

## Data Analyst: Bank Loan Analysis Project

### BANK LOAN REPORT QUERY DOCUMENT

#### A. BANK LOAN REPORT QUERY DOCUMENT

##### Bank Requirements:

##### 1. Total Loan Applications:

```
SELECT
    COUNT(*) AS Total_Loan_Application
FROM
    financial_loan_data
```

	Total_Loan_Application
1	38576

##### 2. MTD Loan Applications:

```
SELECT
    COUNT(*) AS Total_Loan_Application
FROM
    financial_loan_data
WHERE
    MONTH(issue_date) = 12
```

Results	Messages
	Total_Loan_Application
1	4314

##### 3. Total Funded Amount:

```
SELECT
    SUM(loan_amount) AS Total_Loan_Amount
FROM
    financial_loan_data
```

Results	Messages
	Total_Loan_Amount
1	435757075

##### 4. Total Amount Received:

```
SELECT
    SUM(total_payment) AS Total_Loan_Received
FROM
    financial_loan_data
```

Results	Messages
	Total_Loan_Received
1	473070933

## 5. Average Interest Rate

```
SELECT
    ROUND(AVG(int_rate),4)*100 AS Avg_Int_Rate
FROM
    financial_loan_data
```

Results Messages	
	Avg_Int_Rate
1	12.05

## 6. Avg Debt To Income Ratio:

```
SELECT
    AVG(dti)*100 AS Avg_DTI
FROM
    financial_loan_data
```

Results Messages	
	Avg_DTI
1	13.3274331211432

## 7. Moth To Date Avg Debt To Income Ratio:

```
SELECT
    AVG(dti)*100 AS MTD_Avg_DTI
FROM
    financial_loan_data
WHERE
    MONTH(issue_date) = 12
```

Results Messages	
	MTD_Avg_DTI
1	13.6655377880425

## GOOD LOAN ISSUED:

### 1. Good Loan Percentage:

```
SELECT
    (COUNT(CASE WHEN loan_status = 'Fully Paid' OR loan_status = 'Current' THEN id END)*100.0)
    /
    COUNT(id) AS Good_Loan_Percentage
FROM
    financial_loan_data
```

OR

```

Select
(select Count(id) from financial_loan_data
where
loan_status = 'Fully Paid' OR loan_status = 'Current')*100.0
/
(select
Count(id) from financial_loan_data)
as Good_Loan_Percentage

```

Results Messages	
	Good_Loan_Percentage
1	86.175342181667

## 2. Good Loan Applications:

```

SELECT
COUNT(id) AS Good_Loan_Applications
FROM
financial_loan_data
WHERE
loan_status = 'Fully Paid' OR loan_status = 'Current'

```

Results Messages	
	Good_Loan_Applications
1	33243

## 3. Good Loan Funded Amount:

```

SELECT
SUM(loan_amount) AS Good_Loan_Funded_amount
FROM
financial_loan_data
WHERE
loan_status = 'Fully Paid' OR loan_status = 'Current'

```

Results Messages	
	Good_Loan_Funded_amount
1	370224850

## 4. Good Loan Amount Received:

```

SELECT
SUM(total_payment) AS Good_Loan_amount_received
FROM
financial_loan_data
WHERE
loan_status = 'Fully Paid' OR loan_status = 'Current'

```

Results Messages	
	Good_Loan_amount_received
1	435786170

## BAD LOAN ISSUED:

### 1. Bad Loan Percentage:

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

Results		Messages
Bad_Loan_Percentage		
1	13.824657818332	

### 2. Bad Loan Applications:

```
SELECT
COUNT(id) AS Bad_Loan_Applications
FROM
financial_loan_data
WHERE
loan_status = 'Charged Off'
```

Results		Messages
Bad_Loan_Applications		
1	5333	

### 3. Bad Loan Funded Amount:

```
SELECT
SUM(loan_amount) AS Bad_Loan_Funded_amount
FROM
financial_loan_data
WHERE
loan_status = 'Charged Off'
```

Results		Messages
Bad_Loan_Funded_amount		
1	65532225	

### 4. Bad Loan Amount Received:

```
SELECT
SUM(total_payment) AS Bad_Loan_amount_received
FROM
financial_loan_data
WHERE
loan_status = 'Charged Off'
```

Results		Messages
Bad_Loan_amount_received		
1	37284763	

LOAN STATUS:

```
SELECT
    loan_status,
    COUNT(id) AS LoanCount,
    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
    financial_loan_data
GROUP BY
    loan_status
```

	loan_status	LoanCount	Total_Amount_Received	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

B. BANK LOAN REPORT | OVERVIEW

MONTH

```
SELECT
    MONTH(issue_date) AS Month_Munber,
    DATENAME(MONTH, issue_date) AS Month_name,
    COUNT(id) AS Total_Loan_Applications,
    SUM(loan_amount) AS Total_Funded_Amount,
    SUM(total_payment) AS Total_Amount_Received
FROM financial_loan_data
GROUP BY MONTH(issue_date), DATENAME(MONTH, issue_date)
ORDER BY MONTH(issue_date)
```

	Month_Munber	Month_name	Total_Loan_Applications	Total_Funded_Amount	Total_Amount_Received
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

## STATE:

SELECT

```
address_state AS State,  
COUNT(id) AS Total_Loan_Applications,  
SUM(loan_amount) AS Total_Funded_Amount,  
SUM(total_payment) AS Total_Amount_Received
```

FROM financial\_loan\_data

GROUP BY address\_state

ORDER BY address\_state

	State	Total_Loan_Applications	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

## TERM:

SELECT

```
term AS Term,  
COUNT(id) AS Total_Loan_Applications,  
SUM(loan_amount) AS Total_Funded_Amount,  
SUM(total_payment) AS Total_Amount_Received
```

FROM financial\_loan\_data

GROUP BY term

ORDER BY term

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

## EMPLOYEE LENGTH:

SELECT

```
emp_length AS Employee_Length,  
COUNT(id) AS Total_Loan_Applications,  
SUM(loan_amount) AS Total_Funded_Amount,  
SUM(total_payment) AS Total_Amount_Received
```

FROM financial\_loan\_data

GROUP BY emp\_length

ORDER BY emp\_length

	Results	Messages				
	Employee_Length	Total_Loan_Applications	Total_Funded_Amount	Total_Amount_Received		
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		

## PURPOSE:

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 financial\_loan\_data

GROUP BY purpose

ORDER BY purpose

	Results	Messages				
	PURPOSE	Total_Loan_Applications	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		

## HOME OWNERSHIP:

SELECT

home\_ownership AS Home\_Ownership,  
COUNT(id) AS Total\_Loan\_Applications,  
SUM(loan\_amount) AS Total\_Funded\_Amount,  
SUM(total\_payment) AS Total\_Amount\_Received

FROM financial\_loan\_data

GROUP BY home\_ownership

ORDER BY home\_ownership

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



