

BANK LOAN REPORT QUERY DOCUMENT(MS SQL SERVER)

A. BANK LOAN REPORT | For DASHBOARD 1: SUMMARY

Key Performance Indicators(KPIs) Requirements:

1. Total Loan Applications:

```
SELECT COUNT(id) AS Total_Loan_Applications
FROM loan_data
```

Total_Loan_Applications
38576

Month-To-Date(MTD):

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

MTD_Total_Loan_Applications
4314

Previous Month-To-Date(PMTD):

```
SELECT COUNT(id) AS PMTD_Total_Loan_Applications
FROM loan_data
WHERE MONTH(issue_date) = 11 AND YEAR(issue_date) = 2021
```

PMTD_Total_Loan_Applications
4035

2. Total Funded Amount:

```
SELECT SUM(loan_amount) as Total_Funded_Amount
FROM loan_data
```

Total_Funded_Amount
435757075

Month-To-Date(MTD):

```
SELECT SUM(loan_amount) as MTD_Total_Funded_Amount
FROM loan_data
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021
```

MTD_Total_Funded_Amount
53981425

Previous Month-To-Date(PMTD):

```
SELECT SUM(loan_amount) as PMTD_Total_Funded_Amount
FROM loan_data
WHERE MONTH(issue_date) = 11 AND YEAR(issue_date) = 2021
```

PMTD_Total_Funded_Amount
47754825

3. Total Amount Received:

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

Total_Amount_Received
473070933

Month-To-Date(MTD):

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

MTD_Total_Amount_Received
58074380

Previous Month-To-Date(PMTD):

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

PMTD_Total_Amount_Received
50132030

4. Average Interest Rate:

```
SELECT ROUND(AVG(int_rate), 4) * 100 AS Average_Interest_Rate
FROM loan_data
```

Average_Interest_Rate
12.05

Month-To-Date(MTD):

```
SELECT ROUND(AVG(int_rate), 4) * 100 AS Average_Interest_Rate
FROM loan_data
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021
```

Average_Interest_Rate
12.36

Previous Month-To-Date(PMTD):

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

Average_Interest_Rate
11.94

5. Average Debt-to-Income Ratio(DTI):

```
SELECT ROUND(AVG(dti), 4) * 100 AS Average_DTI
FROM loan_data
```

Average_DTI
13.33

Month-To-Date(MTD):

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

Average_DTI
13.67

Previous Month-To-Date(PMTD):

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

Average_DTI
13.3

Good Loans

1. Good Loan Percentage

```
SELECT COUNT(id) * 100 / (SELECT COUNT(id) FROM loan_data) AS Good_Loan_Percentage
FROM loan_data
WHERE loan_status = 'Fully Paid' or loan_status = 'Current'
```

Good_Loan_Percentage
86

2. Good Loan Applications

```
SELECT COUNT(id) AS Good_Loan_Applications
FROM loan_data
WHERE loan_status = 'Fully Paid' or loan_status = 'Current'
```

Good_Loan_Applications
33243

3. Good Loan Funded Amount

```
SELECT SUM(loan_amount) AS Good_Loan_Funded_Amount
FROM loan_data
WHERE loan_status = 'Fully Paid' or loan_status = 'Current'
```

Good_Loan_Funded_Amount
370224850

4. Good Loan Total Received Amount

```
SELECT SUM(total_payment) AS Good_Loan_Received_Amount
FROM loan_data
WHERE loan_status = 'Fully Paid' or loan_status = 'Current'
```

Good_Loan_Received_Amount
435786170

Bad loans

1. Bad Loan Percentage

```
SELECT COUNT(id) * 100 / (SELECT COUNT(id) FROM loan_data) AS Bad_Loan_Percentage
FROM loan_data
WHERE loan_status = 'Charged Off'
```

Bad_Loan_Percentage
13

2. Bad Loan Applications

```
SELECT COUNT(id) AS Bad_Loan_Application
FROM loan_data
WHERE loan_status = 'Charged Off'
```

