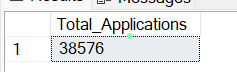
**Bank Loan Analysis Report using SQL Server Query Document**

**KPIs**

**Total Loan Applications:**

select count(id) as Total\_Applications from Bank\_Loan\_Data



**MTD Loan Applications:**

select count(id) as MTD\_Total\_Applications from Bank\_Loan\_Data

where month(issue\_date)= 12

# for December month

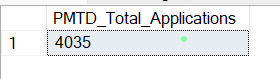


**PMTD Loan Applications:**

select count(id) as PMTD\_Total\_Applications from Bank\_Loan\_Data

where month(issue\_date) = 11 # for November month

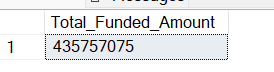






**Total\_Funded\_Amount =**

select SUM(LOAN\_AMOUNT) AS Total\_Funded\_Amount from Bank\_Loan\_Data



**MTD\_ Total\_Funded\_Amount =**

select SUM(LOAN\_AMOUNT) AS MTD\_Total\_Funded\_Amount from Bank\_Loan\_Data

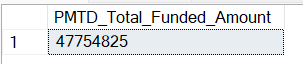
where month(issue\_date) = 12 and year(issue\_date) = 2021



**PMTD\_Total\_Funded\_Amount =**

select SUM(LOAN\_AMOUNT) AS PMTD\_Total\_Funded\_Amount from Bank\_Loan\_Data

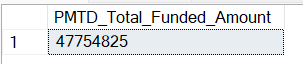
where month(issue\_date) = 11 and year(issue\_date) = 2021



**Total\_Amount\_Recived =**



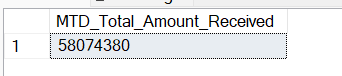
select SUM(Total\_Payment) AS Total\_Amount\_Received from Bank\_Loan\_Data



**MTD\_Total\_Amount\_Recived =**

select SUM(Total\_Payment) AS MTD\_Total\_Amount\_Received from Bank\_Loan\_Data

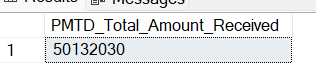
where month(issue\_date) = 12 and year(issue\_date) = 2021



**PMTD\_Total\_Amount\_Recived** =

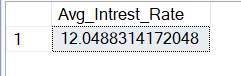
select SUM(Total\_Payment) AS PMTD\_Total\_Amount\_Received from Bank\_Loan\_Data

where month(issue\_date) = 11 and year(issue\_date) = 2021



**Average\_Intrest\_Rate =**

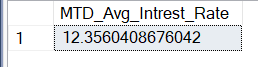
select Avg(int\_rate)\*100 as Avg\_Intrest\_Rate from Bank\_Loan\_Data



**MTD\_Average\_Intrest\_Rate=**

select Avg(int\_rate)\*100 as MTD\_Avg\_Intrest\_Rate from Bank\_Loan\_Data

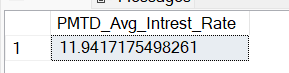
where month(issue\_date) = 12 and year(issue\_date) = 2021



**PMTD\_Total\_Intrest\_Rate =**

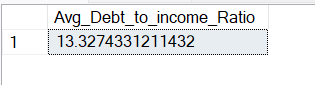
select Avg(int\_rate)\*100 as PMTD\_Avg\_Intrest\_Rate from Bank\_Loan\_Data

where month(issue\_date) = 11 and year(issue\_date) = 2021



**Average Debt-to-Income Ratio (DTI):**

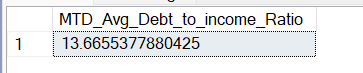
select Avg(dti)\*100 as Avg\_Debt\_to\_income\_Ratio from Bank\_Loan\_Data



**MTD\_Avg\_Debt\_to\_Income\_Ratio =**

select Avg(dti)\*100 as MTD\_Avg\_Debt\_to\_income\_Ratio from Bank\_Loan\_Data

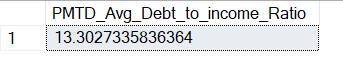
where month(issue\_date) = 12 and year(issue\_date) = 2021



