**Bank Loan Analytics**

**1. Loan Applications**

1.1 Total Loan Applications

select COUNT(id) as total\_loan\_applications

from bank\_loan\_data;



Counts all id values in bank\_loan\_data to get the **total number of loan applications**.

1.2 MTD Loan Applications

select COUNT(id) as MTD\_total\_applications

from bank\_loan\_data

where MONTH(issue\_date) = 12;



Counts all applications (id) where the loan issue\_date falls in **December**, giving the **MTD (Month-to-Date) total applications**.

1.3 PMTD Loan Application

select COUNT(id) as PMTD\_total\_applications

from bank\_loan\_data

where MONTH(issue\_date) = 11;



Counts all applications (id) with issue\_date in **November**, giving the **previous month’s total applications**.

**2. Funded Amount**

2.1 Total Funded Amount

select sum(loan\_amount) as total\_funded\_amount

from bank\_loan\_data;



Sums all loan\_amount values to get the **total amount funded across all loans**.

2.2 MTD Total Funded Amount

select sum(loan\_amount) as MTD\_total\_funded\_amount

from bank\_loan\_data

where MONTH(issue\_date) = 12;



Calculates the **total funded loan amount in December** by summing loan\_amount where issue\_date is in month 12.

2.3 PMTD Total Funded Amount

select sum(loan\_amount) as PMTD\_total\_funded\_amount

from bank\_loan\_data

where MONTH(issue\_date) = 11;



Calculates the **total funded loan amount in November** by summing loan\_amount where issue\_date is in month 11.

**3. Amount Received**

3.1 Total Amount Received

select sum(total\_payment) as total\_amount\_received

from bank\_loan\_data;



Sums all total\_payment values to get the **total amount repaid by borrowers**.

3.2 MTD Total Amount Received

select sum(total\_payment) as MTD\_total\_amount\_received

from bank\_loan\_data

where MONTH(issue\_date) = 12;



Sums total\_payment for loans issued in **December** to get the **MTD total amount received**.

3.3 PMTD Total Amount Received

select sum(total\_payment) as PMTD\_total\_amount\_received

from bank\_loan\_data

where MONTH(issue\_date) = 11;



Sums total\_payment for loans issued in **November** to get the **PMTD total amount received**.

4. Interest Rate

4.1 Average Interest Rate

select round(avg(int\_rate) \* 100, 2) as avg\_int\_rate

from bank\_loan\_data;



Calculates the **average loan interest rate** by taking the mean of int\_rate and converting it to a percentage.

4.2 MTD Average Interest Rate

select round(avg(int\_rate) \* 100, 2) as MTD\_avg\_int\_rate

from bank\_loan\_data

where MONTH(issue\_date) = 12;



Calculates the **average interest rate for loans issued in December**, expressed as a percentage.

4.3 PMTD Average Interest Rate

select round(avg(int\_rate) \* 100, 2) as PMTD\_avg\_int\_rate

from bank\_loan\_data

where MONTH(issue\_date) = 11;



Calculates the **average interest rate** for loans issued in **November**, multiplied by 100 to show as a percentage.

5. DTI

5.1 Average DTI

select round(avg(dti)\*100, 2) as avg\_dti

from bank\_loan\_data;



Calculates the **average debt-to-income ratio** across all loans and multiplies by 100 to express it as a percentage.

5.2 MTD Average DTI

select round(avg(dti)\*100, 2) as MTD\_avg\_dti

from bank\_loan\_data

where MONTH(issue\_date) = 12;



Calculates the **average debt-to-income ratio** for loans issued in **December**, expressed as a percentage.

5.3 PMTD Average DTI

select round(avg(dti)\*100, 2) as PMTD\_avg\_dti

from bank\_loan\_data

where MONTH(issue\_date) = 11;



Finds the **average debt-to-income ratio** for loans issued in **November**, multiplying by 100 to show it as a percentage.

