

# SQL Queries

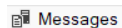


## Bank Loan Analysis – SQL Queries



### Use Database

```
USE Bank_Loan_DB;
```



Messages

Commands completed successfully.

Completion time: 2025-04-08T17:47:44.9673531+05:30



## SECTION 1: General Loan Application Metrics



### Total Loan Applications

```
SELECT COUNT(id) AS total_loan_application FROM bankloan;
```

	total_loan_application
1	38576



### MTD Loan Applications (Dec 2021)

```
SELECT COUNT(id) AS MTD_loan_application  
FROM bankloan
```

```
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021;
```

	MTD_loan_application
1	4314

## 17 PMTD Loan Applications (Nov 2021)

```
SELECT COUNT(id) AS PMTD_loan_application  
FROM bankloan  
WHERE MONTH(issue_date) = 11 AND YEAR(issue_date) = 2021;
```

	PMTD_loan_application
1	4035

## SECTION 2: Funded Amount Metrics

### Total Funded Amount

```
SELECT SUM(loan_amount) AS total_funded_amount FROM bankloan;
```

	total_funded_amount
1	435757075

### MTD Funded Amount

```
SELECT SUM(loan_amount) AS MTD_total_funded  
FROM bankloan  
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021;
```

	MTD_total_funded
1	53981425

## PMTD Funded Amount

```
SELECT SUM(loan_amount) AS PMTD_total_funded
FROM bankloan
WHERE MONTH(issue_date) = 11 AND YEAR(issue_date) = 2021;
```

	PMTD_total_funded
1	47754825

## SECTION 3: Received Amount Metrics

### Total Amount Received

```
SELECT SUM(total_payment) AS total_amount_received FROM bankloan;
```

	total_amount_recived
1	473070933

### MTD Received Amount

```
SELECT SUM(total_payment) AS MTD_total_amount_received
FROM bankloan
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021;
```

	MTD_total_amount_recived
1	58074380

## PMTD Received Amount

```
SELECT SUM(total_payment) AS PMTD_total_amount_received
FROM bankloan
WHERE MONTH(issue_date) = 11 AND YEAR(issue_date) = 2021;
```

	PMTD_total_amount_recived
1	50132030

## SECTION 4: Interest Rate & DTI Metrics

### Average Interest Rate

```
SELECT AVG(int_rate) * 100 AS avg_int_rate FROM bankloan;
```

	avg_int_rate
1	12.0488314172048

### MTD Average Interest Rate

```
SELECT AVG(int_rate) * 100 AS MTD_avg_int_rate
FROM bankloan
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021;
```

	MTD_avg_int_rate
1	12.3560408676042

## PMTD Average Interest Rate

```
SELECT ROUND(AVG(int_rate), 4) * 100 AS PMTD_avg_int_rate  
FROM bankloan  
WHERE MONTH(issue_date) = 11 AND YEAR(issue_date) = 2021;
```

	PMTD_avg_int_rate
1	11.94

## Average Debt-to-Income Ratio

```
SELECT ROUND(AVG(dti), 4) * 100 AS avg_DTI FROM bankloan;
```

	avg_DTI
1	13.33

## MTD Average DTI

```
SELECT ROUND(AVG(dti), 4) * 100 AS MTD_avg_DTI  
FROM bankloan  
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021;
```

	MTD_avg_DTI
1	13.67

## PMTD Average DTI

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

	PMTD_avg_DTI
1	13.3

## ✓ SECTION 5: Good Loan Metrics

### ✓ Good Loan Percentage

```
SELECT
  (COUNT(CASE WHEN loan_status IN ('Fully Paid', 'Current') THEN id END) *
  100.0) / COUNT(id) AS good_loan_percentage
FROM bankloan;
```

	good_loan_percentage
1	86

### ✓ Good Loan Applications

```
SELECT
  COUNT(CASE WHEN loan_status IN ('Fully Paid', 'Current') THEN id END) AS
  good_loan_application
FROM bankloan;
```

	good_loan_application
1	33243

### ✓ Good Loan Funded Amount

```
SELECT
  SUM(CASE WHEN loan_status IN ('Fully Paid', 'Current') THEN loan_amount
```

```
END) AS good_loan_amount  
FROM bankloan;
```

	good_loan_amount
1	370224850

## ✓ Good Loan Received Amount

```
SELECT  
    SUM(CASE WHEN loan_status IN ('Fully Paid', 'Current') THEN total_payme  
nt END) AS good_loan_amount_received  
FROM bankloan;
```

