

# IKEA Customer Retention Analytics Dashboard

## Task 1

The screenshot shows the Power BI desktop interface with the 'IKEA\_Customer\_Retention\_Analytics\_Dashboard' loaded. The 'Queries [6]' pane on the left lists the queries: 'Store\_Locations', 'Loyalty\_Program', 'Customer\_Transactions', 'Customer\_Demographics', 'Churn\_Labelled\_Custom...', and 'Duration \_Days'. The main area displays the 'Store\_Locations' query results in a table format. The columns are: Store\_ID, City, Region, Store\_Type, and Opening\_Year. The data shows 10 rows of store information, all of which are valid (green). The 'Query Settings' pane on the right shows the properties for 'Store\_Locations' and the applied step 'Changed Type'.

| Store_ID | City       | Region     | Store_Type | Opening_Year |
|----------|------------|------------|------------|--------------|
| S101     | Birmingham | London     | Superstore | 2021         |
| S102     | Leeds      | London     | Express    | 2020         |
| S103     | Birmingham | London     | Express    | 2020         |
| S104     | Manchester | Leeds      | Superstore | 2010         |
| S105     | London     | Birmingham | Express    | 2022         |
| S106     | Manchester | Manchester | Express    | 2010         |
| S107     | Manchester | London     | Express    | 2019         |
| S108     | Leeds      | Birmingham | Express    | 2018         |
| S109     | London     | Birmingham | Superstore | 2016         |
| S110     | London     | Manchester | Superstore | 2010         |

The screenshot shows the Power BI desktop interface with the 'IKEA\_Customer\_Retention\_Analytics\_Dashboard' loaded. The 'Queries [6]' pane on the left lists the queries: 'Store\_Locations', 'Loyalty\_Program', 'Customer\_Transactions', 'Customer\_Demographics', 'Churn\_Labelled\_Custom...', and 'Duration \_Days'. The main area displays the 'Loyalty\_Program' query results in a table format. The columns are: Customer\_ID, Loyalty\_Tier, Points\_Earned, Points\_Reclaimed, and Last\_Redemption\_Date. The data shows 17 rows of loyalty program information, all of which are valid (green). The 'Query Settings' pane on the right shows the properties for 'Loyalty\_Program' and the applied step 'Changed Type'.

| Customer_ID | Loyalty_Tier | Points_Earned | Points_Reclaimed | Last_Redemption_Date |
|-------------|--------------|---------------|------------------|----------------------|
| C1001       | Platinum     | 2209          | 820              | 9/2/2024             |
| C1001       | Silver       | 6153          | 2821             | 3/28/2025            |
| C1002       | Silver       | 5898          | 1055             | 4/10/2025            |
| C1003       | Platinum     | 3178          | 5439             | 1/5/2025             |
| C1004       | Gold         | 8610          | 5932             | 1/31/2025            |
| C1005       | Platinum     | 9895          | 1886             | 11/10/2024           |
| C1006       | Silver       | 3544          | 5263             | 11/3/2024            |
| C1007       | Silver       | 6522          | 3547             | 1/8/2025             |
| C1008       | Silver       | 3370          | 2927             | 8/30/2024            |
| C1009       | Silver       | 4281          | 7354             | 8/30/2024            |
| C1010       | Gold         | 5710          | 6538             | 9/17/2024            |
| C1011       | Gold         | 1328          | 2504             | 2/11/2025            |
| C1012       | Silver       | 6579          | 2430             | 11/3/2024            |
| C1013       | Gold         | 5228          | 5341             | 6/1/2025             |
| C1014       | Gold         | 7794          | 5270             | 7/10/2024            |
| C1015       | Gold         | 1120          | 2663             | 8/25/2024            |
| C1016       | Silver       | 7749          | 7248             | 8/15/2024            |

Queries [6]

