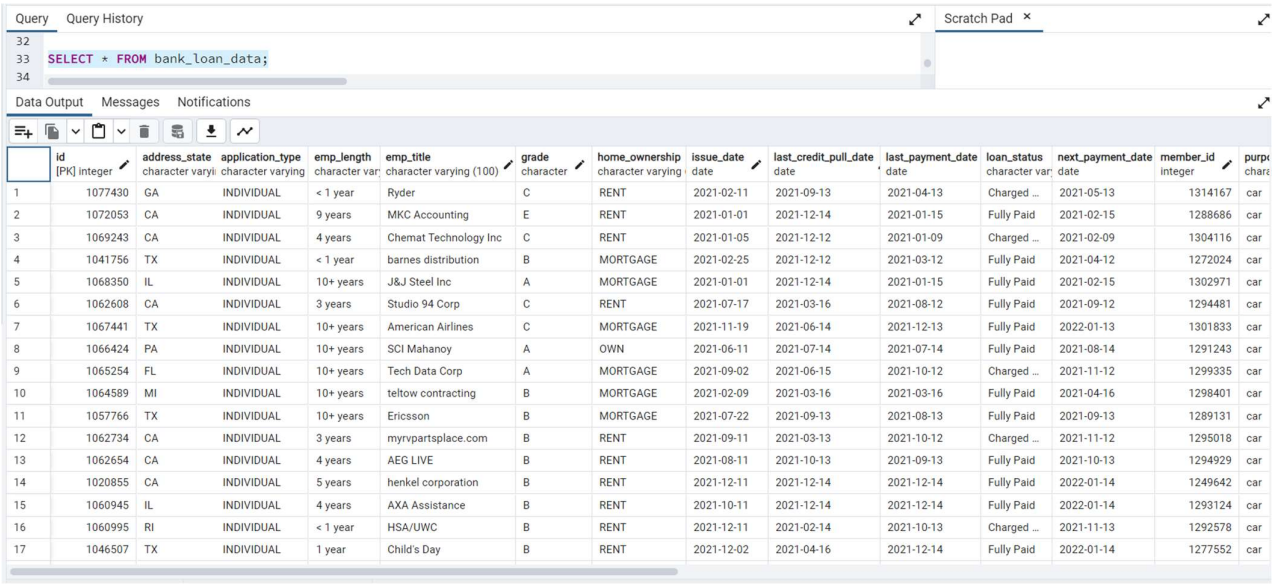
BANK LOAN ANALYSIS

Bank loans are a crucial financial tool that enables individuals and businesses to achieve their goals and manage financial needs. However, it's essential for borrowers to understand the terms, costs, and responsibilities associated with loans to make informed financial decisions.

SELECT * FROM bank_loan_data;



Query | Query History | Scratch Pad

```
SELECT * FROM bank_loan_data;
```

Data Output | Messages | Notifications

	id [PK] integer	address_state character varyi	application_type character varying	emp_length character var	emp_title character varying (100)	grade character	home_ownership character varying	issue_date date	last_credit_pull_date date	last_payment_date date	loan_status character var	next_payment_date date	member_id integer	purpo chara
1	1077430	GA	INDIVIDUAL	< 1 year	Ryder	C	RENT	2021-02-11	2021-09-13	2021-04-13	Charged ...	2021-05-13	1314167	car
2	1072053	CA	INDIVIDUAL	9 years	MKC Accounting	E	RENT	2021-01-01	2021-12-14	2021-01-15	Fully Paid	2021-02-15	1288686	car
3	1069243	CA	INDIVIDUAL	4 years	Chemat Technology Inc	C	RENT	2021-01-05	2021-12-12	2021-01-09	Charged ...	2021-02-09	1304116	car
4	1041756	TX	INDIVIDUAL	< 1 year	barnes distribution	B	MORTGAGE	2021-02-25	2021-12-12	2021-03-12	Fully Paid	2021-04-12	1272024	car
5	1068350	IL	INDIVIDUAL	10+ years	J&J Steel Inc	A	MORTGAGE	2021-01-01	2021-12-14	2021-01-15	Fully Paid	2021-02-15	1302971	car
6	1062608	CA	INDIVIDUAL	3 years	Studio 94 Corp	C	RENT	2021-07-17	2021-03-16	2021-08-12	Fully Paid	2021-09-12	1294481	car
7	1067441	TX	INDIVIDUAL	10+ years	American Airlines	C	MORTGAGE	2021-11-19	2021-06-14	2021-12-13	Fully Paid	2022-01-13	1301833	car
8	1066424	PA	INDIVIDUAL	10+ years	SCI Mahanoy	A	OWN	2021-06-11	2021-07-14	2021-07-14	Fully Paid	2021-08-14	1291243	car
9	1065254	FL	INDIVIDUAL	10+ years	Tech Data Corp	A	MORTGAGE	2021-09-02	2021-06-15	2021-10-12	Charged ...	2021-11-12	1299335	car
10	1064589	MI	INDIVIDUAL	10+ years	teltow contracting	B	MORTGAGE	2021-02-09	2021-03-16	2021-03-16	Fully Paid	2021-04-16	1298401	car
11	1057766	TX	INDIVIDUAL	10+ years	Ericsson	B	MORTGAGE	2021-07-22	2021-09-13	2021-08-13	Fully Paid	2021-09-13	1289131	car
12	1062734	CA	INDIVIDUAL	3 years	myrvpartsplace.com	B	RENT	2021-09-11	2021-03-13	2021-10-12	Charged ...	2021-11-12	1295018	car
13	1062654	CA	INDIVIDUAL	4 years	AEG LIVE	B	RENT	2021-08-11	2021-10-13	2021-09-13	Fully Paid	2021-10-13	1294929	car
14	1020855	CA	INDIVIDUAL	5 years	henkel corporation	B	RENT	2021-12-11	2021-12-14	2021-12-14	Fully Paid	2022-01-14	1249642	car
15	1060945	IL	INDIVIDUAL	4 years	AXA Assistance	B	RENT	2021-10-11	2021-12-14	2021-12-14	Fully Paid	2022-01-14	1293124	car
16	1060995	RI	INDIVIDUAL	< 1 year	HSA/UWC	B	RENT	2021-12-11	2021-02-14	2021-10-13	Charged ...	2021-11-13	1292578	car
17	1046507	TX	INDIVIDUAL	1 year	Child's Day	B	RENT	2021-12-02	2021-04-16	2021-12-14	Fully Paid	2022-01-14	1277552	car