Bad_Loan_Application
5333

3. Bad Loan Funded Amount

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

Bad_Loan_Funded_Amount
65532225

4. Bad Loan Total Received Amount

```
SELECT SUM(total_payment) AS Bad_Loan_Funded_Amount
FROM loan_data
WHERE loan_status = 'Charged Off'
```

Bad_Loan_Funded_Amount
37284763

Loan Status Grid View:

```
SELECT loan_status
      , COUNT(id) AS Total_Loan_Amount
      , SUM(loan_amount) AS Total_Funded_Amount
      , SUM(total_payment) AS Total_Amount_Received
      , AVG(int_rate) * 100 AS Average_Interest_Rate
      , AVG(dti) * 100 AS Average_DTI
FROM loan_data
GROUP BY loan_status
```

loan_status	Total_Loan_Amount	Total_Funded_Amount	Total_Amount_Received	Average_Interest_Rate	Average_DTI
Fully Paid	32145	351358350	411586256	11.6410707730605	13.1673507543942
Charged Off	5333	65532225	37284763	13.8785749109319	14.0047327957997
Current	1098	18866500	24199914	15.0993260473588	14.7243442622951

```

SELECT loan_status
      , SUM(loan_amount) AS MTD_Total_Funded_Amount
      , SUM(total_payment) AS MTD_Total_Amount_Received
FROM loan_data
WHERE MONTH(issue_date) = 12 AND YEAR(issue_date) = 2021
GROUP BY loan_status

```

loan_status	MTD_Total_Funded_Amount	MTD_Total_Amount_Received
Fully Paid	41302025	47815851
Charged Off	8732775	5324211
Current	3946625	4934318

B. BANK LOAN REPORT | For DASHBOARD 2: OVERVIEW

Monthly Trends by Issue Date:

```

SELECT MONTH(issue_date) AS Month_num
      , 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_Amount_Received
FROM loan_data
GROUP BY MONTH(issue_date), DATENAME(MONTH, issue_date)
ORDER BY MONTH(issue_date)

```

Month_num	Month_name	Total_Loan_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

Regional Analysis by State:

```

SELECT address_state AS State
      , COUNT(id) AS Total_Loan_Application
      , SUM(loan_amount) AS Total_Funded_Amount
      , SUM(total_payment) AS Total_Amount_Received
FROM loan_data
GROUP BY address_state
ORDER BY address_state

```

State	Total_Loan_Application	Total_Funded_Amount	Total_Amount_Received
AK	78	1031800	1108570
AL	432	4949225	5492272
AR	236	2529700	2777875
AZ	833	9206000	10041986
CA	6894	78484125	83901234
CO	770	8976000	9845810
CT	730	8435575	9357612
DC	214	2652350	2921854
DE	110	1138100	1269136
FL	2773	30046125	31601905
GA	1355	15480325	16728040
HI	170	1850525	2080184

Loan Term Analysis:

```
SELECT term AS Loan_Term
      , COUNT(id) AS Total_Loan_Application
      , SUM(loan_amount) AS Total_Funded_Amount
      , SUM(total_payment) AS Total_Amount_Received
FROM loan_data
GROUP BY term
ORDER BY term
```

Loan_Term	Total_Loan_Application	Total_Funded_Amount	Total_Amount_Received
36 months	28237	273041225	294709458
60 months	10339	162715850	178361475

Employee Length Analysis:

```
SELECT emp_length AS Employee_Length
      , COUNT(id) AS Total_Loan_Application
      , SUM(loan_amount) AS Total_Funded_Amount
      , SUM(total_payment) AS Total_Amount_Received
FROM loan_data
GROUP BY emp_length
ORDER BY emp_length
```

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

Loan Purpose Breakdown:

```
SELECT purpose AS Loan_Purpose
      , COUNT(id) AS Total_Loan_Application
      , SUM(loan_amount) AS Total_Funded_Amount
      , SUM(total_payment) AS Total_Amount_Received
FROM loan_data
GROUP BY purpose
ORDER BY purpose
```

