1. What is the total amount each customer spent at the restaurant?
2. How many days has each customer visited the restaurant?
3. What was the first item from the menu purchased by each customer?
4. What is the most purchased item on the menu and how many times was it purchased by all customers?
5. Which item was the most popular for each customer?
6. Which item was purchased first by the customer after they became a member?
7. Which item was purchased just before the customer became a member?
8. What is the total items and amount spent for each member before they became a member?
9. If each $1 spent equates to 10 points and sushi has a 2x points multiplier - how many points would each customer have?
10. In the first week after a customer joins the program (including their join date) they earn 2x points on all items, not just sushi - how many points do customer A and B have at the end of January?

Answers

a) SELECT distinct[customerid]

,sum(price)[TotalPrice]

FROM [DatawithDanny].[dbo].[wk1\_q1]

GROUPBY customerid

The query groups data of customers and sums up their price.

b) select customerid, count(order\_date)Dates\_Visited

from SALES

group by customerid

c) select \* from

(

select customerid, b.product\_name, a.product\_id, order\_date,

rank() over(partition by customerid order by order\_date) rank\_col

from SALES a

inner join MENU b

on a.product\_Id = b.product\_id

) a

where a.rank\_col = 1

select customerid, b.product\_name, a.product\_id, order\_date,

rank() over(partition by customerid order by order\_date) rank\_col,

dense\_rank() over(partition by customerid order by order\_date) dense\_rank\_col

from SALES a

inner join MENU b

on a.product\_Id = b.product\_id

order by customerid,rank\_col

d) select top 1 b.product\_name, count(price)NoofPurhcases

from SALES a

inner join MENU b

on a.product\_Id = b.product\_id

group by product\_name

order by NoofPurhcases desc

SELECT product\_Id FROM sales

where product\_Id IN

(

SELECT count(price) NoofPurhcases

FROM SALES a

inner join MENU b

on a.product\_Id = b.product\_id

GROUP BY product\_name

)

group by product\_Id

The 1st query does not enable it to be saved as a view and that leads to finding a second query which can be saved as a view.

e) select \* from (

select customerid, b.product\_name,

count(a.order\_date)PurchaseCount,

dense\_rank() over(partition by customerid order by count(a.order\_date)desc)rank

from SALES a

inner join MENU b

on a.product\_Id = b.product\_Id

group by customerid,a.product\_Id,b.product\_name

) sq

where sq.rank = 1

An alternative to this code will be the use of CTE

WITH fav\_item\_cte AS  
(  
SELECT s.customer\_id, m.product\_name,   
COUNT(m.product\_id) AS order\_count,  
DENSE\_RANK() OVER(PARTITION BY s.customer\_id ORDER BY COUNT(s.customer\_id) DESC) AS rank  
FROM dbo.menu AS m  
JOIN dbo.sales AS s  
ON m.product\_id = s.product\_id  
GROUP BY s.customer\_id, m.product\_name  
)

SELECT customer\_id, product\_name, order\_count  
FROM fav\_item\_cte   
WHERE rank = 1;

f) select \*

from (

select customer\_id ,c.product\_name join\_date,order\_date, DATEDIFF(day,join\_date,order\_date)DateDifference

,rank() over(partition by customer\_id order by DATEDIFF(day,join\_date,order\_date)asc)rank

from MEMBERS a

join SALES b

on a.customer\_id = b.customerid

join MENU c

on b.product\_Id = c.product\_id

group by customer\_id, join\_date,order\_date,product\_name

having DATEDIFF(day,join\_date,order\_date) >= 0

)sq

where sq.rank = 1

g) select customerid, product\_name, join\_date, order\_date from(

select customerid, product\_name, join\_date, order\_date,DATEDIFF(day, join\_date, order\_date)DateDiffernce,

rank() over(partition by customerid order by DATEDIFF(day, join\_date, order\_date)asc)rank

from MEMBERS a

join SALES b

on a.customer\_id = b.customerid

join MENU c

on b.product\_Id = c.product\_id

)sq

where sq.rank = 1

h) select customer\_id, sum(price)TotalPrice

from(

select customer\_id, product\_name, join\_date, order\_date, price, DATEDIFF(day, join\_date, order\_date)DateDifference

from MEMBERS a

join SALES b

on a.customer\_id = b.customerid

join MENU c

on b.product\_Id = c.product\_id

where DATEDIFF(day, join\_date, order\_date) < 0

)sq

GROUP BY customer\_id