Check missing value

SELECT * FROM bank_loan_data WHERE id IS NULL;

Query | Query History | Scratch Pad

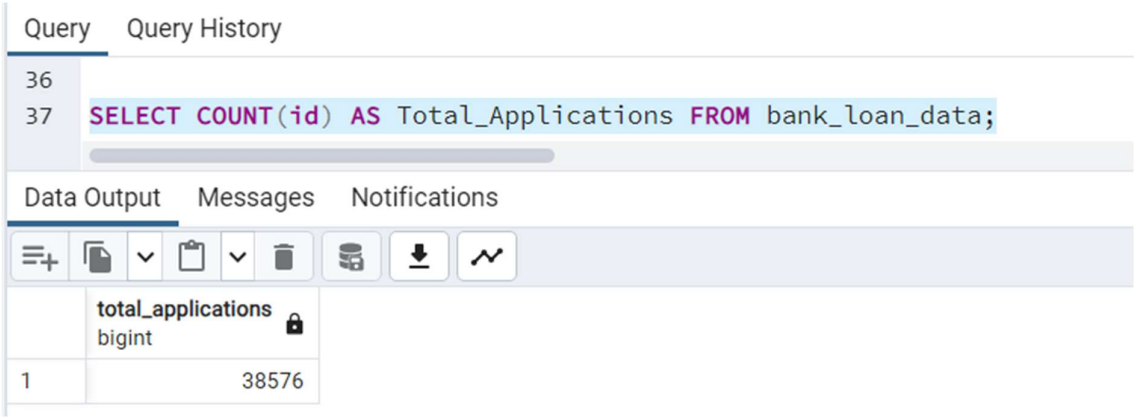
```
SELECT * FROM bank_loan_data WHERE id IS NULL;
```

Data Output | Messages | Notifications

	id [PK] integer	address_state character varying (2)	application_type character varying (20)	emp_length character varying (20)	emp_title character varying (100)	grade character	home_ownership character varying (20)	issue_date date	last_credit_pull_date date	last_pay date

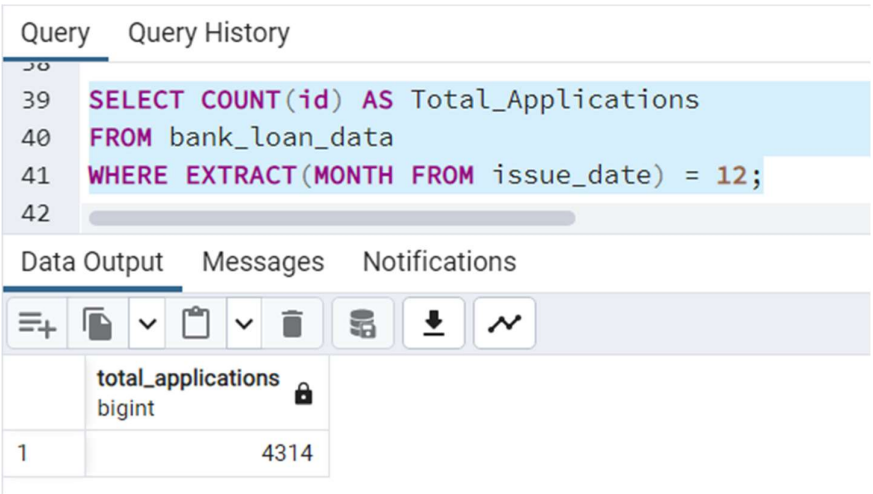
Total Loan Applications

SELECT COUNT(id) AS Total_Applications FROM bank_loan_data;



