

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

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 ;
```