KPI'S (to verify the data)

Total Loan Applications

```sql
1    select COUNT(id) as total_loan_applications from bank_loan_data
```

100 % ▾ ● No issues found ◄

⊞ Results 📄 Messages

	total_loan_applications
1	38576

TOTAL Loan Application MOD

```sql
1  ✓ select COUNT(id)as total_loan_applications, MONTH(issue_date) AS issue_date_month
2    from bank_loan_data
3    GROUP BY MONTH(issue_date)
4    ORDER BY MONTH(issue_date);
```

100 % ▾ ● No issues found ◄

⊞ Results 📄 Messages

	total_loan_applications	issue_date_month
1	2332	1
2	2279	2
3	2627	3
4	2755	4
5	2911	5
6	3184	6
7	3366	7
8	3441	8
9	3536	9
10	3796	10
11	4035	11
12	4314	12

It gives total loan applications for MOD for each month
—--

Previous Month Total Applications MOD

```sql
select MONTH(issue_date) as issue_date_previousmonth, COUNT(id) as total_loan_applications
from bank_loan_data
where MONTH(issue_date) = 11 and YEAR(issue_date)=2021
GROUP BY MONTH(issue_date);
```

100 %   ⊘ No issues found   Ln:

⊞ Results 📄 Messages

	issue_date_previousmonth	total_loan_applications
1	11	4035

—--

Total Funded Amount

```sql
select * from bank_loan_data

select SUM(loan_amount) as total_loan_amount from
bank_loan_data;
```

00 %   ⊘ No issues found

⊞ Results 📄 Messages

	total_loan_amount
1	435757075

MTD Total Funded Amount

```
1    select * from bank_loan_data
2
3    select MONTH(issue_date) AS issue_date_month, SUM(loan_amount) as total_loan_amount from
4    bank_loan_data
5    where YEAR(issue_date)= 2021
6    GROUP BY MONTH(issue_date)
7    ORDER  BY MONTH(issue_date);
8
```

100 %   ⊘ No issues found   ◄ ►   Ln: 8   Ch: 1

⊞ Results   📄 Messages

	issue_date_month	total_loan_amount
1	1	25031650
2	2	24647825
3	3	28875700
4	4	29800800
5	5	31738350
6	6	34161475
7	7	35813900
8	8	38149600
9	9	40907725
10	10	44893800
11	11	47754825
12	12	53981425

PMTD Total Funded Amount

```
1    select * from bank_loan_data
2
3    select MONTH(issue_date) AS issue_date_month, SUM(loan_amount) as total_loan_amount from
4    bank_loan_data
5    where MONTH(issue_date)=11 and
6    YEAR(issue_date)= 2021
7    GROUP BY MONTH(issue_date)
8    ORDER  BY MONTH(issue_date);
9
```

100 %   ⊘ No issues found   ◄ ►   Ln:

⊞ Results   📄 Messages

	issue_date_month	total_loan_amount
1	11	47754825

—--

Total Amount Received

```
1   ✓  select * from bank_loan_data
2
3   ✓  select  SUM(total_payment) as total_amount_received from
4      bank_loan_data
5
6
7      |
8
```

100 %   ✓ No issues found

Results | **Messages**

	total_amount_received
1	473070933

MTD Total Amount Received

```
2
3
4   ✓  select MONTH(issue_date) AS issue_date_month, SUM(total_payment) as total_amount_received from
5      bank_loan_data
6      where
7      YEAR(issue_date)= 2021
8      GROUP BY MONTH(issue_date)
9      ORDER  BY MONTH(issue_date);
10
```

100 %   ✓ No issues found   Ln: 10   Ch: 1

Results | **Messages**

	issue_date_month	total_amount_received
1	1	27578836
2	2	27717745
3	3	32264400
4	4	32495533
5	5	33750523
6	6	36164533
7	7	38827220
8	8	42682218
9	9	43983948
10	10	49399567
11	11	50132030
12	12	58074380