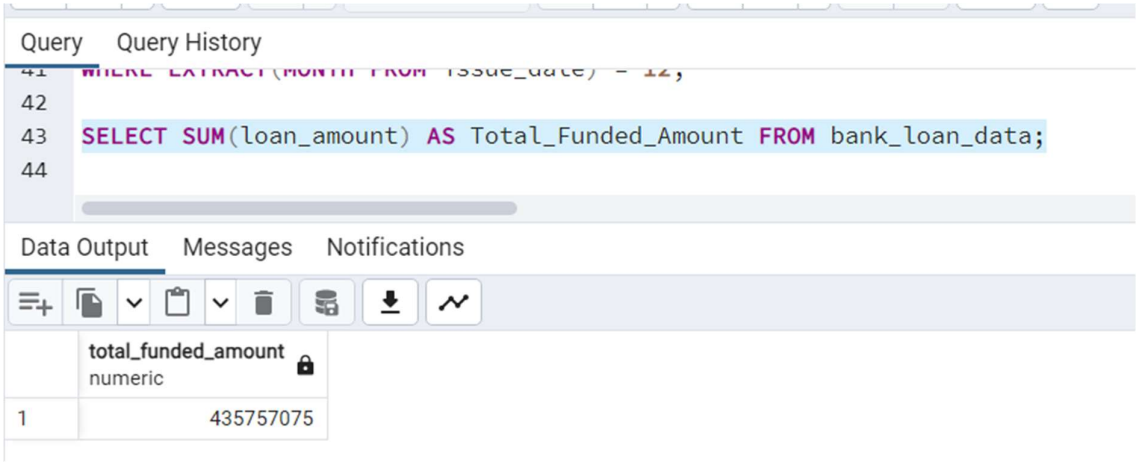
MTD Loan Applications:-

SELECT COUNT(id) AS Total_Applications FROM bank_loan_data WHERE EXTRACT(MONTH FROM issue_date) = 12;



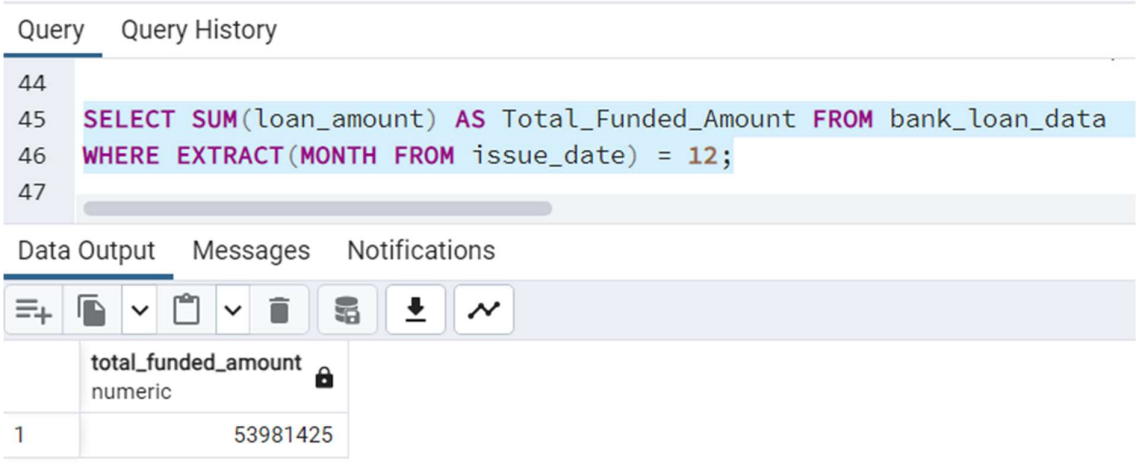
Total Funded Amount

SELECT SUM(loan_amount) AS Total_Funded_Amount FROM bank_loan_data;



MTD Total Funded Amount

SELECT SUM(loan_amount) AS Total_Funded_Amount FROM bank_loan_data WHERE EXTRACT(MONTH FROM issue_date) = 12;



PMTD Total Funded Amount

SELECT SUM(loan_amount) AS Total_Funded_Amount FROM bank_loan_data WHERE EXTRACT(MONTH FROM issue_date) = 11;

```
Query  Query History
44
45  SELECT SUM(loan_amount) AS Total_Funded_Amount FROM bank_loan_data
46  WHERE EXTRACT(MONTH FROM issue_date) = 11;
47
48
```

Data Output | Messages | Notifications

	total_funded_amount numeric
1	47754825

Total Amount Received

SELECT SUM(total_payment) AS Total_Amount_Collected FROM bank_loan_data;

```
Query  Query History
47
48  SELECT SUM(total_payment) AS Total_Amount_Collected FROM bank_loan_data;
49
```

Data Output | Messages | Notifications

	total_amount_collected numeric
1	473070933

Average Interest Rate

SELECT AVG(int_rate)*100 AS Avg_Int_Rate FROM bank_loan_data;

