

BANK LOAN FINANCIAL ANALYSIS

SQL QUERY DOCUMENTS

Key Performance Indicators (KPI's)

A. Total Loan Application Received

```
SELECT COUNT(id) AS Total_Applications FROM Bank_Loan
```

	Total_Applications
1	38576

a. Month to Year-Total Loan Application

```
SELECT COUNT(id) AS MTD FROM Bank_Loan  
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date)= 2021
```

	MTD
1	4314

b. Month to Month (MOM) Total Loan Application Calculated by Previous Month.

```
SELECT SUM(loan_amount) AS Total_Loan_Disbursed FROM Bank_Loan
```

	MoM_Total_Loan_Application
1	4035

B. Total Loan Amount disbursed

```
SELECT SUM(loan_amount) AS Total_Loan_Disbursed FROM Bank_Loan
```

	Total_Loan_Disbursed
1	435757075

o/p – Total Loan Amount disbursed by Bank Approx. 435 million.

a. Total Loan Amount disbursed – PMTD- Month-to-Month(MoM)

```
SELECT SUM(loan_amount) AS PMTD_Loan_Amount
```

```
FROM Bank_Loan
WHERE MONTH(issue_date) = 11 AND YEAR(issue_date)=2021
```

	PMTD_Loan_Amount
1	47754825

b. Total Loan Amount disbursed - MTD

```
SELECT SUM(loan_amount) AS MTD_Loan_Amount
FROM Bank_Loan
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date)=2021
```

	MTD_Loan_Amount
1	53981425

C. Total Amount Received from Customers

```
SELECT SUM(total_payment) AS Total_Amount_Received
FROM Bank_Loan
```

	Total_Amount_Received
1	473070933

a Total Amount Received from Customers - MTD Month To Date

```
SELECT SUM(total_payment) AS MTD_Total_Amount_Received
FROM Bank_Loan
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021
```

	MTD_Total_Amount_Received
1	58074380

b Total Amount Received from Customers - MoM

```
SELECT SUM(total_payment) AS PMTD_Total_Amount_Received
FROM Bank_Loan
WHERE MONTH(issue_date) = 11 AND YEAR(issue_date) = 2021
```

	PMTD_Total_Amount_Received
1	50132030

D. Average Interest Rate

```
SELECT ROUND(AVG(int_rate), 4) * 100 AS Avg_Interest_Rate
FROM Bank_Loan
```

	Avg_Interest_Rate
1	12.05

a. Average Interest Rate % - Month-to-Date

```
SELECT AVG(int_rate) * 100 AS MTD_Avg_Interest_Rate
FROM Bank_Loan
WHERE MONTH(issue_date)=12 AND YEAR(issue_date)=2021
```

	MTD_Avg_Interest_Rate
1	12.36

b. Average Interest Rate % - Month-Over-Month(MoM)

```
SELECT AVG(int_rate) * 100 AS PMTD_Avg_Interest_Rate
FROM Bank_Loan
WHERE MONTH(issue_date)=11 AND YEAR(issue_date)=2021
```

	PMTD_Avg_Interest_Rate
1	11.94

E. AVG Debt-to-Income Ratio

```
SELECT ROUND(AVG(dti), 4) * 100 AS AVG_DTI
FROM Bank_Loan
```

	AVG_DTI
1	13.33

a. AVG Debt-to-Income Ratio - Month-to-Date

```
SELECT ROUND(AVG(dti), 4) * 100 AS MTD_AVG_DTI
```

```
FROM Bank_Loan
WHERE MONTH(issue_date)=12 AND YEAR(issue_date)=2021
```

	MTD_AVG_DTI
1	13.67

b. AVG Debt-to-Income Ratio - Month-Over-Month

```
SELECT ROUND(AVG(dti), 4) * 100 AS PMTD_AVG_DTI
FROM Bank_Loan
WHERE MONTH(issue_date)=11 AND YEAR(issue_date)=2021
```

	PMTD_AVG_DTI
1	13.3

Good Loan Application Percentage

A. Good Loan Application Percentage

```
SELECT (COUNT(CASE WHEN loan_status='Fully Paid' OR loan_status='Current' THEN id END)
* 100)
/ COUNT(id) AS Good_Loan_Application
FROM Bank_Loan
```

	Good_Loan_Application
1	86

B. Total Good Loan Application

```
SELECT COUNT(id) AS Good_Loan_Application
FROM Bank_Loan
WHERE loan_status='Fully Paid' OR loan_status='Current'
```

	Good_Loan_Application
1	33243

C. Good Loan Funded Amount

```
SELECT SUM(loan_amount) AS Total_Funded_Good_Loan
FROM Bank_Loan
```

WHERE loan_status='Fully Paid' OR loan_status='Current'

	Total_Funded_Good_Loan
1	370224850

D. Good Loan Total Amount Received

```
SELECT SUM(total_payment) AS Total_Amount_Receive_GoodLoan
FROM Bank_Loan
WHERE loan_status='Fully Paid' OR loan_status='Current'
```

	Total_Amount_Receive_GoodLoan
1	435786170

BAD LOAN APPLICATIONS

A. Bad Loan Application

```
SELECT (COUNT(CASE WHEN loan_status='Charged off' THEN id END) * 100)
      / COUNT(id) AS Bad_Loan_Application
FROM Bank_Loan
```

	Bad_Loan_Application
1	13

o/p : Total 13% of Applications are Bad Loan Applications.