**PMTD\_Avg\_Debt\_to\_Income\_Ratio =**

select Avg(dti)\*100 as PMTD\_Avg\_Debt\_to\_income\_Ratio from Bank\_Loan\_Data

where month(issue\_date) = 11 and year(issue\_date) = 2021



**Good Loan**

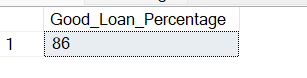
**Good\_Loan\_Percentage =**

select

(count(case when loan\_status = 'Fully Paid' or Loan\_Status = 'Current' then id end)\*100)

/count(id) as Good\_Loan\_Percentage

from Bank\_Loan\_Data

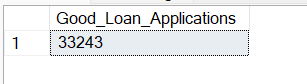


**Good\_Loan\_Applications =**

select

count(id) as Good\_Loan\_Applications from Bank\_Loan\_Data

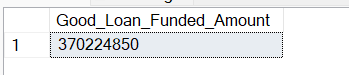
where loan\_status = 'Fully Paid' or Loan\_Status = 'Current'



**Good\_Loan\_Funded\_Amoount =**

select sum(loan\_amount) as Good\_Loan\_Funded\_Amount from Bank\_Loan\_Data

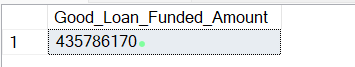
where loan\_status = 'Fully Paid' or Loan\_Status = 'Current'



**Good\_Loan\_Total\_Recived\_Amount=**

select sum(total\_payment) as GLTotal\_Ampunt\_Recieved from Bank\_Loan\_Data

where loan\_status = 'Fully Paid' or Loan\_Status = 'Current'



**BAD LOANS**

**Bad\_Loan\_Applications\_Percen**t =

select

(count(case when loan\_status = 'Charged Off' then id end)\* 100)

/count(id) as Bad\_Loan\_Applications\_Percent

from Bank\_Loan\_Data

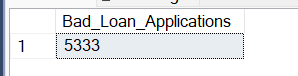


**Bad\_Loan\_Apllications =**

select

count(id)as Bad\_Loan\_Applications from Bank\_Loan\_Data

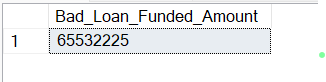
where loan\_status = 'Charged Off'



**Bad\_Loan\_Funded\_Amount =**

select sum(loan\_amount) as Bad\_Loan\_Funded\_Amount from Bank\_Loan\_Data

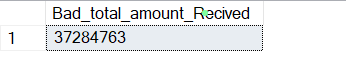
where loan\_status = 'Charged Off'



**Bad\_Loan\_Total\_Recived =**

select sum(total\_payment) as Bad\_total\_amount\_Recived from Bank\_Loan\_Data

where loan\_status = 'Charged Off'



**Loan Status Veiw**

select loan\_status,

count(id) as Total\_Loan\_Applications,

sum(loan\_amount) as Total\_Funded\_Amount,

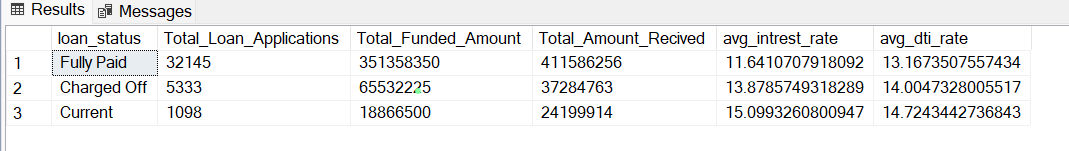
sum(total\_payment) as Total\_Amount\_Recived,

avg(int\_rate)\*100 as avg\_intrest\_rate,

avg(dti)\*100 as avg\_dti\_rate

from Bank\_Loan\_Data

group by loan\_status;