= Table.TransformColumnTypes(#"Promoted Headers",{{{"Transaction\_ID", type text}, {"Customer\_ID", type text}, {"Store\_ID", type number}, {"Product\_Category", type text}, {"Amount", type number}})

| A <sub>c</sub> Transaction_ID | A <sub>c</sub> Customer_ID | Transaction_Date | A <sub>c</sub> Store_ID | A <sub>c</sub> Product_Category | 12 Amount |
|-------------------------------|----------------------------|------------------|-------------------------|---------------------------------|-----------|
| 1 T20000                      | C1011                      | 11/11/2024       | 5106                    | Bakery                          |           |
| 2 T20001                      | C1079                      | 5/26/2025        | 5105                    | Beverages                       |           |
| 3 T20002                      | C1215                      | 8/9/2024         | 5101                    | Beverages                       |           |
| 4 T20003                      | C1263                      | 8/26/2024        | 5108                    | Beverages                       |           |
| 5 T20004                      | C1148                      | 1/2/2025         | 5103                    | Electronics                     |           |
| 6 T20005                      | C1080                      | 7/5/2024         | 5106                    | Grocery                         |           |
| 7 T20006                      | C1214                      | 1/25/2025        | 5103                    | Bakery                          |           |
| 8 T20007                      | C1197                      | 9/27/2024        | 5107                    | Electronics                     |           |
| 9 T20008                      | C1199                      | 6/7/2025         | 5107                    | Clothing                        |           |
| 10 T20009                     | C1024                      | 6/9/2025         | 5109                    | Bakery                          |           |
| 11 T20010                     | C1088                      | 3/17/2025        | 5105                    | Bakery                          |           |
| 12 T20011                     | C1267                      | 6/28/2024        | 5108                    | Bakery                          |           |
| 13 T20012                     | C1142                      | 8/15/2024        | 5110                    | Beverages                       |           |
| 14 T20013                     | C1058                      | 5/31/2025        | 5110                    | Bakery                          |           |
| 15 T20014                     | C1025                      | 4/28/2025        | 5108                    | Grocery                         |           |
| 16 T20015                     | C1046                      | 8/23/2024        | 5101                    | Bakery                          |           |
| 17 T20016                     | C1287                      | 12/21/2024       | 5105                    | Beverages                       |           |
| 18 T20017                     | C1265                      | 7/29/2024        | 5103                    | Bakery                          |           |
| 19                            |                            |                  |                         |                                 |           |

30 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

Queries [6]

= Table.TransformColumnTypes(#"Removed Columns2",{{"Duration\_Days", Int64.Type}})

| A <sub>c</sub> Customer_ID | A <sub>c</sub> Gender | 1 <sub>2</sub> Age | Membership_Since | A <sub>c</sub> Marital_Status | A <sub>c</sub> Region |
|----------------------------|-----------------------|--------------------|------------------|-------------------------------|-----------------------|
| 1 C1000                    | Male                  | 50                 | 11/1/2020        | Single                        | London                |
| 2 C1001                    | Female                | 18                 | 7/5/2021         | Divorced                      | London                |
| 3 C1002                    | Male                  | 36                 | 8/18/2021        | Single                        | Birmingham            |
| 4 C1003                    | Male                  | 19                 | 2/1/2024         | Married                       | Leeds                 |
| 5 C1004                    | Male                  | 70                 | 10/15/2020       | Married                       | Leeds                 |
| 6 C1005                    | Female                | 61                 | 11/19/2020       | Single                        | Liverpool             |
| 7 C1006                    | Male                  | 43                 | 7/13/2021        | Divorced                      | London                |
| 8 C1007                    | Male                  | 49                 | 3/16/2023        | Married                       | London                |
| 9 C1008                    | Male                  | 23                 | 6/14/2022        | Married                       | Manchester            |
| 10 C1009                   | Female                | 49                 | 6/6/2024         | Married                       | Liverpool             |
| 11 C1010                   | Male                  | 21                 | 5/3/2023         | Single                        | Manchester            |
| 12 C1011                   | Male                  | 28                 | 7/7/2021         | Married                       | Manchester            |
| 13 C1012                   | Male                  | 34                 | 2/27/2023        | Divorced                      | Manchester            |
| 14 C1013                   | Male                  | 55                 | 4/27/2023        | Married                       | Birmingham            |
| 15 C1014                   | Female                | 41                 | 1/20/2024        | Married                       | Birmingham            |
| 16 C1015                   | Male                  | 22                 | 11/15/2023       | Divorced                      | Manchester            |
| 17 C1016                   | Female                | 69                 | 5/18/2023        | Married                       | Liverpool             |
| 18 C1017                   | Female                | 51                 | 7/11/2023        | Single                        | London                |
| 19                         |                       |                    |                  |                               |                       |

