

BANK LOAN ANALYSIS

SQL Commands

Total Number of Loan Application-

```
Select count(id) as Total_Loan_Application from loan_data;
```

Total_Loan_Application
38576

Month To Date Total Number of Loan Application-

```
Select count(id) as MTD_Total_Loan_Application from loan_data  
Where month(issue_date) = 12 AND year(issue_date) = 2021;
```

MTD_Total_Loan_Application
4314

Previous Month To Date Total Number of Loan Application-

```
Select count(id) as PMTD_Total_Loan_Application from loan_data  
Where month(issue_date) = 11 AND year(issue_date) = 2021;
```

PMTD_Total_Loan_Application
4035

Total Funded Amount-

```
Select Sum(loan_amount) as Total_Funded_Amount from loan_data;
```

Total_Funded_Amount
435757075

Month to Date Total Funded Amount-

```
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 Total Funded Amount-

```
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

Total Amount Received-

```
Select sum(total_payment) as Total_Amount_Received from loan_data;
```

Total_Amount_Received
473070933

Month to Date Total Amount Received-

```
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 Total Amount Received-

```
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

Average Interest Rate-

```
Select Avg(int_rate) * 100 as Avg_Interest_Rate from loan_data;
```

Avg_Interest_Rate
12.0488314172048

```
Select Round(Avg(int_rate), 4)* 100 as Avg_Interest_Rate from loan_data;
```

Avg_Interest_Rate
12.05

Month To Date Average Interest Rate-

```
Select Round(Avg(int_rate), 4)* 100 as MTD_Avg_Interest_Rate from loan_data  
Where month(issue_date) = 12 AND year(issue_date) = 2021;
```

MTD_Avg_Interest_Rate
12.36

Previous Month To Date Average Interest Rate-

```
Select Round(Avg(int_rate), 4)* 100 as PMTD_Avg_Interest_Rate from loan_data  
Where month(issue_date) = 11 AND year(issue_date) = 2021;
```

PMTD_Avg_Interest_Rate

11.94

Average Debt To Income-

```
Select Round(AVG(dti), 4)* 100 as Avg_DTI from loan_data;
```

Avg_DTI

13.33

Month To Date Average Debt To Income-

```
Select Round(AVG(dti), 4)* 100 as MTD_Avg_DTI from loan_data  
Where month(issue_date) = 12 AND year(issue_date) = 2021;
```

MTD_Avg_DTI

13.67

Previous Month To Date Average Debt To Income-

```
Select Round(AVG(dti), 4)* 100 as PMTD_Avg_DTI from loan_data  
Where month(issue_date) = 11 AND year(issue_date) = 2021;
```

PMTD_Avg_DTI

13.3

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 loan_data;
```

Good_Loan_Percentage

86

Bad Loan Percentage-

```
Select (count(Case When loan_status = 'Charged off' Then id End) * 100) /  
count(id) as Bad_Loan_Percentage from loan_data;
```

Bad_Loan_Percentage

13

Total Number of Good Loan Applications-

```
Select count(id) as Total_Good_loan_App from loan_data  
Where loan_status = 'Fully Paid' OR loan_status = 'Current';
```

Total_Good_loan_App
33243

Total Number of Bad Loan Application-

```
Select count(id) as Total_Bad_loan_App from loan_data
Where loan_status = 'Charged off' ;
```

Total_Bad_loan_App
5333

Total Good Loan Funded Amount-

```
Select sum(loan_amount) as Good_loan_Funded_Amt from loan_data
Where loan_status = 'Fully Paid' OR loan_status = 'Current';
```

Good_loan_Funded_Amt
370224850

Total Bad Loan Funded Amount-

```
Select sum(loan_amount) as Bad_loan_Funded_Amt from loan_data
Where loan_status = 'Charged off';
```

Bad_loan_Funded_Amt
65532225

Total Good Loan Received Amount-

```
Select sum(total_payment) as Good_loan_Received_Amt from loan_data
Where loan_status = 'Fully Paid' OR loan_status = 'Current';
```

Good_loan_Received_Amt
435786170

Total Bad Loan Received Amount-

```
Select sum(total_payment) as Bad_loan_Received_Amt from loan_data
Where loan_status = 'Charged off';
```

Bad_loan_Received_Amt
37284763

Loan Status-

```

Select loan_status,
count(id) as Total_Loan_App,
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 loan_data group by loan_status;

```

loan_status	Total_Loan_App	Total_Amount_Received	Total_Funded_Amount	Interest_Rate	DTI
Fully Paid	32145	411586256	351358350	11.6410707918092	13.1673507557434
Charged Off	5333	37284763	65532225	13.8785749318289	14.0047328005517
Current	1098	24199914	18866500	15.0993260800947	14.7243442736843

Month To Date Loan Status-