Loan_Purpose	Total_Loan_Application	Total_Funded_Amount	Total_Amount_Received
car	1497	10223575	11324914
credit card	4998	58885175	65214084
Debt consolidation	18214	232459675	253801871
educational	315	2161650	2248380
home improvement	2876	33350775	36380930
house	366	4824925	5185538
major purchase	2110	17251600	18676927
medical	667	5533225	5851372
moving	559	3748125	3999899
other	3824	31155750	33289676
renewable_energy	94	845750	898931
small business	1776	24123100	23814817

Home Ownership Analysis:

```
SELECT home_ownership AS Home_Ownership
      , COUNT(id) AS Total_Loan_Application
      , SUM(loan_amount) AS Total_Funded_Amount
      , SUM(total_payment) AS Total_Amount_Received
FROM loan_data
GROUP BY home_ownership
ORDER BY home_ownership
```

Home_Ownership	Total_Loan_Application	Total_Funded_Amount	Total_Amount_Received
MORTGAGE	17198	219329150	238474438
NONE	3	16800	19053
OTHER	98	1044975	1025257
OWN	2838	29597675	31729129
RENT	18439	185768475	201823056

C. BANK LOAN REPORT | For DASHBOARD 3: DETAILS

GRID

```
SELECT * FROM loan_data
```

id	address_state	application_type	emp_length	emp_title	grade	home_ownership	issue_date	last_credit_pull_date	last_payment_date	loan_status	next_payment_date	member_id	purpose	sub_grad
54734	CA	INDIVIDUAL	< 1 year	NULL	B	RENT	2021-08-09	2021-08-12	2021-10-11	Fully Paid	2021-11-11	80364	Debt consolidation	B4
55742	NY	INDIVIDUAL	< 1 year	CNN	B	RENT	2021-05-08	2021-08-12	2021-06-11	Fully Paid	2021-07-11	114426	credit card	B5
57245	TX	INDIVIDUAL	10+ years	city of beaumont texas	C	OWN	2021-03-10	2021-05-16	2021-03-13	Fully Paid	2021-04-13	138150	Debt consolidation	C2
57416	CT	INDIVIDUAL	6 years	State Farm Insurance	C	RENT	2021-11-09	2021-05-16	2021-11-12	Fully Paid	2021-12-12	139635	Debt consolidation	C3
58915	CA	INDIVIDUAL	3 years	QWAlcomm Inc	B	RENT	2021-04-08	2021-03-14	2021-04-11	Fully Paid	2021-05-11	153417	Debt consolidation	B3
59006	TX	INDIVIDUAL	3 years	NULL	C	MORTGAGE	2021-09-09	2021-09-12	2021-10-12	Fully Paid	2021-11-12	154254	credit card	C5
61390	TX	INDIVIDUAL	< 1 year	NULL	A	MORTGAGE	2021-02-10	2021-03-12	2021-03-12	Fully Paid	2021-04-12	182594	credit card	A5
61419	MD	INDIVIDUAL	1 year	Pension Benefit Guaranty Corporation	D	RENT	2021-02-10	2021-03-13	2021-10-12	Charged Off	2021-11-12	182917	Debt consolidation	D2
62102	MA	INDIVIDUAL	5 years	Rockwell Automation Inc.	B	RENT	2021-04-10	2021-03-13	2021-02-11	Fully Paid	2021-03-11	191024	Debt consolidation	B1
65426	MI	INDIVIDUAL	< 1 year	Infotrieve, Inc.	B	MORTGAGE	2021-08-09	2021-05-16	2021-06-11	Charged Off	2021-07-11	232106	car	B1
65640	CA	INDIVIDUAL	10+ years	kmex/univision	C	MORTGAGE	2021-05-08	2021-04-15	2021-05-11	Fully Paid	2021-06-11	234569	home improvement	C2