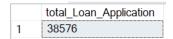# Bank Loan Report

Query Document

Key Performance Indicators (KPIs) Requirements:

1. Total Loan Application

```
select COUNT(id) as total_Loan_Application
from financial_loan
```

	total_Loan_Application
1	38576

1.1. MTD Loan Application

```
select COUNT(id) as PMTD_total_Loan_Application
from financial_loan
where MONTH(issue_date)= 12 and YEAR(issue_date) = 2021
```

	PMTD_total_Loan_Application
1	4314

2. Total Funded Amount

```
select SUM(loan_amount) as Total_funded_amount
from financial_loan
```

	Total_funded_amount
1	435757075

2.1. MTD Total Funded Amount

```
select SUM(loan_amount) as MTD_Total_funded_amount
from financial_loan
where MONTH(issue_date)= 12 and YEAR(issue_date) =2021
```

	Total_funded_amount
1	53981425

2.2. PMTD Total Funded Amount (Previous Month)

```sql
select SUM(loan_amount) as PMTD_Total_funded_amount
from financial_loan
where MONTH(issue_date)= 11 and YEAR(issue_date) =2021
```

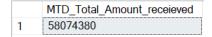|	PMTD_Total_funded_amount
1	47754825

3. Total Payment Receieved

```sql
Select sum(total_payment) as Total_Amount_receieved
from financial_loan\
```

	Total_Amount_receieved
1	473070933

3.1. MTD Total Payment Received

```sql
Select sum(total_payment) as MTD_Total_Amount_receieved
from financial_loan
where MONTH(issue_date)= 12 and YEAR(issue_date)= 2021
```

	MTD_Total_Amount_receieved
1	58074380

3.2. PMTD Total Payment Received

```sql
Select sum(total_payment) as PMTD_Total_Amount_receieved
from financial_loan
where MONTH(issue_date)= 11 and YEAR(issue_date)= 2021
```

	PMTD_Total_Amount_receieved
1	50132030

4. Avg Interest Rate

```sql
select AVG(int_rate)*100 as Average_Interest_Rate
from financial_loan
```
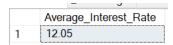
	Average_Interest_Rate
1	12.0488314172048

- ■ Upto 2 digits :- Round(number, decimal)

```sql
select ROUND(AVG(int_rate),2)*100 as Average_Interest_Rate
from financial_loan
```

	Average_Interest_Rate
1	12

- ■ Upto 4 digits

```sql
select ROUND(AVG(int_rate),4)*100 as Average_Interest_Rate
from financial_loan
```

	Average_Interest_Rate
1	12.05

4.1. MTD Average Interest Rate

```sql
select ROUND(AVG(int_rate),4)*100 as MTD_Average_Interest_Rate
from financial_loan
where MONTH(issue_date) = 12 and Year(issue_date)= 2021
```

	PMTD_Average_Interest_Rate
1	12.36

4.2. PMTD Average Interest Rate

```sql
select ROUND(AVG(int_rate),4)*100 as PMTD_Average_Interest_Rate
from financial_loan
where MONTH(issue_date) = 11 and Year(issue_date)= 2021
```

	PMTD_Average_Interest_Rate
1	11.94

5. Average DTI (Debt To Income) rate

```sql
select AVG(dti)*100 as Average_DTI
from financial_loan
```

	Average_DTI
1	13.3274331211432

- ■ Upto 4 digits :- Round(number, decimal)

```sql
select ROUND (AVG(dti),4)*100 as Average_DTI
from financial_loan
```

	Average_DTI
1	13.33

5.1. MTD Average DTI (Debt To Income) rate

```sql
select ROUND (AVG(dti),4)*100 as MTD_Average_DTI
from financial_loan
where MONTH(issue_date)= 12 and YEAR(issue_date)= 2021
```

	MTD_Average_DTI
1	13.67

5.2. PMTD Average DTI (Debt To Income) Rate

```sql
select ROUND (AVG(dti),4)*100 as PMTD_Average_DTI
from financial_loan
where MONTH(issue_date)= 11 and YEAR(issue_date)= 2021
```

	PMTD_Average_DTI
1	13.3

Good Loan v Bad Loan KPI's

Good Loan KPI's:

1. Good Loan Application Percentage

```sql
select
      (COUNT(CASE When loan_status= 'Fully Paid' or loan_status= 'Current' Then id
End)*100)
      /
      COUNT(id) as Good_loan_Percentage
from financial_loan
```

	Good_loan_Percentage
1	86

2. Good Loan Application

```sql
select count(id) as Good_Loan_Application
from financial_loan
where loan_status= 'Fully Paid' or loan_status= 'Current'
```

	Good_Loan_Application
1	33243

3. Good loan Funded Amount

```sql
select sum(loan_amount) as Good_Loan_Funded_Amount
from financial_loan
where loan_status= 'Fully Paid' or loan_status= 'Current'
```

	Good_Loan_Funded_Amount
1	370224850

4. Good loan Received amount

```sql
select sum(total_payment) as Good_Loan_Received_Amount
from financial_loan
where loan_status= 'Fully Paid' or loan_status= 'Current'
```

	Good_Loan_Received_Amount
1	435786170

Bad Loan KPI's:

1. Bad loan percentage

```sql
select
    (count( case when loan_status='Charged Off' then id end)*100)
    /
    COUNT(id) as Bad_Loan_Percentage
from financial_loan
```

	Bad_Loan_Percentage
1	13

2. Bad Loan Applications

```sql
select COUNT(id) as Bad_Loan_Applications
from financial_loan
where loan_status='Charged Off'
```

	Bad_Loan_Percentage
1	13

3. Bad Loan Funded Amount

```sql
select sum(loan_amount) as Bad_Loan_Funded_amount
from financial_loan
where loan_status='Charged Off'
```

	Bad_Loan_Funded_amount
1	65532225

4. Bad Loan Amount Received

```sql
select sum(total_payment) as Bad_Loan_amount_received
from financial_loan
where loan_status='Charged Off'
```

	Bad_Loan_amount_received
1	37284763

Loan Status Grid View

```sql
select
      loan_status,
      COUNT(id) as Total_Loan_application,
      SUM(total_payment) as Total_Amount_Recieved,
      SUM(loan_amount) as Total_Funded_Amount,
      Avg(int_rate*100) as Interest_rate,
      AVG(dti*100) as DTI
from financial_loan
group by loan_status
```

	loan_status	Total_Loan_application	Total_Amount_Recieved	Total_Funded_Amount	Interest_rate	DTI
1	Fully Paid	32145	411586256	351358350	11.6410707918092	13.1673507557434
2	Current	1098	24199914	18866500	15.0993260800947	14.7243442736843
3	Charged Off	5333	37284763	65532225	13.8785749318289	14.0047328005517

```sql
select
      loan_status,
      SUM(total_payment) as MTD_Total_Amount_Received,
      SUM(loan_amount) as MTD_Total_Funded_amount
from financial_loan
where MONTH(issue_date)=12
group by loan_status
```

	loan_status	MTD_Total_Amount_Received	MTD_Total_Funded_amount
1	Fully Paid	47815851	41302025
2	Current	4934318	3946625
3	Charged Off	5324211	8732775

Metrix:

1. Monthly Trends by Issue date

```sql
select
      MONTH(issue_date) Month_number,
      DATENAME(MONTH, issue_date) Month_Name,
      COUNT(id) as Total_Loan_Application,
      SUM(loan_amount) as Total_Funded_Amount,
      SUM(total_payment) as Total_Recieved_Amount
from financial_loan
Group by MONTH(issue_date), DATENAME(MONTH, issue_date)
Order by MONTH(issue_date)
```

	Month_number	Month_Name	Total_Loan_Application	Total_Funded_Amount	Total_Recieved_Amount
1	1	January	2332	25031650	27578836
2	2	February	2279	24647825	27717745
3	3	March	2627	28875700	32264400
4	4	April	2755	29800800	32495533
5	5	May	2911	31738350	33750523
6	6	June	3184	34161475	36164533
7	7	July	3366	35813900	38827220
8	8	August	3441	38149600	42682218
9	9	September	3536	40907725	43983948
10	10	October	3796	44893800	49399567
11	11	November	4035	47754825	50132030
12	12	December	4314	53981425	58074380