Query Settings

► PROPERTY

Name  
Customer  
All Properties

► APPLIED STEPS

Source  
Promoted Head  
Changed Type  
Added Custom  
Changed Type  
Removed Colu  
Added Custom  
Removed Colu  
Changed Type  
Added Custom  
Renamed Colu  
Added Custom  
Removed Colu  
Changed Type

Power BI Query Editor

Queries [6]

Customer\_ID, Last\_Transaction\_Date, Churned (Yes/No), Days\_Since\_Last\_Purchase

|    | Customer_ID | Last_Transaction_Date | Churned (Yes/No) | Days_Since_Last_Purchase |
|----|-------------|-----------------------|------------------|--------------------------|
| 1  | C1000       | 5/19/2025             | No               | 37                       |
| 2  | C1001       | 5/26/2025             | No               | 30                       |
| 3  | C1002       | 12/28/2024            | No               | 179                      |
| 4  | C1003       | 8/14/2024             | Yes              | 315                      |
| 5  | C1004       | 6/21/2025             | No               | 4                        |
| 6  | C1005       | 10/30/2024            | Yes              | 238                      |
| 7  | C1006       | 8/18/2024             | Yes              | 311                      |
| 8  | C1007       | 5/24/2025             | No               | 32                       |
| 9  | C1008       | 11/30/2024            | Yes              | 207                      |
| 10 | C1009       | 9/3/2024              | Yes              | 295                      |
| 11 | C1010       | 5/9/2025              | No               | 47                       |
| 12 | C1011       | 4/29/2025             | No               | 57                       |
| 13 | C1012       | 12/12/2024            | Yes              | 195                      |
| 14 | C1013       | 2/7/2025              | No               | 138                      |
| 15 | C1014       | 8/8/2024              | Yes              | 321                      |
| 16 | C1015       | 6/10/2025             | No               | 15                       |
| 17 | C1016       | 4/14/2025             | No               | 72                       |
| 18 | C1017       | 3/6/2025              | No               | 111                      |
| 19 | C1018       | 4/3/2025              | No               | 83                       |

Power BI Query Editor

Customer\_ID, Gender, Age, Membership\_Since, Marital\_Status, Region

|    | Customer_ID | Gender | Age | Membership_Since | Marital_Status | Region     |
|----|-------------|--------|-----|------------------|----------------|------------|
| 1  | C1000       | Male   | 50  | 11/1/2020        | Single         | London     |
| 2  | C1001       | Female | 18  | 7/5/2021         | Divorced       | London     |
| 3  | C1002       | Male   | 36  | 8/18/2021        | Single         | Birmingham |
| 4  | C1003       | Male   | 19  | 2/1/2024         | Married        | Leeds      |
| 5  | C1004       | Male   | 70  | 10/15/2020       | Married        | Leeds      |
| 6  | C1005       | Female | 61  | 11/19/2020       | Single         | Liverpool  |
| 7  | C1006       | Male   | 43  | 7/13/2021        | Divorced       | London     |
| 8  | C1007       | Male   | 49  | 3/16/2023        | Married        | London     |
| 9  | C1008       | Male   | 23  | 6/14/2022        | Married        | Manchester |
| 10 | C1009       | Female | 49  | 6/6/2024         | Married        | Liverpool  |
| 11 | C1010       | Male   | 21  | 5/3/2023         | Single         | Manchester |
| 12 | C1011       | Male   | 28  | 7/7/2021         | Married        | Manchester |
| 13 | C1012       | Male   | 34  | 2/27/2023        | Divorced       | Manchester |
| 14 | C1013       | Male   | 55  | 4/27/2023        | Married        | Birmingham |
| 15 | C1014       | Female | 41  | 1/20/2024        | Married        | Birmingham |
| 16 | C1015       | Male   | 22  | 11/15/2023       | Divorced       | Manchester |
| 17 | C1016       | Female | 69  | 5/18/2023        | Married        | Liverpool  |
| 18 | C1017       | Female | 51  | 7/11/2023        | Single         | London     |
| 19 |             |        |     |                  |                |            |

Data Cleaning is completed moving on to custom column making

**Custom Column**

Add a column that is computed from the other columns.