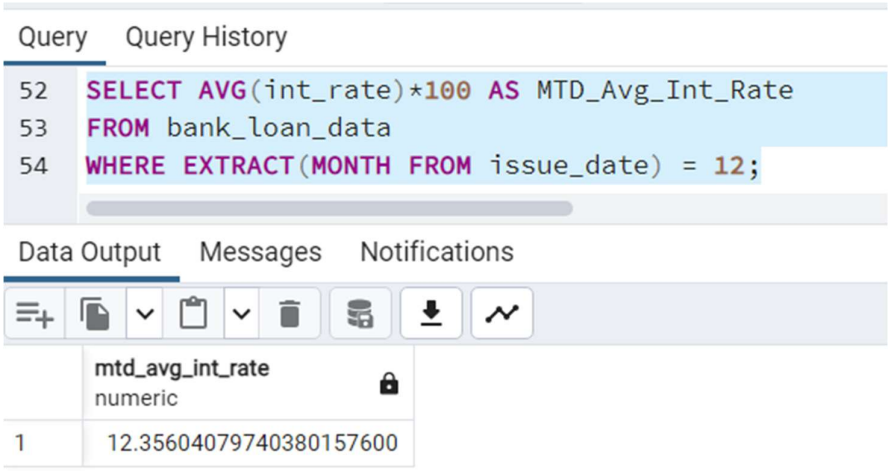
```
Query  Query History
50
51  SELECT AVG(int_rate)*100 AS Avg_Int_Rate FROM bank_loan_data;
```

Data Output | Messages | Notifications

	avg_int_rate numeric
1	12.04883139776026545000

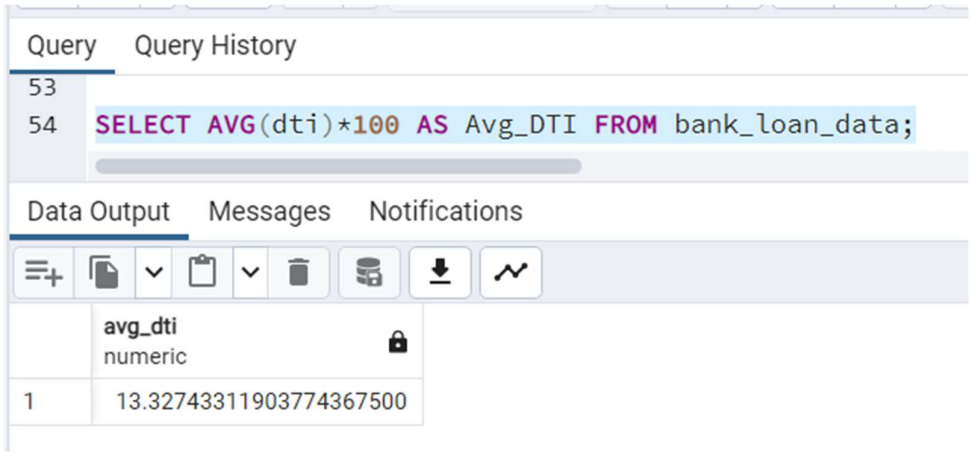
MTD Average Interest

SELECT AVG(int_rate)*100 AS MTD_Avg_Int_Rate FROM bank_loan_data WHERE EXTRACT(MONTH FROM issue_date) = 12;



Avg DTI

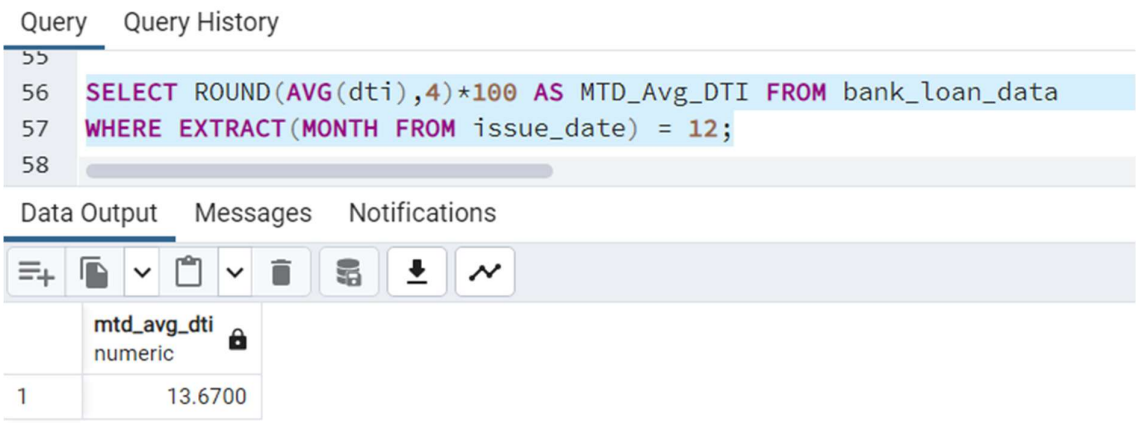
SELECT AVG(dti)*100 AS Avg_DTI FROM bank_loan_data;



