Dataset consist of 38576 rows and 24 Columns

Columns : 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_grade, term, verification_status, annual_income, dti, installment, int_rate, loan_amount, total_acc, total_payment

SQL Queries and result

A) KPI

i) Total Loan Application(TLA)

```
SELECT COUNT(id) AS Total_loan_application FROM bank_loan;
```

Total_loan_application
38576

ii) MTD_loan_application

```
SELECT COUNT(id) AS  MTD_loan_application FROM bank_loan
 WHERE MONTH(issue_date_c) = 12 AND YEAR(issue_date_c) = 2021;
```

MTD_loan_application
4314

iii) PMTD_loan_application

```
SELECT COUNT(id) AS  PMTD_l
oan_application FROM bank_loan
 WHERE MONTH(issue_date_c) = 11 AND YEAR(issue_date_c) = 2021;
```

PMTD_loan_application
4035

B) Total Funded Amount

i) Total_funded_amount

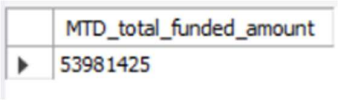
```
SELECT SUM(loan_amount) AS Total_funded_amount FROM bank_loan;
```

Total_funded_amount
435757075

ii) MTD_total_funded_amount

```
SELECT SUM(loan_amount) AS MTD_total_funded_amount FROM bank_loan
```

WHERE MONTH(issue_date_c) = 12 AND YEAR(issue_date_c) = 2021;

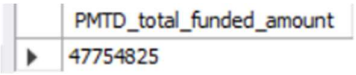


MTD_total_funded_amount
53981425

iii) PMTD_total_funded_amount

SELECT SUM(loan_amount) AS PMTD_total_funded_amount FROM bank_loan

WHERE MONTH(issue_date_c) = 11 AND YEAR(issue_date_c) = 2021;

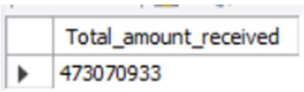


PMTD_total_funded_amount
47754825

C) Total Amount Received

i) Total Amount Received

SELECT SUM(total_payment) AS Total_amount_received FROM bank_loan;

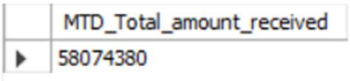


Total_amount_received
473070933

ii) MTD_Total_amount_received

SELECT SUM(total_payment) AS MTD_Total_amount_received FROM bank_loan

WHERE MONTH(issue_date_c) = 12 AND YEAR(issue_date_c) = 2021;



MTD_Total_amount_received
58074380

iii) PMTD_Total_amount_received

SELECT SUM(total_payment) AS PMTD_Total_amount_received FROM bank_loan

WHERE MONTH(issue_date_c) = 11 AND YEAR(issue_date_c) = 2021;

PMTD_Total_amount_received
50132030

D) Average Interest Rate

i) Avg_interest_rate

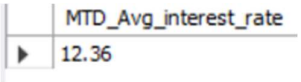
SELECT FORMAT(AVG(int_rate) * 100, 2) AS Avg_interest_rate FROM bank_loan;

Avg_interest_rate
12.05

ii) MTD_Avg_interest_rate

SELECT FORMAT(AVG(int_rate) * 100, 2) AS MTD_Avg_interest_rate FROM bank_loan

WHERE MONTH(issue_date_c) = 12 AND YEAR(issue_date_c) = 2021;



MTD_Avg_interest_rate
12.36

iii) PMTD_Avg_interest_rate

SELECT FORMAT(AVG(int_rate) * 100, 2) AS PMTD_Avg_interest_rate FROM bank_loan
WHERE MONTH(issue_date_c) = 11 AND YEAR(issue_date_c) = 2021;

	PMTD_Avg_interest_rate
▶	11.94

E) Average debt-to-income(dti) Rate

i) Avg_dti_rate

SELECT FORMAT(AVG(dti) * 100, 2) AS Avg_dti_rate FROM bank_loan;

	Avg_dti_rate
▶	13.33

ii) MTD_Avg_dti_rate

SELECT FORMAT(AVG(dti) * 100, 2) AS MTD_Avg_dti_rate FROM bank_loan
WHERE MONTH(issue_date_c) = 12 AND YEAR(issue_date_c) = 2021;

	MTD_Avg_dti_rate
▶	13.67

iii) PMTD_Avg_dti_rate

SELECT FORMAT(AVG(dti) * 100, 2) AS PMTD_Avg_dti_rate FROM bank_loan
WHERE MONTH(issue_date_c) = 11 AND YEAR(issue_date_c) = 2021;

	PMTD_Avg_dti_rate
▶	13.30

GOOD LOAN

A) Good Loan Percentage

SELECT ROUND((COUNT(CASE WHEN loan_status IN ("Fully Paid","Current") THEN id END) * 100)
/ COUNT(id), 2) AS Good_loan_percentage FROM bank_loan;

	Good_loan_percentage
▶	86.18

B) Good Loan Application

SELECT COUNT(id) AS Good_loan_application FROM bank_loan
WHERE loan_status IN ("Fully Paid","Current")

	Good_loan_application
▶	33243

C) Good Loan Funded Amount

SELECT SUM(loan_amount) AS Good_loan_funded_amount FROM bank_loan
WHERE loan_status IN ("Fully Paid","Current")

	Good_loan_funded_amount
▶	370224850

D) Good Loan Received Amount

SELECT SUM(total_payment) AS Good_loan_payment_amount FROM bank_loan

```
WHERE loan_status IN  ("Fully Paid","Current");
```