**6. Good Loan Issued**

6.1 Good Loan Percentage

select

cast((count(case

when loan\_status = 'Fully Paid' or loan\_status = 'Current' then id

end) \* 100.0) / count(id) as decimal(10,2)) as good\_loan\_percentage

from bank\_loan\_data;



Calculates the **percentage of good loans** by dividing the number of loans with status 'Fully Paid' or 'Current' by the total loan count, then multiplying by 100.

6.2 Good Loan Applications

select count(id) as good\_loan\_applications

from bank\_loan\_data

where loan\_status = 'Fully Paid' or loan\_status = 'Current';



Counts all loan applications where the status is 'Fully Paid' or 'Current', representing the **total number of good loans**.

6.3 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';



Sums the loan\_amount for loans with status 'Fully Paid' or 'Current' to get the **total funded amount of good loans**.

6.4 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';



Sums total\_payment for loans with status 'Fully Paid' or 'Current' to get the **total amount received from good loans**.

**7. Bad Loan Issued**

7.1 Bad Loan Percentage

select

(count(case

when loan\_status = 'Charged Off' then id

end) \* 100.0) / count(id) as bad\_loan\_percentage

from bank\_loan\_data;



Calculates the **percentage of bad loans** by dividing the number of 'Charged Off' loans by total loans, then multiplying by 100.

7.2 Bad Loan Applications

select count(id) as bad\_loan\_applications

from bank\_loan\_data

where loan\_status = 'Charged Off';



Counts all loan applications with status 'Charged Off', representing the **total number of bad loans**.

7.3 Bad Loan Funded Amount

select sum(loan\_amount) as bad\_loan\_funded\_amount

from bank\_loan\_data

where loan\_status = 'Charged Off';



Sums the loan\_amount of all 'Charged Off' loans to get the **total funded amount for bad loans**.

7.4 Bad Loan Amount Received

select sum(total\_payment) as bad\_loan\_amount\_received

from bank\_loan\_data

where loan\_status = 'Charged Off';



Sums total\_payment for all 'Charged Off' loans to get the **total amount received from bad loans**.

**8. Loan Status**

select

loan\_status,

count(id) as loan\_count,

sum(total\_payment) as total\_amount\_received,

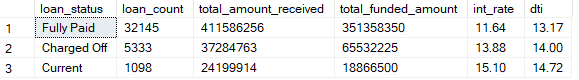
sum(loan\_amount) as total\_funded\_amount,

avg(int\_rate \* 100) as int\_rate,

avg(dti \* 100) as dti

from bank\_loan\_data

group by loan\_status;



Summarizes each **loan status** with the total loans, total payments received, total funded amount, average interest rate, and average DTI.

select

loan\_status,

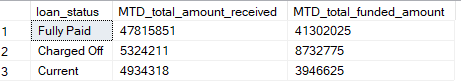
SUM(total\_payment) as MTD\_total\_amount\_received,

SUM(loan\_amount) as MTD\_total\_funded\_amount

from bank\_loan\_data

where MONTH(issue\_date) = 12

group by loan\_status;



Summarizes **December loans** by status, showing the total amount received and total funded amount.

**B. Bank Loan Report | Overview**

1. Month

select

MONTH(issue\_date) as month\_number,

DATENAME(MONTH, issue\_date) as month\_name,

COUNT(id) as total\_loan\_applications,

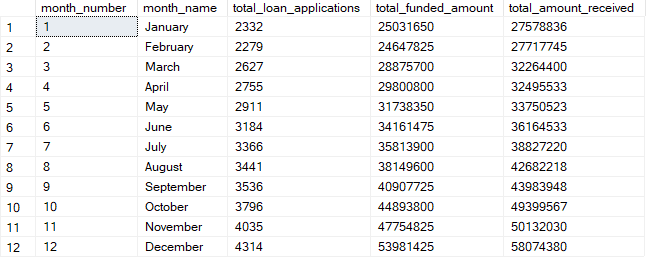
SUM(loan\_amount) as total\_funded\_amount,

SUM(total\_payment) as total\_amount\_received

from bank\_loan\_data

group by MONTH(issue\_date), DATENAME(month, issue\_date)

order by month(issue\_date);



Provides a **monthly breakdown** of loan applications, funded amounts, and payments received, ordered by month.