MTD Avg DTI

SELECT AVG(dti)*100 AS MTD_Avg_DTI FROM bank_loan_data

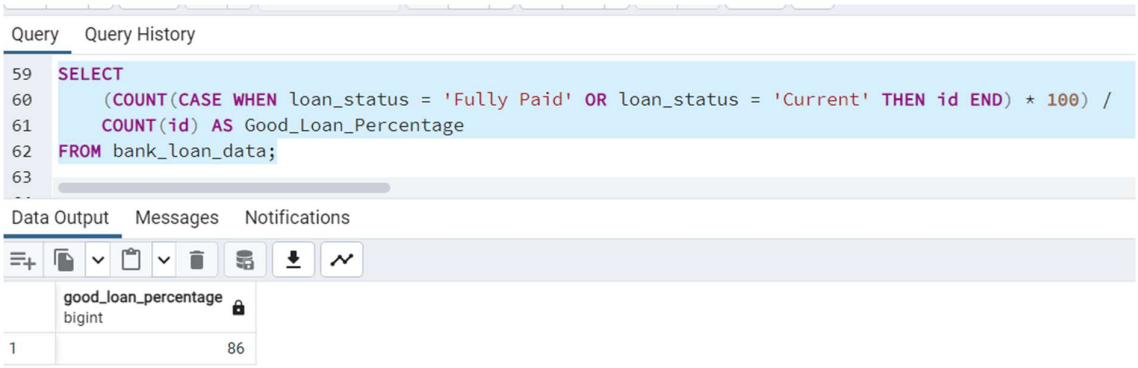
WHERE MONTH(issue_date) = 12;



GOOD LOAN ISSUED

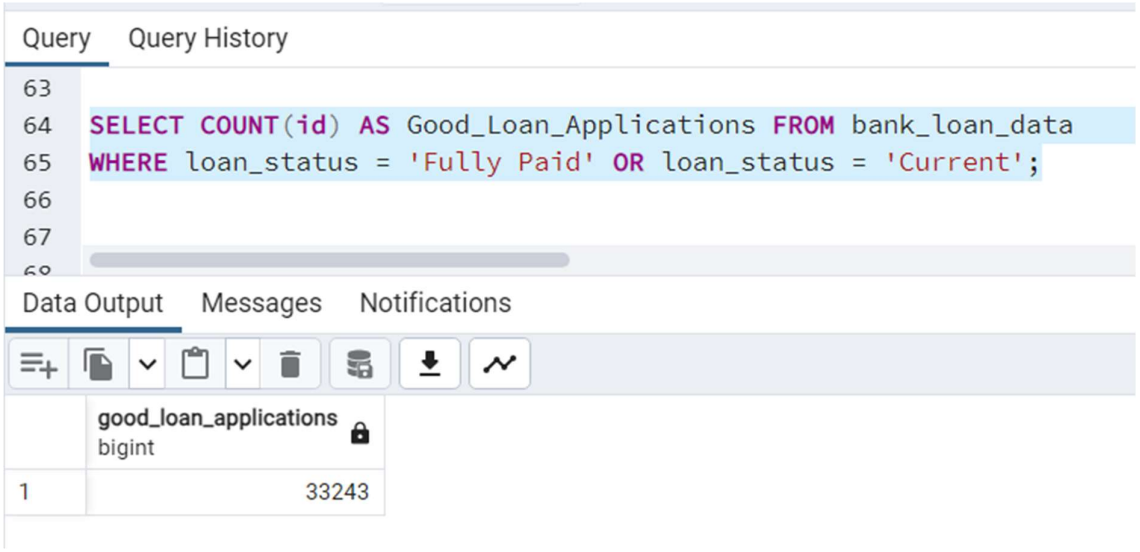
Good Loan Percentage

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



Good Loan Applications

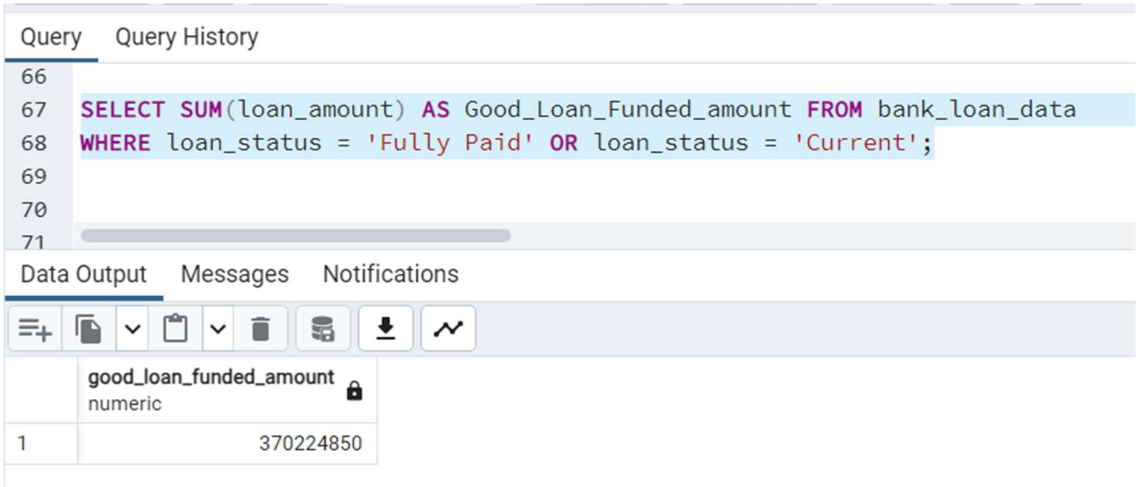
```
SELECT COUNT(id) AS Good_Loan_Applications FROM bank_loan_data
WHERE loan_status = 'Fully Paid' OR loan_status = 'Current';
```