	good_loan_amount_recived
1	435786170

## ✗ SECTION 6: Bad Loan Metrics

### ⚠ Bad Loan Percentage

```
SELECT  
    (COUNT(CASE WHEN loan_status = 'Charged Off' THEN id END) * 100.0) /  
COUNT(id) AS bad_loan_percentage  
FROM bankloan;
```

	bad_loan_percentage
1	13.824657818332

### ⚠ Bad Loan Applications

```
SELECT COUNT(id) AS total_bad_loan_application
FROM bankloan
WHERE loan_status = 'Charged Off';
```

	total_bad_loan_application
1	5333

### ! Bad Loan Funded Amount

```
SELECT SUM(loan_amount) AS bad_loan_funded
FROM bankloan
WHERE loan_status = 'Charged Off';
```

	bad_loan_funded
1	65532225

### ! Bad Loan Received Amount

```
SELECT SUM(total_payment) AS bad_loan_received
FROM bankloan
WHERE loan_status = 'Charged Off';
```

	bad_loan_received
1	37284763



## SECTION 7: Loan Status Overview

```
SELECT
    loan_status AS Loan_Status,
    COUNT(id) AS Loan_Count,
    SUM(total_payment) AS Total_Amount_Received,
```



```

SUM(loan_amount) AS Total_Funded_Amount,
AVG(int_rate * 100) AS Interest_Rate,
AVG(dti * 100) AS DTI
FROM bankloan
GROUP BY loan_status;

```

	Loan_Status	Loan_Count	Total_Amount_Receieved	Total_Funded_Amount	Interest_Rate	DTI
1	Fully Paid	32145	411586256	351358350	11.6410707918092	13.1673507557434
2	Charged Off	5333	37284763	65532225	13.8785749318289	14.0047328005517
3	Current	1098	24199914	18866500	15.0993260800947	14.7243442736843

## SECTION 8: Dashboard Chart Queries

### Monthly Loan Trends By Issue Date

```

SELECT
    DATEPART(MONTH, issue_date) AS Month_Number,
    DATENAME(MONTH, issue_date) AS Month_Name,
    COUNT(id) AS Total_Loan_Application,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM bankloan
GROUP BY DATEPART(MONTH, issue_date), DATENAME(MONTH, issue_date)
ORDER BY DATEPART(MONTH, issue_date);

```

	Month_Number	Month_Name	Total_Loan_Application	Total_Funded_Amount	Total_Receieved_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

### Regional Loan Distribution By State

```

SELECT
    address_state,
    COUNT(id) AS Total_Loan_Application,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM bankloan
GROUP BY address_state
ORDER BY SUM(loan_amount) DESC;

```

	address_state	Total_Loan_Application	Total_Funded_Amount	Total_Received_Amount
1	CA	6894	78484125	83901234
2	NY	3701	42077050	46108181
3	TX	2664	31236650	34392715
4	FL	2773	30046125	31601905
5	NJ	1822	21657475	23425159
6	IL	1486	17124225	18875941
7	VA	1375	15982650	17711443
8	PA	1482	15826525	17462908
9	GA	1355	15480325	16728040
10	MA	1310	15051000	16676279
11	OH	1188	12991375	14330148
12	MD	1027	11911400	12985170
13	AZ	833	9206000	10041986
14	CO	770	8976000	9845810
15	WA	805	8855525	9531739
16	NC	759	8787575	9534813
17	CT	730	8435575	9357612

## Loan Term Breakdown

```

SELECT
    term,
    COUNT(id) AS Total_Loan_Application,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM bankloan
GROUP BY term
ORDER BY SUM(loan_amount) DESC;

```

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

## Employment Length Analysis

```
SELECT
    emp_length,
    COUNT(id) AS Total_Loan_Application,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM bankloan
GROUP BY emp_length
ORDER BY COUNT(id) DESC;
```

	emp_length	Total_Loan_Application	Total_Funded_Amount	Total_Received_Amount
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

## Loan Purpose Overview

```
SELECT
    purpose,
    COUNT(id) AS Total_Loan_Application,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM bankloan
GROUP BY purpose
ORDER BY COUNT(id) DESC;
```

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



## Home Ownership Breakdown

```

SELECT
    home_ownership,
    COUNT(id) AS Total_Loan_Application,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Received_Amount
FROM bankloan
GROUP BY home_ownership
ORDER BY COUNT(id) DESC;

```

	home_ownership	Total_Loan_Application	Total_Funded_Amount	Total_Receivied_Amount
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