PMTD Total Amount Received

```
 3
 4  ∨  select MONTH(issue_date) AS issue_date_month, SUM(total_payment) as total_amount_received from
 5     bank_loan_data
 6     where
 7     MONTH(issue_date) = 11 and
 8  ∨  YEAR(issue_date)= 2021
 9  ∨  GROUP BY MONTH(issue_date)
10  [  ORDER  BY MONTH(issue_date);
11
```

100 % ▼   ✓ No issues found   ◄   ►   Ln: 11   Ch: 1

⊞ Results   📄 Messages

	issue_date_month	total_amount_received
1	11	50132030

Average Interest Rate

```
 1  ∨  select * from bank_loan_data
 2
 3     select AVG(int_rate)*100 AS avg_int_rate from bank_loan_data;
 4
 5  ∨  select MONTH(issue_date) AS issue_date_month, SUM(total_payment) as total_amount_received from
 6     bank_loan_data
 7     where
 8     MONTH(issue_date) = 11 and
 9     YEAR(issue_date)= 2021
10     GROUP BY MONTH(issue_date)
11     ORDER  BY MONTH(issue_date);
12
```

100 % ▼   ✓ No issues found   ◄   ►   Ln: 3   Ch: 1

⊞ Results   📄 Messages

	avg_int_rate
1	12.0488314172048

MTD Average Interest Rate

```
3
4
5   ∨  select MONTH(issue_date) AS issue_date_month, AVG(int_rate)*100 as total_amount_received from
6      bank_loan_data
7      where
8      YEAR(issue_date)= 2021
9      GROUP BY MONTH(issue_date)
10     ORDER  BY MONTH(issue_date);
11
```

100 %   ▼   ✅ No issues found   ◀   ▶   Ln: 11

⊞ Results 📑 Messages

	issue_date_month	total_amount_received
1	1	11.4618867920076
2	2	11.7216322607001
3	3	11.8582908049946
4	4	11.7409074291614
5	5	12.2577945579884
6	6	12.2742430978553
7	7	12.2372370693596
8	8	12.3002353887837
9	9	12.0032324989819
10	10	12.0241228277129
11	11	11.9417175498261
12	12	12.3560408676042

PMTD Average Interest Rate

```
2
3
4
5   ∨  select MONTH(issue_date) AS issue_date_month, AVG(int_rate)*100 as total_amount_received from
6      bank_loan_data
7      where
8      MONTH(issue_date) = 11 and
9      YEAR(issue_date)= 2021
10     GROUP BY MONTH(issue_date)
11     ORDER  BY MONTH(issue_date);
12
```

100 %   ▼   ✅ No issues found   ◀   ▶   Ln: 3   Ch: 1

⊞ Results 📑 Messages

	issue_date_month	total_amount_received
1	11	11.9417175498261

━——

AVG DEBT TO INCOME (DTI)

```
1    select AVG(dti)*100 as average_dti from bank_loan_data;
```

100 %   ▾   ✔ No issues found   ◁

⊞ Results 📄 Messages

	average_dti
1	13.3274331211432

MTD AVG DEBT TO INCOME (DTI)

```
2    |
3    select MONTH(issue_date) as issue_date_month, AVG(dti)*100 as average_dti from bank_loan_data
4    where YEAR(issue_date)=2021
5    group by MONTH(issue_date)
6    order by MONTH(issue_date);
```

100 %   ▾   ✔ No issues found   ◁   ▷   Ln: 6   Ch

⊞ Results 📄 Messages

	issue_date_month	average_dti
1	1	12.9369854160024
2	2	13.4093286596926
3	3	13.2156147751171
4	4	13.2193611582112
5	5	13.3337444194804
6	6	13.2437814069081
7	7	13.2948158120873
8	8	13.3532316144614
9	9	13.2978478612715
10	10	13.414380925747
11	11	13.3027335836364
12	12	13.6655377880425

PMTD AVG DEBT TO INCOME (DTI)

```
7    |
8    select MONTH(issue_date) as issue_date_month, AVG(dti)*100 as average_dti from bank_loan_data
9    where YEAR(issue_date)=2021 and MONTH(issue_date)=11
10   group by MONTH(issue_date)
11   order by MONTH(issue_date);
```