2. Loan Term Analysis

```sql
select
      term,
      COUNT(id) as Total_Loan_Application,
      SUM(loan_amount) as Total_Funded_Amount,
      SUM(total_payment) as Total_Recieved_Amount
from financial_loan
Group by term
Order by term
```

	term	Total_Loan_Application	Total_Funded_Amount	Total_Recieved_Amount
1	36 months	28237	273041225	294709458
2	60 months	10339	162715850	178361475

3. Regional Analysis by State

```sql
select
    address_state,
    COUNT(id) as Total_Loan_Application,
    SUM(loan_amount) as Total_Funded_Amount,
    SUM(total_payment) as Total_Recieved_Amount
from financial_loan
Group by address_state
Order by address_state
```

	address_state	Total_Loan_Application	Total_Funded_Amount	Total_Recieved_Amount
1	AK	78	1031800	1108570
2	AL	432	4949225	5492272
3	AR	236	2529700	2777875
4	AZ	833	9206000	10041986
5	CA	6894	78484125	83901234
6	CO	770	8976000	9845810
7	CT	730	8435575	9357612
8	DC	214	2652350	2921854
9	DE	110	1138100	1269136
10	FL	2773	30046125	31601905
11	GA	1355	15480325	16728040
12	HI	170	1850525	2080184
13	IA	5	56450	64482
14	ID	6	59750	65329
15	IL	1486	17124225	18875941
16	IN	9	86225	85521
17	KS	260	2872325	3247394
18	KY	320	3504100	3792530
19	LA	426	4498900	5001160
20	MA	1310	15051000	16676279
21	MD	1027	11911400	12985170
22	ME	3	9200	10808

4. Home Ownership Analysis

```sql
select
    home_ownership,
    COUNT(id) as Total_Loan_Application,
    SUM(loan_amount) as Total_Funded_Amount,
    SUM(total_payment) as Total_Recieved_Amount
from financial_loan
Group by home_ownership
```

	home_ownership	Total_Loan_Application	Total_Funded_Amount	Total_Recieved_Amount
1	MORTGAGE	17198	219329150	238474438
2	OWN	2838	29597675	31729129
3	NONE	3	16800	19053
4	RENT	18439	185768475	201823056
5	OTHER	98	1044975	1025257

5. Employee Length Analysis

```sql
select
        emp_length,
        COUNT(id) as Total_Loan_Application,
        SUM(loan_amount) as Total_Funded_Amount,
        SUM(total_payment) as Total_Recieved_Amount
from financial_loan
Group by emp_length
Order by emp_length
```

	emp_length	Total_Loan_Application	Total_Funded_Amount	Total_Recieved_Amount
1	< 1 year	4575	44210625	47545011
2	1 year	3229	32883125	35498348
3	10+ years	8870	116115950	125871616
4	2 years	4382	44967975	49206961
5	3 years	4088	43937850	47551832
6	4 years	3428	37600375	40964850
7	5 years	3273	36973625	40397571
8	6 years	2228	25612650	27908658
9	7 years	1772	20811725	22584136
10	8 years	1476	17558950	19025777
11	9 years	1255	15084225	16516173

6. Loan Purpose Breakdown

```sql
select
        purpose,
        COUNT(id) as Total_Loan_Application,
        SUM(loan_amount) as Total_Funded_Amount,
        SUM(total_payment) as Total_Recieved_Amount
from financial_loan
Group by purpose
```

	purpose	Total_Loan_Application	Total_Funded_Amount	Total_Recieved_Amount
1	house	366	4824925	5185538
2	vacation	352	1967950	2116738
3	wedding	928	9225800	10266856
4	Debt consolidation	18214	232459675	253801871
5	renewable_energy	94	845750	898931
6	major purchase	2110	17251600	18676927
7	moving	559	3748125	3999899
8	car	1497	10223575	11324914
9	medical	667	5533225	5851372
10	educational	315	2161650	2248380
11	small business	1776	24123100	23814817
12	home improvement	2876	33350775	36380930
13	other	3824	31155750	33289676
14	credit card	4998	58885175	65214084