B. Total No of Bad Loan Applications

```
SELECT COUNT(id) AS Total_Bad_Loan_Application
FROM Bank_Loan
WHERE loan_status='Charged Off'
```

	Total_Bad_Loan_Application
1	5333

C. BAD loan Funded Amount

```
SELECT SUM(loan_amount) AS Bad_Loan_Funded_Amount
FROM Bank_Loan
WHERE loan_status='Charged Off'
```

	Bad_Loan_Funded_Amount
1	65532225

D. BAD loan Received Amount

```
SELECT SUM(total_payment) AS Bad_Loan_Received_Amount
FROM Bank_Loan
WHERE loan_status='Charged Off'
```

	Bad_Loan_Received_Amount
1	37284763

Loan Grid View

Part 1. SELECT loan_status,
COUNT(id) AS Total_Loan_Application,
SUM(loan_amount) AS Total_Funded_Amount,
SUM(total_payment) AS Total_Amount_Received,
AVG(int_rate)*100 AS AVG_Interest_Rate,
AVG(dti)* 100 AS Avg_DTI
FROM Bank_Loan
GROUP BY loan_status

	loan_status	Total_Loan_Application	Total_Funded_Amount	Total_Amount_Received	AVG_Interest_Rate	Avg_DTI
1	Fully Paid	32145	351358350	411586256	11.6410707918092	13.1673507557434
2	Current	1098	18866500	24199914	15.0993260800947	14.7243442736843
3	Charged Off	5333	65532225	37284763	13.8785749318289	14.0047328005517

Part 2. SELECT loan_status,
SUM(loan_amount) AS MTD_Funded_Amount,
SUM(total_payment) AS MTD_Amount_Received
FROM Bank_Loan
WHERE YEAR(issue_date)= 2021 GROUP BY loan_status

	loan_status	MTD_Funded_Amount	MTD_Amount_Received
1	Fully Paid	351358350	411586256
2	Current	18866500	24199914
3	Charged Off	65532225	37284763

Overview Dashboard2 - Monthly Trends by Issue date

1. Monthly Trends by Issue date

SELECT

MONTH(issue_date) AS Month_No,
 DATENAME(MONTH, issue_date) AS Month_name,
 COUNT(id) AS Total_Application,
 SUM(loan_amount) AS Total_Funded_Amount,
 SUM(total_payment) AS Total_Amount_Received

FROM Bank_Loan

GROUP BY MONTH(issue_date), DATENAME(MONTH, issue_date)

ORDER BY MONTH(issue_date)

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

2. Regional Analysis by State

SELECT

address_state,
 COUNT(id) AS Total_Application,
 SUM(loan_amount) AS Total_Funded_Amount,
 SUM(total_payment) AS Total_Amount_Received

FROM Bank_Loan

GROUP BY address_state

ORDER BY address_state

	address_state	Total_Application	Total_Funded_Amount	Total_Amount_Received
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
23	MI	685	7829900	8543660
24	MN	592	6302600	6750746
25	MO	660	7151175	7692732
26	MS	19	139125	149342
27	MT	79	829525	892047
28	NC	759	8787575	9534813
29	NE	5	31700	24542
30	NH	161	1917900	2101386
31	NJ	1822	21657475	23425159
32	NM	183	1916775	2084485
33	NV	482	5307375	5451443
34	NY	3701	42077050	46108181
35	OH	1188	12991375	14330148
36	OK	293	3365725	3712649
37	OR	436	4720150	4966903
38	PA	1482	15826525	17462908
39	RI	196	1883025	2001774
40	SC	464	5080475	5462458
41	SD	63	606150	656514
42	TN	17	162175	141522
43	TX	2664	31236650	34392715
44	UT	252	2849225	2952412

44	UT	252	2849225	2952412
45	VA	1375	15982650	17711443
46	VT	54	504100	534973
47	WA	805	8855525	9531739
48	WI	446	5070450	5485161
49	WV	167	1830525	1991936
50	WY	79	890750	1046050

3. Loan Term Analysis

```
SELECT
term AS Term,
COUNT(id) AS Total_Application,
SUM(loan_amount) AS Total_Funded_Amount,
SUM(total_payment) AS Total_Amount_Received
FROM Bank_Loan
GROUP BY term
ORDER BY term
```

	Term	Total_Application	Total_Funded_Amount	Total_Amount_Received
1	36 months	28237	273041225	294709458
2	60 months	10339	162715850	178361475

4. Employee Length Analysis

```
SELECT
emp_length AS Employee_length,
COUNT(id) AS Total_Application,
SUM(loan_amount) AS Total_Funded_Amount,
SUM(total_payment) AS Total_Amount_Received
FROM Bank_Loan
GROUP BY emp_length
ORDER BY COUNT(id) DESC
```

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

5. Loan Purpose Analysis

```
SELECT
purpose AS Loan_Purpose,
COUNT(id) AS Total_Application,
SUM(loan_amount) AS Total_Funded_Amount,
```

```

SUM(total_payment) AS Total_Amount_Received
FROM Bank_Loan
GROUP BY purpose
ORDER BY purpose

```

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

6. Home Ownership Analysis

```

SELECT
    home_ownership AS Home_Ownership,
    COUNT(id) AS Total_Application,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Amount_Received
FROM Bank_Loan
GROUP BY home_ownership
ORDER BY Count(id) DESC

```

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

a. Home Ownership Analysis With Respect to State California And A Grade

```
SELECT
    home_ownership AS Home_Ownership,
    COUNT(id) AS Total_Application,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Amount_Received
FROM Bank_Loan
WHERE address_state = 'CA' AND grade = 'A'
GROUP BY home_ownership
ORDER BY Count(id) DESC
```

	Home_Ownership	Total_Application	Total_Funded_Amount	Total_Amount_Received
1	RENT	894	7359175	7680797
2	MORTGAGE	612	6276375	6490097
3	OWN	93	802100	844556
4	OTHER	2	14000	15340