100 %   ▾   ✔ No issues found   ◁   ▷   Ln: 11   Ch: 28

⊞ Results 📄 Messages

	issue_date_month	average_dti
1	11	13.3027335836364

GOOD LOAN

Good Loan Percentage

```sql
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;
```

100 % ⊘ No issues found   Ln: 2

Results Messages

	good_loan_percentage
1	86

Good Loan Total Applications

```sql
select COUNT(CASE WHEN loan_status = 'Fully Paid' or loan_status = 'Current' THEN id
END)  AS good_loan_applications from bank_loan_data;
```

00 % ⊘ No issues found   Ln: 2

Results Messages

	good_loan_applications
1	33243

Good Loan Funded Amount

```sql
1  select SUM(loan_amount) AS good_loan_fundedamount from bank_loan_data
2      where
3      loan_status = 'Fully Paid' or loan_status = 'Current' ;
```

100 % ▾   ✓ No issues found

⊞ Results   📄 Messages

	good_loan_fundedamount
1	370224850

Good Loan Received Amount

```sql
3      loan_status = 'Fully Paid' or loan_status = 'Current' ;
4
5  select SUM(total_payment) AS good_loan_receivedamount from bank_loan_data
6      where
7      loan_status = 'Fully Paid' or loan_status = 'Current' ;
```

100 % ▾   ✓ No issues found

⊞ Results   📄 Messages

	good_loan_receivedamount
1	435786170

BAD LOAN

Bad Loan Percentage

```
SQLQuery2.s...(ADMIN (54))   ⁂ ×  SQLQuery1.sq...(ADMIN (01))
     1  ∨  select (COUNT(CASE WHEN loan_status = 'Charged Off' then id END)*100.00)/COUNT(id) AS
     2      bad_loan_percentage from bank_loan_data
     3  ⌐
```

100 % ▾   ✔ No issues found   ◄ ─────────────────────── ►   Ln: 1

⊞ Results 📄 Messages

	bad_loan_percentage
1	13.8246578183326

Bad Loan Total Applications

```
     1  ∨  select count(id) AS bad_loan_totalapplications| from bank_loan_data
     2      where
     3      loan_status = 'Charged Off' ;
     4
     5  ⌐
```

00 % ▾   ✔ No issues found   ◄

⊞ Results 📄 Messages

	bad_loan_totalapplications
1	5333

Bad Loan Funded Amount

```
1    select SUM(loan_amount) AS bad_loan_fundedamount from bank_loan_data
2      where
3      loan_status = 'Charged Off' ;
4
5    select SUM(total_payment) AS bad_loan_receivedamount from bank_loan_data
6      where
7      loan_status = 'Charged Off' ;
```

100 % ▾   ✅ No issues found ◀

⊞ Results   📄 Messages

	bad_loan_fundedamount
1	65532225

Bad Loan Received Amount

```
3    |  |   loan_status     Charged Off   ;
4    |  |
5    |  select SUM(total_payment) AS bad_loan_receivedamount from bank_loan_data
6    |     where
7    |     loan_status = 'Charged Off' ;
```

100 % ▾   ✅ No issues found ◀

⊞ Results   📄 Messages

	bad_loan_receivedamount
1	37284763

——

Loan Status

```sql
select loan_status, COUNT(id) as total_applications,
SUM(total_payment) as total_amount_received,
sum(loan_amount) as total_amount_funded,
avg(int_rate*100) as average_interest_rate,
avg(dti*100) as average_dti
from bank_loan_data
group by loan_status;
```

100 % | ✅ No issues found | ◄ | Ln: 3

	loan_status	total_applications	total_amount_received	total_amount_funded	average_interest_rate	average_dti
1	Fully Paid	32145	411586256	351358350	11.6410707918092	13.1673507557434
2	Current	1098	24199914	18866500	15.0993260800947	14.7243442736843
3	Charged Off	5333	37284763	65532225	13.8785749318289	14.0047328005517

MTD Loan Status

```sql
select month(issue_date) as monthnumber,
loan_status, COUNT(id) as total_applications,
SUM(total_payment) as total_amount_received,
sum(loan_amount) as total_amount_funded,
avg(int_rate*100) as average_interest_rate,
avg(dti*100) as average_dti
from bank_loan_data
group by loan_status
, month(issue_date)
order by month(issue_date) ;
```