**MTD**

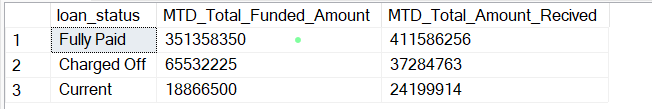
select loan\_status,

sum(loan\_amount) as MTD\_Total\_Funded\_Amount,

sum(total\_payment) as MTD\_Total\_Amount\_Recived

from Bank\_Loan\_Data

group by loan\_status;



MONTH

SELECT month(issue\_date) as Month\_Number,

datename(month,issue\_date) as Month\_Name,

sum(loan\_amount) as Total\_Amount\_Funded,

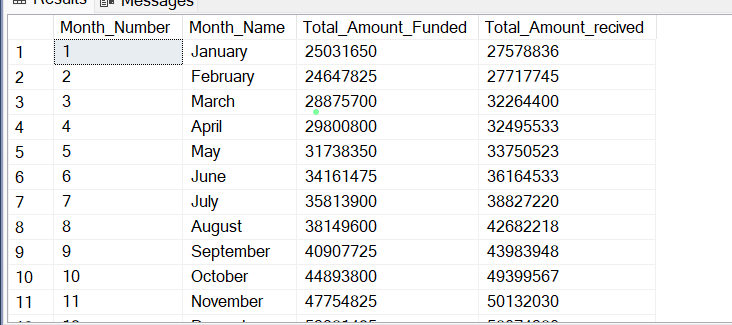
sum(total\_payment) as Total\_Amount\_recived

from Bank\_Loan\_Data

group by month(issue\_date),

datename(month,issue\_date)

order by month(issue\_date)



**Regional Analysis by State =**

select address\_state as State,

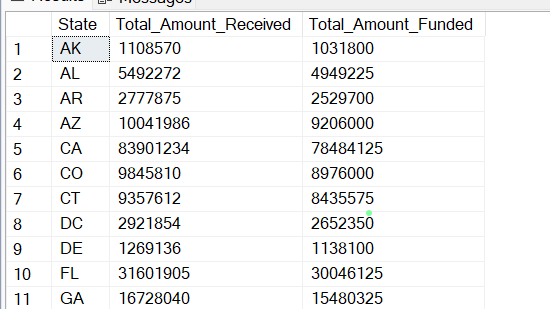
sum(total\_payment) as Total\_Amount\_Received,

Sum(loan\_amount)as Total\_Amount\_Funded

from Bank\_Loan\_Data

group by address\_state

order by address\_state



**Loan Term Analysis (Donut Chart):** To allow the client to understand the distribution of loans across various term lengths.

**Term**

select term as term,

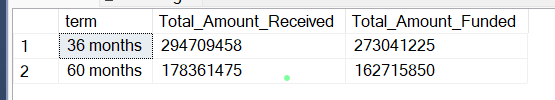
sum(total\_payment) as Total\_Amount\_Received,

Sum(loan\_amount)as Total\_Amount\_Funded

from Bank\_Loan\_Data

group by term

order by term



Employee Length

select emp\_length as Emp\_Length,

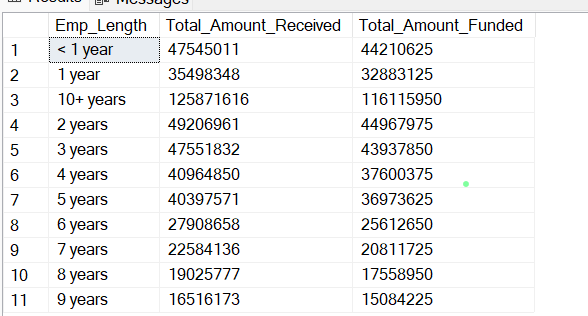
sum(total\_payment) as Total\_Amount\_Received,