New column name: Membership\_Duration\_Days

Custom column formula:

```
= Duration.Days([Date.From(DateTime.LocalNow())] - [Membership_Since])
```

Available columns:

- Customer\_ID
- Gender
- Age
- Membership\_Since
- Marital\_Status
- Region
- Income\_Group

<< Insert

Learn about Power Query formulas

✓ No syntax errors have been detected.

OK Cancel

|    | 21 | 5/3/2023  | Single   | Manchester | Medium |
|----|----|-----------|----------|------------|--------|
| 28 |    | 7/7/2021  | Married  | Manchester | Low    |
| 24 |    | 2/27/2023 | Divorced | Manchester | Medium |

Created a calculated column for Membership duration in days

**Custom Column**

Add a column that is computed from the other columns.

New column name: Membership Duration In Years

Custom column formula:

```
= ([Membership_Duration_Days]/365.25)
```

Available columns:

- Customer\_ID
- Gender
- Age
- Membership\_Since
- Marital\_Status
- Region
- Income\_Group

<< Insert

Learn about Power Query formulas

✓ No syntax errors have been detected.

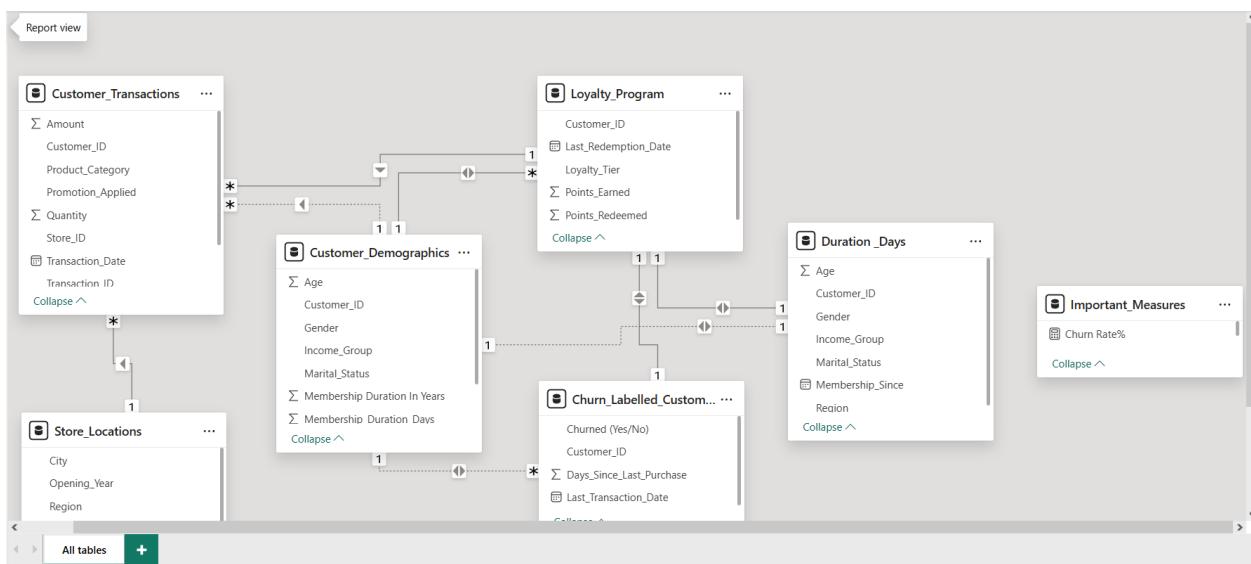
OK Cancel

Created a calculated column for membership duration in years

= Table.TransformColumnTypes(#"Added Custom1",{{"Transaction\_Month ", type text}})

The screenshot shows the Power Query Editor interface. On the left is a preview grid with columns: Product\_Category, Amount, Quantity, Promotion\_Applied, Transaction\_Year, and Transaction\_Month. The Transaction\_Month column contains values like "Valid", "Error", and "Empty". The right side of the editor displays the 'APPLIED STEPS' pane, which lists several steps including 'Changed Type' and 'Added Custom1'. The 'Properties' pane on the far right shows the query name as 'Customer\_Trans'.

