rnk = 1

OUTPUT

	UserID	Product_ID	cnt	rnk
1	1	2	3	1
2	2	3	2	1
3	3	2	3	1
4	6	2	1	1
5	7	1	1	1
6	8	3	1	1
7	9	1	1	1
8	10	2	1	1
9	11	3	1	1
10	12	2	1	1
11	13	1	1	1
12	14	3	1	1
13	15	1	1	1

6. WHICH ITEM WAS PURCHASED FIRST BY THE CUSTOMER AFTER THEY BECAME A MEMBER?

Select*from

(select *,rank() over(partition by UserID order by Created_Date) rnk from

(select a.UserID,a.Created_Date,a.Product_ID,b.Gold_Signup_Date from sales a inner join

Goldusers_signup b on a.UserID=b.UserID and Created_Date>=Gold_Signup_Date) c)d
where rnk =1

OUTPUT

	UserID	Created_Date	Product_ID	Gold_Signup_Date	rnk
1	1	2018-03-19	3	2017-09-22	1
2	2	2018-09-10	3	2018-06-14	1
3	3	2017-12-07	2	2017-04-21	1
4	6	2023-01-05	2	2019-11-22	1
5	7	2022-03-14	1	2018-08-14	1
6	8	2021-08-01	3	2020-06-05	1
7	9	2020-12-25	1	2017-04-03	1
8	10	2022-06-30	2	2018-10-17	1

7.WHICH ITEM WAS PURCHASED JUST BEFORE THE CUSTOMER AFTER THEY BECAME A MEMBER?

Select*from

(select *,rank() over(partition by UserID order by Created_Date desc) rnk from

(select a.UserID,a.Created_Date,a.Product_ID,b.Gold_Signup_Date from sales a inner join

Goldusers_signup b on a.UserID=b.UserID and Created_Date<=Gold_Signup_Date) c)d
where rnk =1

OUTPUT

	UserID	Created_Date	Product_ID	Gold_Signup_Date	rnk
1	1	2017-04-19	2	2017-09-22	1
2	2	2017-11-08	2	2018-06-14	1
3	3	2016-12-20	2	2017-04-21	1

8.WHAT IS THE TOTAL ORDERS AND AMOUNT SPENT FOR EACH NUMBER BEFORE THEY BECAME MEMBER?

Select UserID,count(Created_Date) Order_Purchased,sum(Price) Total_Amt_Spent from

(select c.*,d.Price from

(select a.UserID,a.Created_Date,a.Product_ID,b.Gold_Signup_Date from sales a inner join

Goldusers_signup b on a.UserID= b.UserID and Created_Date<=Gold_Signup_Date)c inner
join Product d on c.Product_ID=d.Product_ID)e group by UserID

OUTPUT

	UserID	Order_Purchased	Total_Amt_Spent
1	1	5	4030
2	2	2	1850
3	3	3	2720

9. IF BUYING EACH PRODUCT GENERATES POINTS FOR EXAMPLE 5RS=2 ZOMATO POINTS AND EACH PRODUCT HAS DIFFERENT PURCHASING POINTS FOR EXAMPLE P1 5RS = 1POINT AND P2 10RS = 5POINTS AND P3 5RS = 1POINT CALCULATE POINTS COLLECTED BY EACH OF A CUSTOMER AND FOR WHICH PRODUCT HAS THE MORE POINTS

i) Calculate Points Collected By Each Of A Customer

(select e.*,amt/points 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 points 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)

OUTPUT

	UserID	Product_ID	amt	points	Total_Points
1	1	1	1960	5	392
2	1	2	2610	2	1305
3	1	3	660	5	132
4	2	1	980	5	196
5	2	2	870	2	435
6	2	3	660	5	132
7	3	1	1960	5	392
8	3	2	2610	2	1305
9	6	2	870	2	435
10	7	1	980	5	196
11	8	3	330	5	66
12	9	1	980	5	196
13	10	2	870	2	435
14	11	3	330	5	66
15	12	2	870	2	435
16	13	1	980	5	196
17	14	3	330	5	66
18	15	1	980	5	196

ii) Which Product has More Points?