Good Loan Funded Amount

SELECT SUM(loan_amount) AS Good_Loan_Funded_amount FROM bank_loan_data

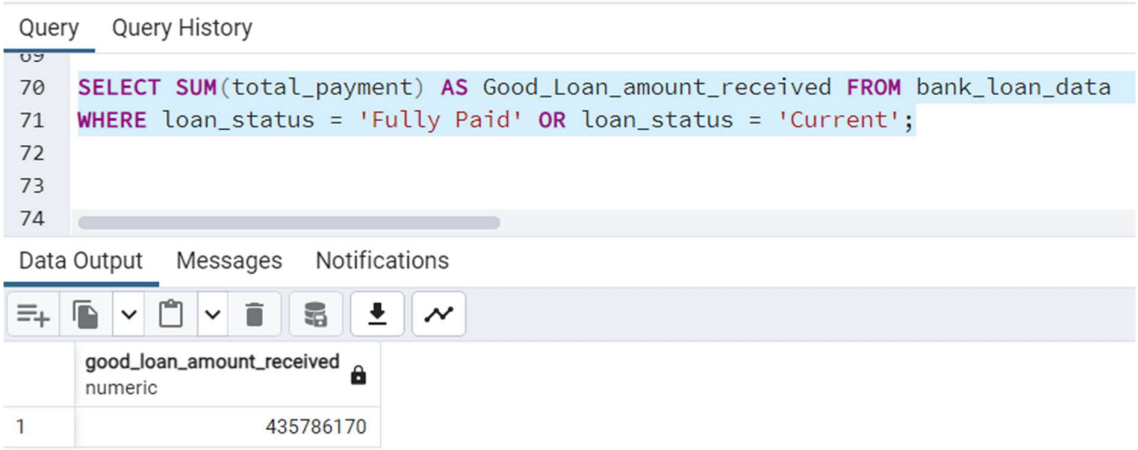
WHERE loan_status = 'Fully Paid' OR loan_status = 'Current';



Good Loan Amount Received

SELECT SUM(total_payment) AS Good_Loan_amount_received FROM bank_loan_data

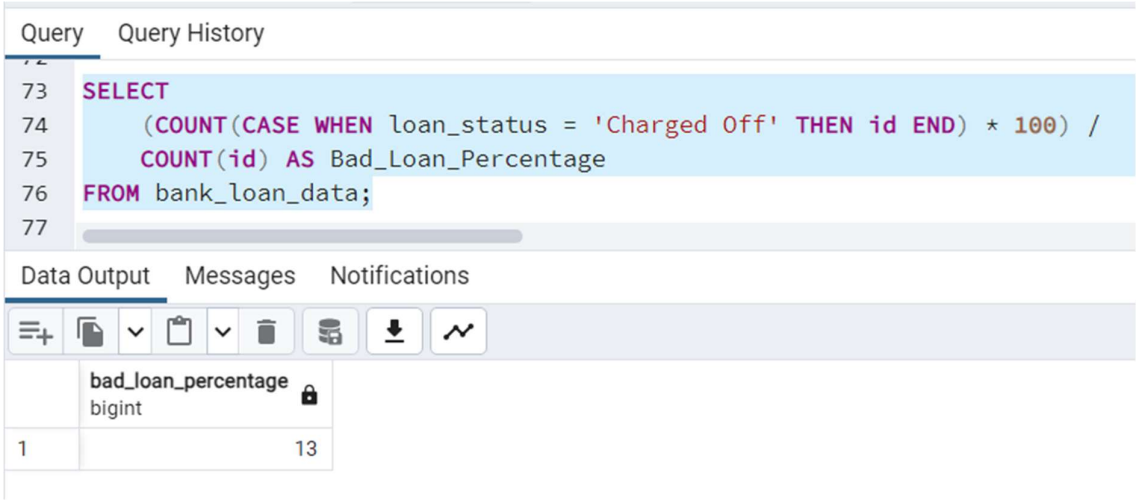
WHERE loan_status = 'Fully Paid' OR loan_status = 'Current';