Created a calculated column for transaction year and month



Relationship created

## Task 2

The screenshot shows the Power BI 'Measures' blade. On the left, under 'Structure', there is a table with one row labeled 'Total Customers'. In the middle, under 'Formatting', the measure is selected, and its formula is displayed: 'Total Customers = DISTINCTCOUNT(Customer\_Demographics[Customer\_ID])'. The formula bar has a red 'X' icon and a green checkmark icon. On the right, under 'Properties', the data category is set to 'Uncategorized'. The overall interface is light gray with a clean, modern look.

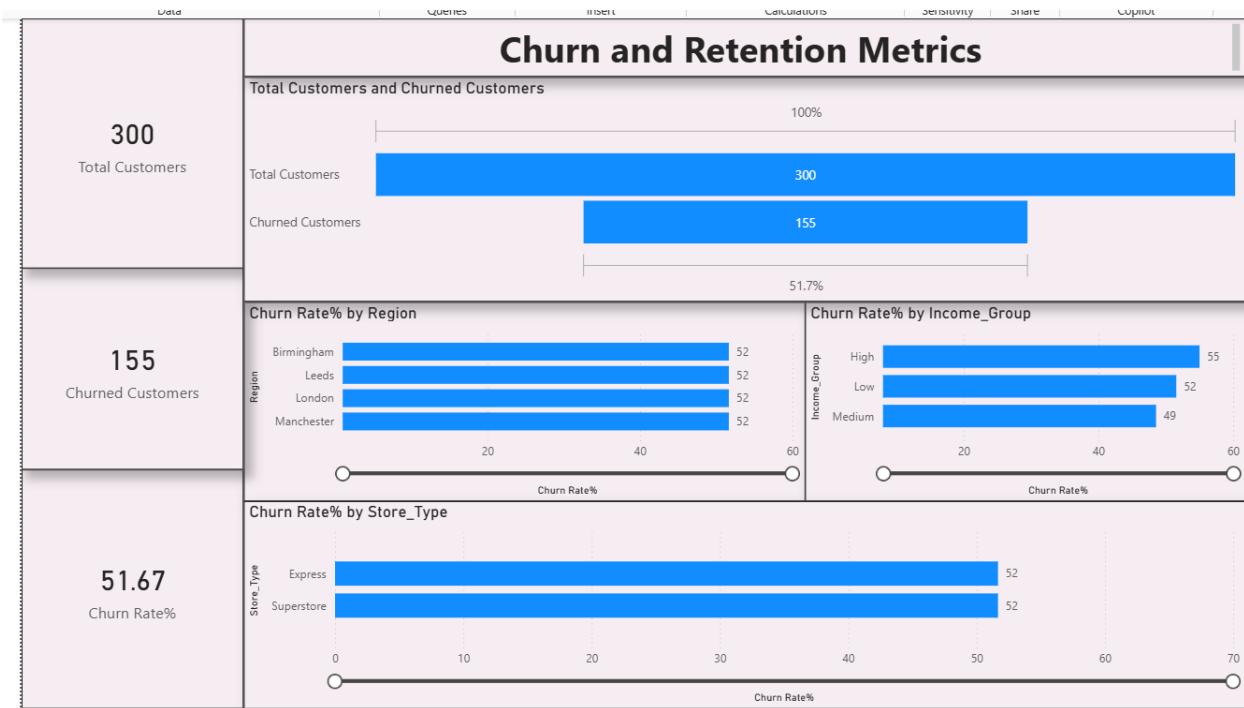
Created measure for total customers

The screenshot shows the Power BI 'Measures' blade. On the left, under 'Structure', there is a table with one row labeled 'Churned Customer'. In the middle, under 'Formatting', the measure is selected, and its formula is displayed: 'Churned Customer = CALCULATE(DISTINCTCOUNT(Churn\_Labelled\_Customers[Customer\_ID]), Churn\_Labelled\_Customers[Churned (Yes/No)] = "Yes")'. The formula bar has a green checkmark icon. On the right, under 'Properties', the data category is set to 'Uncategorized'. The overall interface is light gray with a clean, modern look.

Created Measure for Churned Customer

The screenshot shows the Power BI 'Measures' blade. On the left, under 'Structure', there is a table with one row labeled 'Churn Rate%'. In the middle, under 'Formatting', the measure is selected, and its formula is displayed: 'Churn Rate% = DIVIDE([Churned Customer],[Total Customers])\*100'. The formula bar has a green checkmark icon. On the right, under 'Properties', the data category is set to 'Uncategorized'. The overall interface is light gray with a clean, modern look.