100 % | ✅ No issues found | ◄ | Ln: 10 Ch: 27 TABS

	monthnumber	loan_status	total_applications	total_amount_received	total_amount_funded	average_interest_rate	average_dti
19	7	Charged Off	454	2900150	5325200	14.061101306115	14.083876647568
20	8	Current	122	2450198	1832200	14.9613934462188	13.9977869760917
21	8	Charged Off	452	3010898	5210900	14.2672787560562	13.4421460274194
22	8	Fully Paid	2867	37221122	31106500	11.8768782611192	13.3117858283519
23	9	Charged Off	521	3725704	6471925	13.7402495658901	13.8556621892775
24	9	Fully Paid	2867	37133524	31809375	11.59690620607	13.1573561340941
25	9	Current	148	3124720	2626425	13.7596621605996	14.0557432459114
26	10	Charged Off	546	4050186	6947350	13.6915568480671	13.9214102399703
27	10	Fully Paid	3085	41426950	34942750	11.5654425291613	13.2333776361261
28	10	Current	165	3922431	3003700	15.0823637120651	15.1207878393347
29	11	Charged Off	561	3994065	7511175	14.3080570932591	14.1345098146541
30	11	Fully Paid	3321	42420451	37375675	11.3909756919008	13.0674074099247
31	11	Current	153	3717514	2867975	15.2194771988719	15.3608496443922
32	12	Fully Paid	3452	47815851	41302025	11.7703332126503	13.3745451938834
33	12	Current	213	4934318	3946625	16.0667136731282	15.1206103620281
34	12	Charged Off	649	5324211	8732775	14.2535593842826	14.7357627137411

State

```sql
select
-- month(issue_date) as monthnumber,
address_state, COUNT(id) as total_applications,
SUM(total_payment) as total_amount_received,
sum(loan_amount) as total_amount_funded,
avg(int_rate*100) as average_interest_rate,
avg(dti*100) as average_dti
from bank_loan_data
group by address_state
-- , month(issue_date)
```

	address_state	total_applications	total_amount_received	total_amount_funded	average_interest_rate	average_dti
1	UT	252	2952412	2849225	11.9757143026661	13.2625397023124
2	NC	759	9534813	8787575	12.1220685306038	13.7805665160342
3	WI	446	5485161	5070450	12.0678475544258	13.4769954871803
4	MA	1310	16676279	15051000	11.8714733103304	12.6445190739135
5	MI	685	8543660	7829900	12.006613162421	13.4616204317197
6	TN	17	141522	162175	10.5611765209366	11.5917648462688
7	NH	161	2101386	1917900	11.7891304727112	14.146335433405
8	AK	78	1108570	1031800	12.7915385059821	15.043461520989
9	OK	293	3712649	3365725	11.8953242363987	14.1418088859252
10	KY	320	3792530	3504100	11.8975624837913	14.0750312515183
11	CO	770	9845810	8976000	11.8150259902725	13.6089610557265
12	NV	482	5451443	5307375	12.5403734859218	13.5446888055899
13	SD	63	656514	606150	11.4314286008714	14.8139682184491
14	PA	1482	17462908	15826525	11.6906073057519	13.8422334650018
15	WV	167	1991936	1830525	11.7252694476329	14.883892215833
16	GA	1355	16728040	15480325	11.9620443064018	13.9885534914101
17	RI	196	2001774	1883025	11.8651530743406	12.7241836988476

Query executed successfully.   DESKTOP-HNVU9QQ (16.0 RTM)   DESKTOP-HNVU9QQ\ADMIN ...   Bank_loan_DB   00:00:00   50 r

TERM

```sql
select
-- month(issue_date) as monthnumber,
term, COUNT(id) as total_applications,
SUM(total_payment) as total_amount_received,
sum(loan_amount) as total_amount_funded,
avg(int_rate*100) as average_interest_rate,
avg(dti*100) as average_dti
from bank_loan_data
group by term
-- , month(issue_date)
```

	term	total_applications	total_amount_received	total_amount_funded	average_interest_rate	average_dti
1	36 months	28237	294709458	273041225	11.0309098203626	12.9877263890215
2	60 months	10339	178361475	162715850	14.8288925575506	14.2552113390482

