Dax Explaination

Make in the 1st page descriptive analysis in general

Mean , median, mode ,standard deviation ,

how much males versus females,

table indicating whole clients how many and how many of them following each source, each city category, p or G , etc.

Then in the following pages make the various reports and analysis

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- **Date manager table**:

Date Manager = CALENDARAUTO()

Note : all lead creation were in 2016

Lead months : July, august ,and sep

Want to make visual using days

Measures not columns and tables to not take much space:

- **Approval percentage measure**

```
Approval percentage measure =
   DIVIDE(
      COUNTX(
         FILTER(
            train,train[Approved]=1
         ),
```

```
        train[ID]
      ),
      Count(train[ID])
   )*100
```

Visual card

- **Non Approval percentage measure**

```
Non Approval percentage measure =
   DIVIDE(
      COUNTX(
         FILTER(
            train,train[Approved]=0
         ),
         train[ID]
      ),
      Count(train[ID])
   )*100
```

Visual card

- **<u>Approval rate by city categoory measure</u>**

```
Approval rate by city categoory measure = CALCULATE(
   [Approval percentage measure],
   train[City_Category]=SELECTEDVALUE(train[City_Category])
)
```

Note several visuals can be made tree chart and pies (look in pbxi file)

- **<u>Average Loan Amount according to Monthly income measure</u>**

```
Average Loan Amount according to Monthly income measure =
CALCULATE(
    AVERAGE('train'[Loan_Amount]),
```

```
    ALLEXCEPT(train,train[Monthly_Income])
)
```

- **Average Loan Amount By Bank type measure**

```
Average Loan Amount By Bank type measure = CALCULATE(
    AVERAGE('train'[Loan_Amount]),
    ALLEXCEPT(train,train[Primary_Bank_Type])
)
```

- **Average Loan Amount By City category measure**

```
Average Loan Amount By City category measure = CALCULATE(
    AVERAGE('train'[Loan_Amount]),
    ALLEXCEPT(train,train[City_Category])
)
```

- **Average Loan Amount By Employer category measure**

```
Average Loan Amount By Employer category measure = CALCULATE(
    AVERAGE('train'[Loan_Amount]),
    ALLEXCEPT(train,train[Employer_Category1])
)
```

- **Average Loan Amount By Gender measure**

```
Average Loan Amount By Gender measure = CALCULATE(
    AVERAGE('train'[Loan_Amount]),
    ALLEXCEPT(train,train[Gender])
)
```

- **1- Risk Category based on EMI and Loan Amount column**

```
Risk Category based on EMI and Loan Amount = IF(
   (train[Monthly_Income]*.5)<(train[EMI]+train[Loan_Amount]*.1),"High-
Risk",
```

```
    "Low-Risk"
    )
```

Assumption that if monthly income is less 50% of the EMI and 10% of the loan amount then this is high risk client.

Visual is column chart with relation to average monthly income

Visual is column chart with relation to average EMI

- **2- Debt to income ratio percentage column**

Debt to income ratio % column =
Round(DIVIDE(train[EMI],train[Monthly_Income]),2)*100

- **Risk Category based on debt to income ratio column**

```
Risk Category based on debt to income ratio = IF(
    train[EMI]/train[Monthly_Income]>.5,
    "High Risk",
    "Low Risk"
)
```

Assumption

If debt ratio is greater 50% then high risk

Visual will be table or matrix when categories are made

3- **Debt to income ratio measure**

DTI ratio measure = Divide([EMI measure for Debt to Income Ratio measure], [Monthly Income measure for DTI ratio measure])

EMI measure for Debt to Income Ratio measure = Sum(train[EMI])

Monthly Income measure for DTI ratio measure = Sum(train[Monthly_Income])

Visual is card

- **Loan approval by month measure**

```
Loan approval by month measure = CALCULATE(
    Count(train[ID]),
    train[Approved]=1
)
```

Column chart month from lead creation and this measure

Note overall clients whom their loan was approved is 1020 client

Another visual as column chart

Note if we use the date from date manager instead it will get the same 1020 client indicated by their birth month, indicated as how much were approved for loans.

- **top month for loan approvals measure**

```
top month for loan approvals measure = MINX(
    TOPN(
```

```
        1,
        All(train),
        [Loan approval by month meaure],
        DESC
    ),
    train[Month Name]
)
```

It will be august // visual is card

- **Top Source Category measure**

```
Top Source Category measure = MINX(
TOPN(
    1,
    all(train),
    [Approval percentage measure],
    DESC),
    train[Source_Category])
```

visual is card // it will be category B

- **Top approval % Month measure**

```
Top approval % Month measure =
MAXX(
    TOPN(
        1,
        ALL(train),[Approval percentage measure]),train[Month Name])
```

Slicer , table , pie. Interactive visuals with slicer

A 1.66 % approved from the whole in A only
B 1.34% approved from the whole in B only

etc.

This question is same as mariem hamdi 7th question so pie chart , table , slicer
pie as visual with approval percentage measure
table with the approval rate by city category measure

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cards-

total loans in all categories

Main KPIS