Created Measure for Churn Rate%



## Churn And Retention Metrics

## Task 3

Important\_Measures  $\downarrow$  \$  $\downarrow$  % , .<sup>00</sup> 0  $\uparrow$

Structure      Formatting      Prop

1 Purchase Count =COUNT([Customer\_Transactions[Transaction\_ID]])

Created a Measure for Purchase Count

```
1 Retention rate = DIVIDE([Total Customers]-[Churned Customers],[Total Customers])*100
```

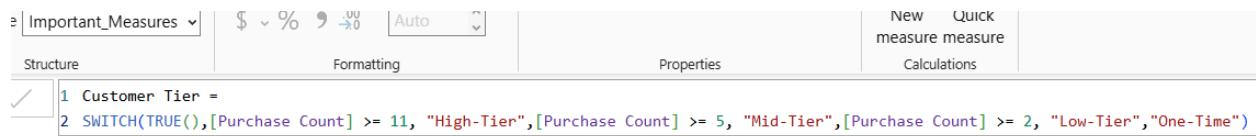
Created Measure for retention rate

```
1 Repeated Customers =
2 CALCULATE(
3     DISTINCTCOUNT(Customer_Transactions[Customer_ID]),
4     FILTER(VALUES(Customer_Transactions[Customer_ID]),[Purchase Count]>=2))
```

Created measure for repeated customers

```
1 Repeat Rate = DIVIDE([Repeated Customers],[Total Customers])*100
```

Created measure for repeat rate



The screenshot shows the Power BI ribbon with the 'Measures' tab selected. Below the ribbon, a code editor displays the following DAX measure:

```
1 Customer Tier =
2 SWITCH(TRUE(),[Purchase Count] >= 11, "High-Tier",[Purchase Count] >= 5, "Mid-Tier",[Purchase Count] >= 2, "Low-Tier","One-Time")
```

Created a Measure for Customer Tier

Customer\_Retention\_Analytics\_Dashboard

Transform Add Column View Tools Help

Conditional Column Index Column Duplicate Column Format Extract Parse

Merge Columns Statistics Standard Scientific Information

Date Time Duration

From Text From Number From Date & Time

= Table.AddColumn(#"Changed Type4", "Age\_Group", each if [Age] <= 30 then "Young" else if [Age] <= 50 then "Middle" else "Old")

|    | Region     | Income_Group | Membership_Duration_Days | Membership Duration In Years | Age_Group |
|----|------------|--------------|--------------------------|------------------------------|-----------|
| 1  | London     | High         | 1890                     | 5.174537988                  | Middle    |
| 2  | London     | Medium       | 1644                     | 4.501026694                  | Young     |
| 3  | Birmingham | Medium       | 1600                     | 4.380561259                  | Middle    |
| 4  | Leeds      | Medium       | 703                      | 1.924709103                  | Young     |
| 5  | Leeds      | Medium       | 1907                     | 5.221081451                  | Old       |
| 6  | Liverpool  | High         | 1872                     | 5.125256674                  | Old       |
| 7  | London     | High         | 1636                     | 4.479123888                  | Middle    |
| 8  | London     | Medium       | 1025                     | 2.806297057                  | Middle    |
| 9  | Manchester | Medium       | 1300                     | 3.559206023                  | Young     |
| 10 | Liverpool  | High         | 577                      | 1.579739904                  | Middle    |
| 11 | Manchester | Medium       | 977                      | 2.674880219                  | Young     |
| 12 | Manchester | Low          | 1642                     | 4.495550992                  | Young     |
| 13 | Manchester | Medium       | 1042                     | 2.85284052                   | Middle    |
| 14 | Birmingham | Medium       | 983                      | 2.691307324                  | Old       |
| 15 | Birmingham | Low          | 715                      | 1.957563313                  | Middle    |
| 16 | Manchester | Low          | 781                      | 2.138261465                  | Young     |
| 17 | Liverpool  | High         | 962                      | 2.633812457                  | Old       |
| 18 | London     | High         | 908                      | 2.485968515                  | Old       |
| 19 | Liverpool  | Low          | 654                      | 1.790554415                  | Young     |
| 20 | Leeds      | Low          | 942                      | 2.579055441                  | Middle    |