EMP_LENGTH

```sql
select
    emp_length, COUNT(id) as total_applications,
    SUM(total_payment) as total_amount_received,
    sum(loan_amount) as total_amount_funded,
    avg(int_rate*100) as average_interest_rate,
    avg(dti*100) as average_dti
    from bank_loan_data
    group by emp_length
    order by emp_length
    -- , month(issue_date)
```

No issues found   Ln: 11

	emp_length	total_applications	total_amount_received	total_amount_funded	average_interest_rate	average_dti
1	< 1 year	4575	47545011	44210625	11.9176590270846	12.554653552448
2	1 year	3229	35498348	32883125	12.0529668950774	13.0706658437636
3	10+ years	8870	125871616	116115950	12.0926629259695	13.7189346147294
4	2 years	4382	49206961	44967975	12.0714103365219	13.1047033330119
5	3 years	4088	47551832	43937850	12.0169838690864	13.1643272996851
6	4 years	3428	40964850	37600375	12.1668086617603	13.199682041261
7	5 years	3273	40397571	36973625	12.0270363829422	13.4271432957711
8	6 years	2228	27908658	25612650	12.0730431091636	13.8239497295344
9	7 years	1772	22584136	20811725	12.175355549969	13.6785270822151
10	8 years	1476	19025777	17558950	11.9060840255765	13.7697222229231
11	9 years	1255	16516173	15084225	11.9123267049927	13.5386772889345

PURPOSE

```sql
select
    purpose, COUNT(id) as total_applications,
    SUM(total_payment) as total_amount_received,
    sum(loan_amount) as total_amount_funded,
    avg(int_rate*100) as average_interest_rate,
    avg(dti*100) as average_dti
    from bank_loan_data
    group by purpose
    order by purpose
    -- , month(issue_date)
```

No issues found   Ln: 9   Ch: 1

	purpose	total_applications	total_amount_received	total_amount_funded	average_interest_rate	average_dti
1	car	1497	11324914	10223575	10.5921108962479	11.1803540341483
2	credit card	4998	65214084	58885175	11.7306803046417	14.6276510604328
3	Debt consolidation	18214	253801871	232459675	12.5042582864022	14.4844625041295
4	educational	315	2248380	2161650	11.6544762076367	11.307777757239
5	home improvement	2876	36380930	33350775	11.4013421553885	11.1077955513913
6	house	366	5185538	4824925	12.3807104223006	10.6600819546249
7	major purchase	2110	18676927	17251600	10.8689573384221	10.8272227508588
8	medical	667	5851372	5533225	11.5708545911527	12.2153823365087
9	moving	559	3999899	3748125	11.5919677877202	11.6834883725255
10	other	3824	33289676	31155750	11.8585277384802	12.2875392332526
11	renewable_energy	94	898931	845750	11.4962766581076	11.8180851323253
12	small business	1776	23814817	24123100	13.0295326610238	11.1399718476109
13	vacation	352	2116738	1967950	10.8752841140482	12.0951420261752
14	wedding	928	10266856	9225800	11.8929849210966	12.2616487059743

HOME OWNERSHIP

```sql
select
    home_ownership, COUNT(id) as total_applications,
    SUM(total_payment) as total_amount_received,
    sum(loan_amount) as total_amount_funded,
    avg(int_rate*100) as average_interest_rate,
    avg(dti*100) as average_dti
    from bank_loan_data
    group by home_ownership
    order by home_ownership
-- , month(issue_date)
```

100 %   ✓ No issues found   Ln: 3

Results | Messages

	home_ownership	total_applications	total_amount_received	total_amount_funded	average_interest_rate	average_dti
1	MORTGAGE	17198	238474438	219329150	11.8023706413784	13.1702575903906
2	NONE	3	19053	16800	8.69666660825411	11.746667077144
3	OTHER	98	1025257	1044975	12.0409183812385	11.2519387544218
4	OWN	2838	31729129	29597675	11.886377740255	13.2402043744308
5	RENT	18439	201823056	185768475	12.3042958095145	13.4987439681047