BAD LOAN ISSUED

Bad Loan Percentage

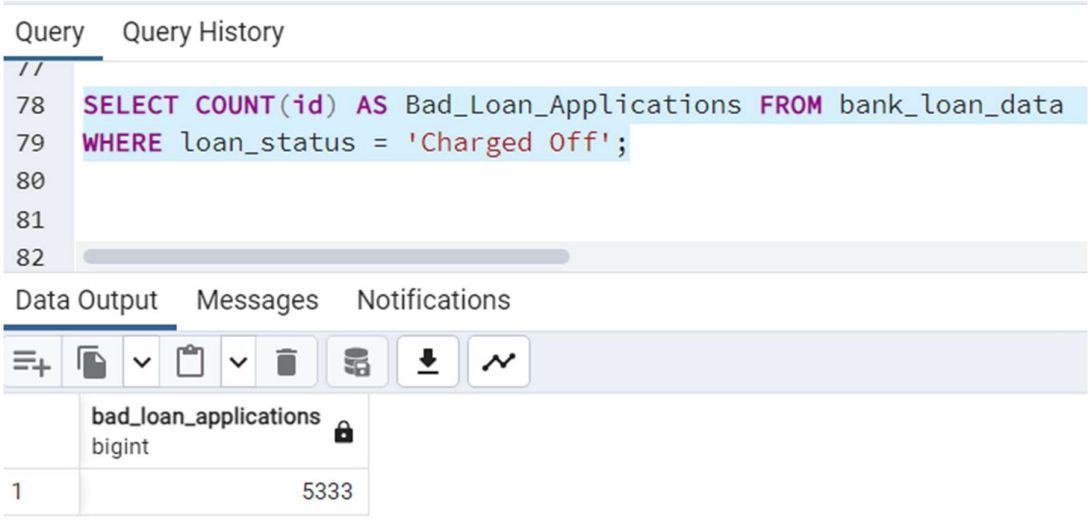
```
SELECT
    (COUNT(CASE WHEN loan_status = 'Charged Off' THEN id END) * 100) /
        COUNT(id) AS Bad_Loan_Percentage
FROM bank_loan_data;
```



Bad Loan Applications

SELECT COUNT(id) AS Bad_Loan_Applications FROM bank_loan_data

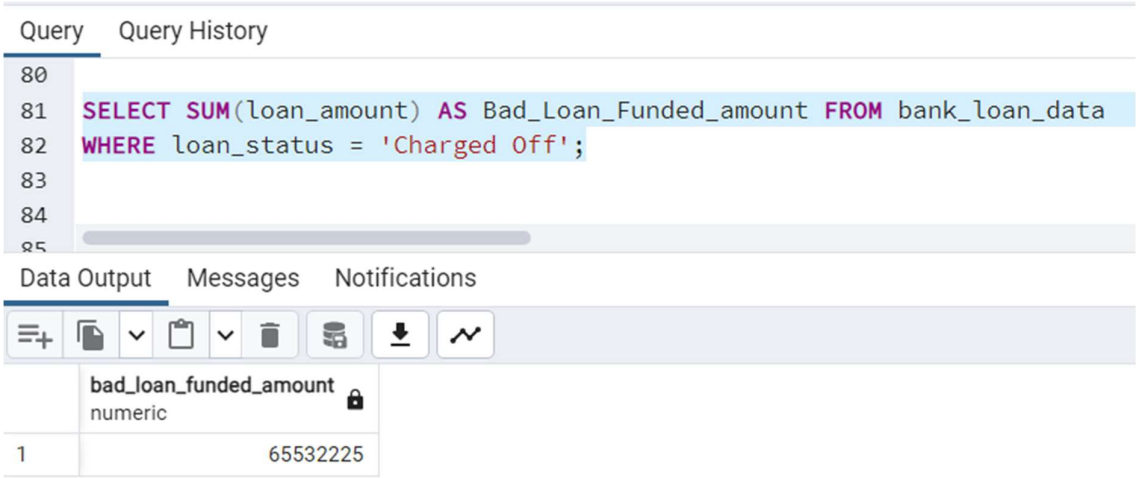
WHERE loan_status = 'Charged Off';



Bad Loan Funded Amount

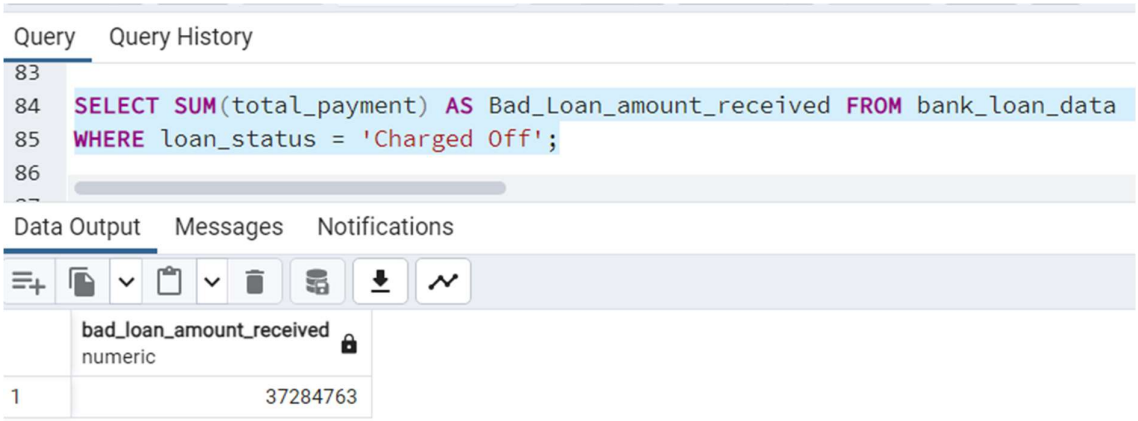
SELECT SUM(loan_amount) AS Bad_Loan_Funded_amount FROM bank_loan_data

