DataSet:

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');

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');

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);

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);

***What is the total amount each customer spent on Zomato***

SELECT C.userid,SUM(C.price) AS Purchased\_Amount FROM

(

SELECT A.userid,B.price FROM sales A INNER JOIN product B ON A.product\_id=B.product\_id

) C

GROUP BY C.userid ORDER BY SUM(C.price) DESC;

***How many days has each customer visited Zomato?***

SELECT userid,COUNT(DISTINCT created\_date) AS NoOfVisits FROM sales GROUP BY userid;

***What was the first product purchased by each of the customer?***

SELECT A.userid,A.product\_id,A.created\_date FROM   
(  
SELECT \*,RANK() OVER(PARTITION BY userid ORDER BY created\_date) rank FROM sales  
) A   
WHERE rank=1;

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

SELECT userid,product\_id,COUNT(product\_id) AS CountOfOrder 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,product\_id;

***Which item was the most popular for each customer?***

SELECT B.userid,B.product\_id,B.count FROM

(

SELECT \*,RANK() OVER (PARTITION BY userid ORDER BY count DESC) rank FROM

(

SELECT userid,product\_id,COUNT(product\_id) count FROM sales GROUP BY userid,product\_id

)A)B

WHERE rank=1;

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

SELECT D.userid,D.product\_id FROM

(

SELECT \*,RANK() OVER(PARTITION BY userid ORDER BY created\_date)Rank 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

WHERE B.gold\_signup\_date <= A.created\_date

) C) D

WHERE Rank=1;

***Which item was purchased by the customer just before he/she signed up for the gold membership?***

SELECT D.userid,D.product\_id FROM

(

SELECT \*,RANK() OVER(PARTITION BY userid ORDER BY created\_date DESC)Rank 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

WHERE B.gold\_signup\_date > A.created\_date

) C) D

WHERE Rank=1;

***What are the total orders and amount spent by each customer before becoming a gold member?***

SELECT userid,COUNT(created\_date) Orders\_Purchased,SUM(price) Total\_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

WHERE B.gold\_signup\_date > A.created\_date) C

INNER JOIN product D ON D.product\_id=C.product\_id

)E

GROUP BY userid;

***If buying each product generates points for example Rs5=2 Zomato points (ZP) and each product has different purchasing points for example for P1 Rs5=1 ZP, for P2 Rs10=5 ZP and for P3 Rs5=1 ZP. Calculate the points collected by each customer and for which product most points have been given till now.***

Points Collected by each customer :-

SELECT F.userid,SUM(F.totalpoints) AS ZP,2.5\*SUM(F.totalpoints) AS WalletBalance FROM

(

SELECT E.\*,amt/points AS totalpoints 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 B.product\_id=A.product\_id

)C

GROUP BY userid,product\_id

)D

)E

)F

GROUP BY userid;

For which product maximum points have been give till now:-

SELECT \* FROM

(

SELECT \*,RANK() OVER(ORDER BY ZP DESC) rank FROM

(

SELECT product\_id,SUM(totalpoints) AS ZP FROM

(

SELECT E.\*,amt/points AS totalpoints 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 B.product\_id=A.product\_id

)C

GROUP BY userid,product\_id

)D )E )F

GROUP BY product\_id

)G )H

WHERE rank=1;

***In the first one year after a customer joins the gold membership program (including the date they joined) irrespective of what the customer has purchased they earn 5 Zomato points for every Rs10 spent. Who earned more, 1 or 3 among the gold members and what was their points earning in their first year?***

SELECT C.\*,D.price\*0.5 AS ZP 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

WHERE B.gold\_signup\_date <= A.created\_date AND created\_date <= DATEADD(YEAR,1,gold\_signup\_date)

)C

INNER JOIN product D ON C.product\_id=D.product\_id;

***Rank all the transactions of the customers.***

SELECT \*,RANK() OVER(PARTITION BY userid ORDER BY created\_date) Rank FROM sales;

***Rank all the transactions for each customer whenever they are a Zomato gold member for every non-gold member transaction mark n/a.***

SELECT E.\*,CASE WHEN Rank=0 THEN 'n/a' ELSE Rank END AS Ranks 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 Rank 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 B.gold\_signup\_date <= A.created\_date

)C

)E;