	Good_loan_payment_amount
▶	435786170

BAD LOAN

A) Good Loan Percentage

```
SELECT ROUND((COUNT(CASE WHEN loan_status IN ("Charged off") THEN id END) *
100)
  / COUNT(id), 2) AS bad_loan_percentage FROM bank_loan;
```

	bad_loan_percentage
▶	13.82

B) Bad Loan Application

```
SELECT COUNT(id) AS bad_loan_application FROM bank_loan
  WHERE loan_status IN  ("Charged off");
```

	bad_loan_application
▶	5333

C) Bad Loan Funded Amount

```
SELECT SUM(loan_amount) AS bad_loan_funded_amount FROM bank_loan
  WHERE loan_status IN  ("Charged off");
```

	bad_loan_funded_amount
▶	65532225

D) Bad Loan Received Amount

```
SELECT SUM(total_payment) AS bad_loan_payment_amount FROM bank_loan
  WHERE loan_status IN  ("Charged off");
```

	bad_loan_payment_amount
▶	37284763

LOAN STATUS

```
SELECT
        loan_status,
   COUNT(id) AS Total_loan_applications,
   SUM(total_payment) AS total_amount_received,
   SUM(loan_amount) AS total_funded_amount,
   AVG(int_rate * 100) AS average_rate,
   AVG(dti * 100) AS dti
FROM bank_loan
```

```
GROUP BY loan_status;
```

loan_status	Total_loan_applications	total_amount_received	total_funded_amount	average_rate	dti
Charged Off	5333	37284763	65532225	13.878574910931917	14.004732795799695
Fully Paid	32145	411586256	351358350	11.641070773058658	13.167350754394164
Current	1098	24199914	18866500	15.0993260473588	14.724344262295068

For last month of the year

```
SELECT
        loan_status,
   SUM(loan_amount) AS MTD_total_funded_amount,
   SUM(total_payment) AS MTD_total_received_amount
FROM bank_loan
WHERE MONTH(issue_date_c) = 12
GROUP BY loan_status
```

loan_status	MTD_total_funded_amount	MTD_total_received_amount
Fully Paid	41302025	47815851
Charged Off	8732775	5324211
Current	3946625	4934318

Monthly Trend by issue date (Line Chart)

```
SELECT
   MONTH(issue_date_c) as Month_Number,
   DATE_FORMAT(issue_date_c, '%M') as Month_Name,
   COUNT(id) AS Total_loan_applications,
   SUM(loan_amount) AS total_funded_amount,
   SUM(total_payment) AS total_amount_received
   FROM bank_loan
   GROUP BY Month_Number, Month_Name
   ORDER BY Month_Number
```

Month_Number	Month_Name	Total_loan_applications	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 (Filled Map)

```
SELECT
   address_state,
   COUNT(id) AS Total_loan_applications,
   SUM(loan_amount) AS total_funded_amount,
   SUM(total_payment) AS total_amount_received
   FROM bank_loan
   GROUP BY address_state
   ORDER BY Total_loan_applications DESC
```

address_state	Total_loan_applications	total_funded_amount	total_amount_received
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

NV	482	5307375	5451443
SC	464	5080475	5462458
WI	446	5070450	5485161
OR	436	4720150	4966903
AL	432	4949225	5492272
LA	426	4498900	5001160
KY	320	3504100	3792530
OK	293	3365725	3712649
KS	260	2872325	3247394
UT	252	2849225	2952412
AR	236	2529700	2777875
DC	214	2652350	2921854
RI	196	1883025	2001774
NM	183	1916775	2084485
HI	170	1850525	2080184
WV	167	1830525	1991936
NH	161	1917900	2101386
DE	110	1138100	1269136
WY	79	890750	1046050
MT	79	829525	892047
AK	78	1031800	1108570
SD	63	606150	656514
VT	54	504100	534973
MS	19	139125	149342
TN	17	162175	141522
IN	9	86225	85521
ID	6	59750	65329
IA	5	56450	64482
NE	5	31700	24542
ME	3	9200	10808

Loan Term Analysis (Donut Chart)

```
SELECT
    term,
    COUNT(id) AS Total_loan_applications,
    SUM(loan_amount) AS total_funded_amount,
    SUM(total_payment) AS total_amount_received
    FROM bank_loan
    GROUP BY term
    ORDER BY Total_loan_applications DESC
```

	term	Total_loan_applications	total_funded_amount	total_amount_received
▶	36 months	28237	273041225	294709458
	60 months	10339	162715850	178361475

Employee Length Analysis (Bar Chart)

```
SELECT
    emp_length,
    COUNT(id) AS Total_loan_applications,
    SUM(loan_amount) AS total_funded_amount,
    SUM(total_payment) AS total_amount_received
    FROM bank_loan
    GROUP BY emp_length
    ORDER BY Total_loan_applications DESC
```

	emp_length	Total_loan_applications	total_funded_amount	total_amount_received
▶	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

Home Ownership Analysis (Treemap)

```
SELECT
    home_ownership,
    COUNT(id) AS Total_loan_applications,
    SUM(loan_amount) AS total_funded_amount,
    SUM(total_payment) AS total_amount_received
    FROM bank_loan
```

```
GROUP BY home_ownership
ORDER BY Total_loan_applications DESC;
```

home_ownership	Total_loan_applications	total_funded_amount	total_amount_received
RENT	18439	185768475	201823056
MORTGAGE	17198	219329150	238474438
OWN	2838	29597675	31729129
OTHER	98	1044975	1025257
NONE	3	16800	19053

Loan Purpose Breakdown (Bar Chart)

```
SELECT
    purpose,
    COUNT(id) AS Total_loan_applications,
    SUM(loan_amount) AS total_funded_amount,
    SUM(total_payment) AS total_amount_received
    FROM bank_loan
    GROUP BY purpose
    ORDER BY Total_loan_applications DESC;
```

purpose	Total_loan_applications	total_funded_amount	total_amount_received
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