NS Column profiling based on top 1000 rows  
11/5/2024 Yes 232

Created a custom column of Age Group in power query editor where

1. Age - 0 to 30 (Young)
2. Age – 31 to 50 (Middle)
3. Age – 51 above (Old)



Created visualization of Repeat purchase analysis

## Task 4

Structure      Formatting      Properties      Calculations

```


1 Promotion % =
2 DIVIDE(
3     CALCULATE(COUNT(Customer_Transactions[Transaction_ID]),Customer_Transactions[Promotion_Applied]="Yes"),
4     COUNT(Customer_Transactions[Transaction_ID]))


```

Calculated the measure of Promotion Percentage

Structure      Formatting      Properties

```


1 Average amount with Promotion applied = CALCULATE(AVERAGE(Customer_Transactions[Amount]),
2 Customer_Transactions[Promotion_Applied]="Yes"))


```

Calculated the measure of Average amount with promotion applied

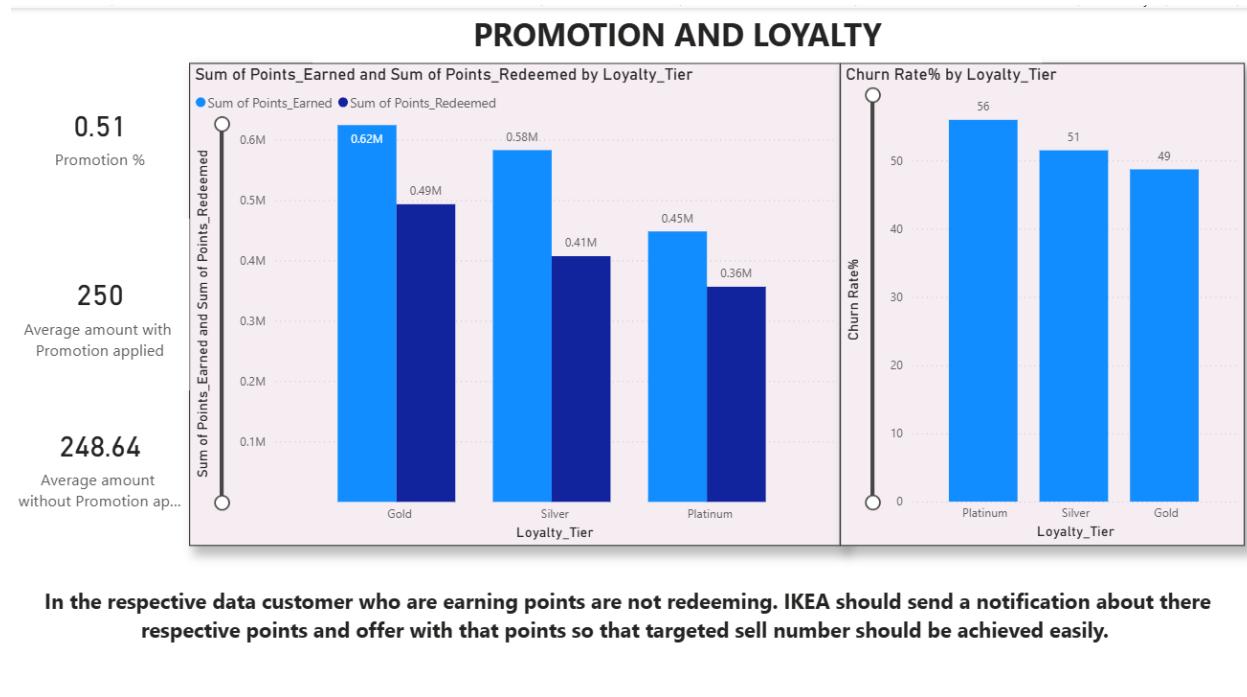
your measure should be stored in.      Formatting      Properties      Calculations

```


1 Average amount without Promotion applied = CALCULATE(AVERAGE(Customer_Transactions[Amount]),
2 ,Customer_Transactions[Promotion_Applied]="No")


```

Calculated the measure of Average amount without promotion applied



Created clustered column chart for sum of points earned and redeemed by loyalty tier, and created a column chart for churn rates by loyalty Tier.