WHERE loan_status = 'Charged Off';



Bad Loan Amount Received

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



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
    bank_loan_data
GROUP BY
    loan_status;
```

Query | Query History

```
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
        bank_loan_data
    GROUP BY
        loan_status;
```

Data Output | Messages | Notifications

	loan_status character varying (20)	loancount bigint	total_amount_received numeric	total_funded_amount numeric	interest_rate numeric	dti numeric
1	Current	1098	24199914	18866500	15.0993260473588342	14.7243442622950820
2	Fully Paid	32145	411586256	351358350	11.6410707730595738	13.1673507543941515
3	Charged Off	5333	37284763	65532225	13.8785749109319332	14.0047327957997375

Loan Status of MTD Amount

```
SELECT
    loan_status,
    SUM(total_payment) AS MTD_Total_Amount_Received,
    SUM(loan_amount) AS MTD_Total_Funded_Amount
FROM bank_loan_data
WHERE EXTRACT(MONTH FROM issue_date) = 12
GROUP BY loan_status;
```

Data Output | Messages | Notifications

	loan_status character varying (20)	mtd_total_amount_received numeric	mtd_total_funded_amount numeric
1	Charged Off	5324211	8732775
2	Current	4934318	3946625
3	Fully Paid	47815851	41302025

BANK LOAN REPORT | OVERVIEW

MONTH

Query | Query History

```
107 SELECT
108     EXTRACT(MONTH FROM issue_date) AS Month_Number,
109     TO_CHAR(issue_date, 'Month') AS Month_Name,
110     COUNT(id) AS Total_Loan_Applications,
111     SUM(loan_amount) AS Total_Funded_Amount,
112     SUM(total_payment) AS Total_Amount_Received
113 FROM
114     bank_loan_data
115 GROUP BY
116     EXTRACT(MONTH FROM issue_date), TO_CHAR(issue_date, 'Month')
117 ORDER BY
118     Month_Number;
119
```

Data Output | Messages | Notifications

	month_number numeric	month_name text	total_loan_applications bigint	total_funded_amount numeric	total_amount_received numeric
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

STATE

Query | Query History

```
120  SELECT
121      address_state AS State,
122      COUNT(id) AS Total_Loan_Applications,
123      SUM(loan_amount) AS Total_Funded_Amount,
124      SUM(total_payment) AS Total_Amount_Received
125  FROM bank_loan_data
126  GROUP BY address_state
127  ORDER BY address_state;
128
```

Data Output | Messages | Notifications

	state character varying (2)	total_loan_applications bigint	total_funded_amount numeric	total_amount_received numeric
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

TERM

Query | Query History

```
120  SELECT
121      term AS Term,
122      COUNT(id) AS Total_Loan_Applications,
123      SUM(loan_amount) AS Total_Funded_Amount,
124      SUM(total_payment) AS Total_Amount_Received
125  FROM bank_loan_data
126  GROUP BY term
127  ORDER BY term;
128
```

Data Output | Messages | Notifications

	term character varying (20)	total_loan_applications bigint	total_funded_amount numeric	total_amount_received numeric
1	36 months	28237	273041225	294709458
2	60 months	10339	162715850	178361475

HOME_OWNERSHIP

Query | Query History

```
120  SELECT
121      home_ownership AS Home_Ownership,
122      COUNT(id) AS Total_Loan_Applications,
123      SUM(loan_amount) AS Total_Funded_Amount,
124      SUM(total_payment) AS Total_Amount_Received
125  FROM bank_loan_data
126  GROUP BY home_ownership
127  ORDER BY home_ownership;
128
```

Data Output | Messages | Notifications

	home_ownership character varying (20)	total_loan_applications bigint	total_funded_amount numeric	total_amount_received numeric
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

PURPOSE

Query | Query History

```
120  SELECT
121      purpose AS PURPOSE,
122      COUNT(id) AS Total_Loan_Applications,
123      SUM(loan_amount) AS Total_Funded_Amount,
124      SUM(total_payment) AS Total_Amount_Received
125  FROM bank_loan_data
126  GROUP BY purpose
127  ORDER BY purpose;
128
```

Data Output | Messages | Notifications

	purpose character varying (50)	total_loan_applications bigint	total_funded_amount numeric	total_amount_received numeric
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