```

Select loan_status,
sum(total_payment) as MTD_Total_Amt_Received,
sum(loan_amount) as MTD_Total_Funded_Amt
from loan_data
where month(issue_date) = 12 AND Year(issue_date) = 2021
group by loan_status;

```

loan_status	MTD_Total_Amt_Received	MTD_Total_Funded_Amt
Fully Paid	47815851	41302025
Charged Off	5324211	8732775
Current	4934318	3946625

Month Wise Loan Status-

```

Select
month(issue_date) as Month_Num,
DATENAME(month, issue_date) as Month_Name,
count(id) as Total_Loan_App,
sum(loan_amount) as Total_Funded_Amount,
sum(total_payment) as Total_Received_Amount
from loan_data
group by month(issue_date), DATENAME(month, issue_date)
order by month(issue_date);

```

Month_Num	Month_Name	Total_Loan_App	Total_Funded_Amount	Total_Received_Amount
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

State Wise Loan Status-

```

Select
address_state,
count(id) as Total_Loan_App,
sum(loan_amount) as Total_Funded_Amount,
sum(total_payment) as Total_Received_Amount
from loan_data
group by address_state
order by count(id) desc;

```

address_state	Total_Loan_App	Total_Funded_Amount	Total_Received_Amount					
CA	6894	78484125	83901234					
NY	3701	42077050	46108181					
FL	2773	30046125	31601905					
TX	2664	31236650	34392715					
NJ	1822	21657475	23425159					
IL	1486	17124225	18875941					
PA	1482	15826525	17462908					
VA	1375	15982650	17711443					
GA	1355	15480325	16728040					
MA	1310	15051000	16676279					
OH	1188	12991375	14330148					
MD	1027	11911400	12985170					
AZ	833	9206000	10041986					
WA	805	8855525	9531739					
CO	770	8976000	9845810					
NC	759	8787575	9534813					
CT	730	8435575	9357612					
MI	685	7829900	8543660					
MO	660	7151175	7692732					
MN	592	6302600	6750746	36	WV	167	1830525	1991936
NV	482	5307375	5451443	37	NH	161	1917900	2101386
SC	464	5080475	5462458	38	DE	110	1138100	1269136
WI	446	5070450	5485161	39	WY	79	890750	1046050
OR	436	4720150	4966903	40	MT	79	829525	892047
AL	432	4949225	5492272	41	AK	78	1031800	1108570
LA	426	4498900	5001160	42	SD	63	606150	656514
KY	320	3504100	3792530	43	VT	54	504100	534973
OK	293	3365725	3712649	44	MS	19	139125	149342
KS	260	2872325	3247394	45	TN	17	162175	141522
UT	252	2849225	2952412	46	IN	9	86225	85521
AR	236	2529700	2777875	47	ID	6	59750	65329
DC	214	2652350	2921854	48	NE	5	31700	24542
RI	196	1883025	2001774	49	IA	5	56450	64482
NM	183	1916775	2084485	50	ME	3	9200	10808
HI	170	1850525	2080184					

Loan Term Wise Loan Status-

Select

term,

count(id) as Total_Loan_App,

sum(loan_amount) as Total_Funded_Amount,

sum(total_payment) as Total_Received_Amount

from loan_data

group by term

order by term;

term	Total_Loan_App	Total_Funded_Amount	Total_Received_Amount
36 months	28237	273041225	294709458
60 months	10339	162715850	178361475

Work Experience Wise Loan Status-

```

Select
emp_length,
count(id) as Total_Loan_App,
sum(loan_amount) as Total_Funded_Amount,
sum(total_payment) as Total_Received_Amount
from loan_data
group by emp_length
order by count(id) desc;

```

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

Purpose Wise Loan Status-

```

Select
purpose,
count(id) as Total_Loan_App,
sum(loan_amount) as Total_Funded_Amount,
sum(total_payment) as Total_Received_Amount
from loan_data
group by purpose
order by count(id) desc;

```


purpose	Total_Loan_App	Total_Funded_Amount	Total_Received_Amount
Debt consolidation	18214	232459675	253801871
credit card	4998	58885175	65214084
other	3824	31155750	33289676
home improvement	2876	33350775	36380930
major purchase	2110	17251600	18676927
small business	1776	24123100	23814817
car	1497	10223575	11324914
wedding	928	9225800	10266856
medical	667	5533225	5851372
moving	559	3748125	3999899
house	366	4824925	5185538
vacation	352	1967950	2116738
educational	315	2161650	2248380
renewable_energy	94	845750	898931

Home Ownership Wise Loan Status-

Select

home_ownership,

count(id) as Total_Loan_App,

sum(loan_amount) as Total_Funded_Amount,

sum(total_payment) as Total_Received_Amount

from loan_data

group by home_ownership

order by count(id) desc;

home_ownership	Total_Loan_App	Total_Funded_Amount	Total_Received_Amount
RENT	18439	185768475	201823056
MORTGAGE	17198	219329150	238474438
OWN	2838	29597675	31729129
OTHER	98	1044975	1025257
NONE	3	16800	19053