Sum(loan\_amount)as Total\_Amount\_Funded

from Bank\_Loan\_Data

group by emp\_length

order by emp\_length



Loan Purpose Breakdown

select purpose as Purpose,

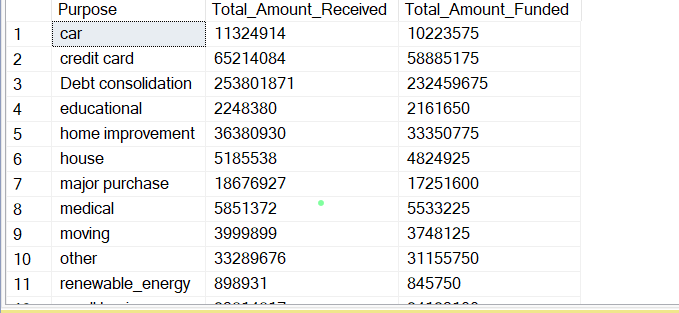
sum(total\_payment) as Total\_Amount\_Received,

Sum(loan\_amount)as Total\_Amount\_Funded

from Bank\_Loan\_Data

group by purpose

order by purpose



Home ownership

select home\_ownership as Home\_Ownership,

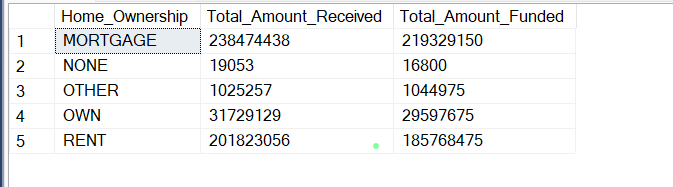
sum(total\_payment) as Total\_Amount\_Received,

Sum(loan\_amount)as Total\_Amount\_Funded

from Bank\_Loan\_Data

group by home\_ownership

order by home\_ownership



Calculate home ownership of Applicant for Total Amount recived and total amount funded for grade is A

SELECT

purpose AS PURPOSE,

COUNT(id) AS Total\_Loan\_Applications,

SUM(loan\_amount) AS Total\_Funded\_Amount,

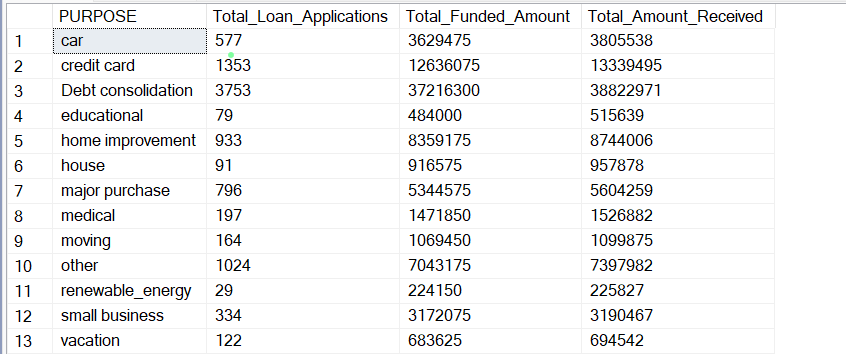
SUM(total\_payment) AS Total\_Amount\_Received

FROM bank\_loan\_data

WHERE grade = 'A'

GROUP BY purpose

ORDER BY purpose



**POWER BI**

Import data through sql server and then check for column quality

Valid 100% means good to go we don’t have any null values

Incase of any null value in column it will show Empty %

Total Loan Applications = count(Bank\_Loan\_Data[id])

MTD Loan Applications = CALCULATE(TOTALMTD([Total Loan Applications],'Date Table'[Date]))

MOM Loan Applications = ([MTD Loan Applications]-[Previous month to date loan Apllications])/[Previous month to date loan Apllications]

MTD Total Funded Amount = CALCULATE([Total Funded Amount], DATESMTD(dateadd('Date Table'[Date],0,MONTH)))

PMTD Total Funded Amount = CALCULATE([Total Funded Amount],DATESMTD(dateadd('Date Table'[Date],-1,month)))

MOM TOtal Funded Amount = ([MTD Total Funded Amount]-[PMTD Total Funded Amount])/[PMTD Total Funded Amount]

PMTD Avg INtrest Rate = CALCULATE([Avgerage intrest rate],DATESMTD(dateadd('Date Table'[Date],-1,month)))