I calculate Recency By use the equation(Max(Date) in Dataset - The last Date of Invoice to each Customer)

using Max() aggregate Function, Last\_value() Window Function

Then caluclate Frequency By using Count function and calculate how much each customer has paid for our products by using Sum () and over() Fuction

Then to give each customer aScore of 5

I used Ntile(5) Window function

Then use The table Iam given to classify Customers

Customer Segment

**Coding**

CREATE TABLE IF NOT EXISTS My\_work6 AS

(

SELECT \*

FROM ONLINE\_Retail

);

ALTER Table My\_work6 ALTER COLUMN invoicedate SET DATA TYPE DATE

USING TO\_TIMESTAMP(invoicedate, 'MM/DD/YYYY HH24:MI:SS');

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delete from My\_work6

where customerid = '';

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WITH final\_report as

( SELECT distinct customerid,

MAX(invoicedate) over() - first\_value(invoicedate)

OVER(Partition by customerid ) AS Recency,

COUNT(\*) OVER(PARTITION BY customerid) As frequency,

SUM(ROUND(CAST(unitprice AS numeric), 2))

OVER(PARTITION BY customerid) As monetary

FROM My\_work6

ORDER BY customerid

)

select \* ,case when (r\_score = 5 and (fm\_score in (5, 4)) or (r\_score = 4 and fm\_score = 5))

THEN 'Champions'

when ((r\_score in( 5 , 4) and fm\_score = 2) or ((r\_score in( 3, 4) and fm\_score = 3)))

THEN 'Potential loyalists'

when ((r\_score = 5 and fm\_score = 3) or (r\_score = 4 and fm\_score = 4) or (r\_score = 3 and (fm\_score in( 4 , 5))))

THEN 'loyal Customers'

when (r\_score = 5 and fm\_score = 1)

THEN 'loyal Customers'

when ((r\_score in( 4, 3)) and fm\_score = 1)

THEN 'Promising'

when ((r\_score in( 3, 2) and fm\_score = 2) or (r\_score = 2 and fm\_score = 3))

THEN 'Customers Needing Attention'

when ((r\_score = 2 and (fm\_score in(1, 5, 4))) or (r\_score = 1 and fm\_score = 3))

THEN 'At Risk'

when (r\_score = 1 and (fm\_score in( 5, 4)))

THEN 'Cant Lose Them'

when (r\_score = 1 and fm\_score = 2)

THEN 'Hibernating'

when (r\_score = 1 and fm\_score = 1)

THEN 'Lost'

END as cust\_segment

from(SELECT \*,NTILE(5) OVER(ORDER BY RECENCY desc) as r\_score

,NTILE(5) OVER(order by round(((cast(frequency as numeric)+cast(monetary as numeric))/2))) as fm\_score

FROM final\_report

order BY monetary)as ntiling ;