Recommendation: -

**In the respective data customer who are earning points are not redeeming. IKEA should send a notification about there respective points and offer with that points so that targeted sell number should be achieved easily.**

# Task 5

```
structure | Formatting  
1 Churned Customers =  
2 CALCULATE(  
3     DISTINCTCOUNT(Churn_Labelled_Customers[Customer_ID]),  
4     Churn_Labelled_Customers[Churned (Yes/No)] = "Yes"  
5 )  
6  
ver
```

Calculated churned customers

```
structure | Formatting | Properties  
1 Churn Rate% = DIVIDE([Churned Customers],[Total Customers])*100
```

Calculated churn rate%



Created a report for store performance vs retention

## Task 6

Structure | Formatting | Properties

```
1 CLV = DIVIDE([Total spend],AVERAGE(Customer_Demographics[Membership Duration In Years ]))
```

Calculated CLV using divide dax fuction

Structure | Formatting | Properties | Sort

```
1 CLV Segment =
2 SWITCH(
3     TRUE(),
4     Customer_Demographics[CLV Rank] <= Customer_Demographics[Total Customers] * 0.25, "Low",
5     Customer_Demographics[CLV Rank] <= Customer_Demographics[Total Customers] * 0.75, "Medium",
6     "High")
```

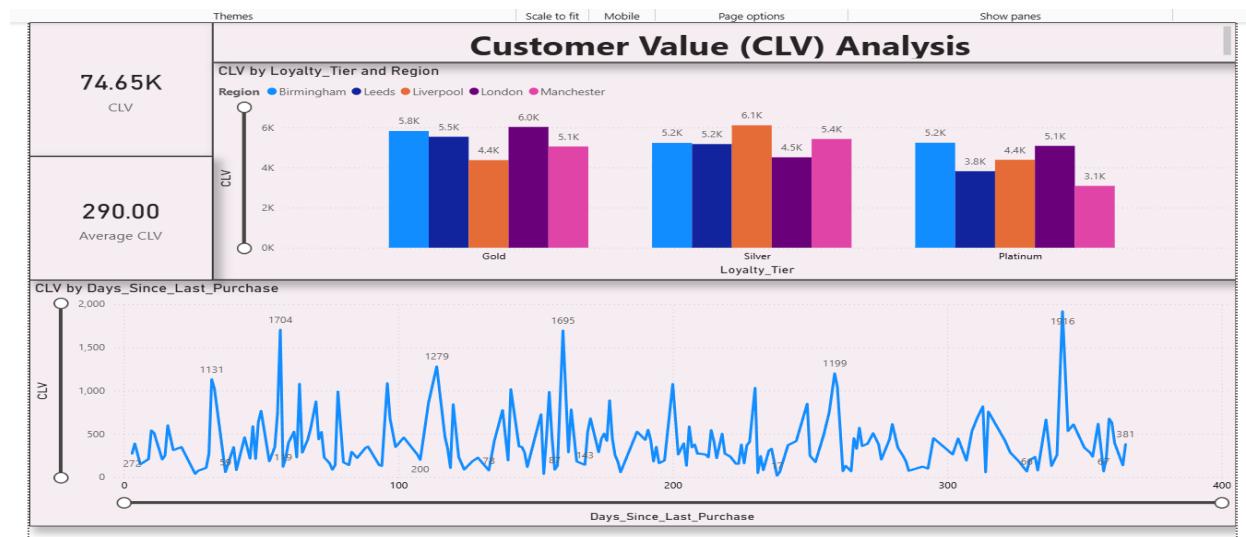
Status | Region | Income\_Group | Membership\_Duration\_Days | Membership Duration In Years | Age

Using calculated column done CLV Segment

```
1 CLV Rank =
2 RANKX(
3     ALL(Customer_Demographics),
4     Customer_Demographics[CLV],,ASC)
```

Status | Region | Income\_Group | Membership\_Duration\_Days | Membership Duration In Years | Age

Calculated rank of CLV so that I can divide them to low , middle and high rank



## Task 7



Made a final dashboard and added a slicer for better understanding of visuals.

Recording Link:- <https://www.loom.com/share/befd2026e1cd4d0bb6ce8424d5d9b214>

Please listen my recording in 0.8x as due to glitch my video is playing in 2x.