Select*from

(select*,rank() over(order by Total_Points_Earned desc) rnk from

(select Product_ID,sum(Total_Points) Total_Points_Earned from

(select e.*,amt/points 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 points 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)f)g where rnk=1;

OUTPUT

	Product_ID	Total_Points_Earned	rnk
1	2	4350	1

10.In the First One Year after a Customer Joins the Gold Program(Including their Join date) irrespective of what the customer has purchased they earn 5 Zomato Points for every 10rs spent who earned more and what was their points earning in their First Year?

Select c.*,d.Price*0.5 Total_Points_Earned from

(select a.UserID,a.Created_Date,a.Product_ID,b.Gold_Signup_Date from sales a inner join

GoldUsers_Signup b on a.UserID = b.UserID and Created_Date>= Gold_Signup_Date and Created_Date<=DATEADD(year,1,Gold_Signup_Date))c

Inner join product d on c.Product_ID=d.Product_ID;

OUTPUT

	UserID	Created_Date	Product_ID	Gold_Signup_Date	Total_Points_Earned
1	1	2018-03-19	3	2017-09-22	165.0
2	3	2017-12-07	2	2017-04-21	435.0
3	2	2018-09-10	3	2018-06-14	165.0

11. Rank all the Transaction of the Customer

Select *,rank() over(partition by UserID order by Created_Date) rnk from sales

OUTPUT

	UserID	Created_Date	Product_ID	rnk
1	1	2016-03-11	1	1
2	1	2016-05-20	3	2
3	1	2016-11-09	1	3
4	1	2017-03-11	2	4
5	1	2017-04-19	2	5
6	1	2018-03-19	3	6
7	1	2019-10-23	2	7
8	2	2017-09-24	1	1
9	2	2017-11-08	2	2
10	2	2018-09-10	3	3
11	2	2020-07-20	3	4
12	3	2016-11-10	1	1
13	3	2016-12-15	2	2
14	3	2016-12-20	2	3
15	3	2017-12-07	2	4
16	3	2019-12-18	1	5
17	6	2023-01-05	2	1
18	7	2022-03-14	1	1
19	8	2021-08-01	3	1
20	9	2020-12-25	1	1
21	10	2022-06-30	2	1
22	11	2023-11-11	3	1
23	12	2022-09-07	2	1
24	13	2023-07-20	1	1
25	14	2024-05-12	3	1
26	15	2023-04-18	1	1

12. Rank all the Transaction for Each Member whenever they are a zomato Gold Member for every Non-Gold Member transaction mark as N/A

Select e.*,case when rnkk = 0 then 'NA' else rnkk end as rnkk from

(select c.*,cast((case when Gold_Signup_Date is null then 0 else rank() over(partition by UserID order by Created_Date desc)end)as varchar)as rnkk from

(select a.UserID,a.Created_Date,a.Product_ID,b.Gold_Signup_Date from sales a left join Goldusers_signup b on a.UserID=b.UserID and Created_Date>=Gold_Signup_Date)c)e;

OUTPUT

	UserID	Created_Date	Product_ID	Gold_Signup_Date	rnk	rnkk
1	1	2019-10-23	2	2017-09-22	1	1
2	1	2018-03-19	3	2017-09-22	2	2
3	1	2017-04-19	2	NULL	0	NA
4	1	2017-03-11	2	NULL	0	NA
5	1	2016-11-09	1	NULL	0	NA
6	1	2016-05-20	3	NULL	0	NA
7	1	2016-03-11	1	NULL	0	NA
8	2	2020-07-20	3	2018-06-14	1	1
9	2	2018-09-10	3	2018-06-14	2	2
10	2	2017-11-08	2	NULL	0	NA
11	2	2017-09-24	1	NULL	0	NA
12	3	2019-12-18	1	2017-04-21	1	1
13	3	2017-12-07	2	2017-04-21	2	2
14	3	2016-12-20	2	NULL	0	NA
15	3	2016-12-15	2	NULL	0	NA
16	3	2016-11-10	1	NULL	0	NA
17	6	2023-01-05	2	2019-11-22	1	1
18	7	2022-03-14	1	2018-08-14	1	1
19	8	2021-08-01	3	2020-06-05	1	1
20	9	2020-12-25	1	2017-04-03	1	1
21	10	2022-06-30	2	2018-10-17	1	1
22	11	2023-11-11	3	NULL	0	NA
23	12	2022-09-07	2	NULL	0	NA
24	13	2023-07-20	1	NULL	0	NA
25	14	2024-05-12	3	NULL	0	NA
26	15	2023-04-18	1	NULL	0	NA