2. State

select address\_state as state,

count(id) as total\_loan\_applications,

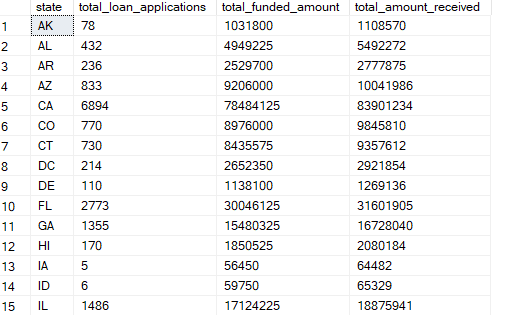
sum(loan\_amount) as total\_funded\_amount,

sum(total\_payment) as total\_amount\_received

from bank\_loan\_data

group by address\_state

order by address\_state;



Summarizes loans by **state**, showing total applications, funded amounts, and payments received.

3. Term

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\_data

group by term

order by term;



Summarizes loans by **term length**, showing total applications, funded amounts, and payments received.

4. Employee length

SELECT emp\_length AS employee\_Length,

COUNT(id) AS total\_Loan\_Applications,

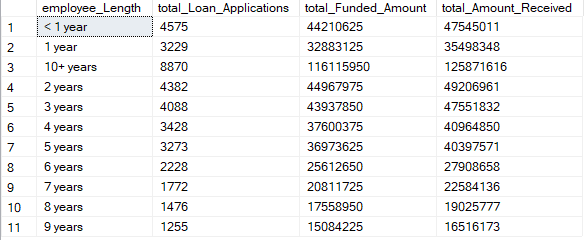
SUM(loan\_amount) AS total\_Funded\_Amount,

SUM(total\_payment) AS total\_Amount\_Received

FROM bank\_loan\_data

GROUP BY emp\_length

ORDER BY emp\_length



Summarizes loans by **borrower’s employment length**, showing total applications, funded amounts, and payments received.

5. Purpose

SELECT purpose,

COUNT(id) AS total\_loan\_applications,

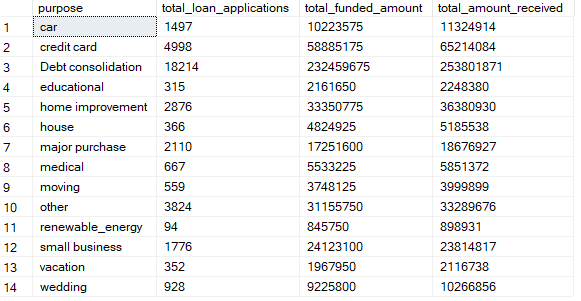
SUM(loan\_amount) AS total\_funded\_amount,

SUM(total\_payment) AS total\_amount\_received

FROM bank\_loan\_data

GROUP BY purpose

ORDER BY purpose



Summarizes loans by **purpose**, showing total applications, funded amounts, and payments received.

6. Home Ownership

SELECT home\_ownership AS home\_ownership,

COUNT(id) AS total\_loan\_applications,

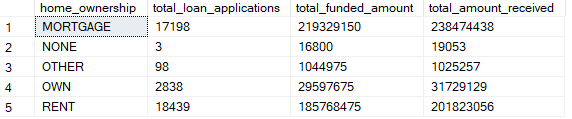
SUM(loan\_amount) AS total\_funded\_amount,

SUM(total\_payment) AS total\_amount\_received

FROM bank\_loan\_data

GROUP BY home\_ownership

ORDER BY home\_ownership



Summarizes loans by **home ownership status**, showing total applications, funded amounts, and payments received.