**Bank Loan Analysis SQL Queries**

1. To find out the total number of Loan Applications:

SELECT COUNT(id)

FROM bank\_loan\_data

1. To find MTD Loan Applications:

SELECT COUNT(id) AS MTD\_Loan\_Applications

FROM bank\_loan\_data

WHERE MONTH(issue\_date) = 12

1. To find the PMTD Loan Applications:

SELECT COUNT(id) AS PMTD\_Loan\_Applications

FROM bank\_loan\_data

WHERE MONTH(issue\_date) = 11

1. To find MoM Change in Loan Applications:

SELECT

CAST(

ROUND(

(

(SELECT COUNT(id) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021) -

(SELECT COUNT(id) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021)

) \* 100.0 /

NULLIF(

(SELECT COUNT(id) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021), 0

), 2

) AS DECIMAL(10, 2)

) AS MoM\_Change\_Percentage

1. To find out the Total Funded Amount:

SELECT SUM(loan\_amount) AS Total\_Funded\_Amount

FROM bank\_loan\_data

1. To find MTD Funded Amount:

SELECT SUM(loan\_amount) AS PMTD\_Funded\_Amount

FROM bank\_loan\_data

WHERE MONTH(issue\_date) = 11

1. To find PMTD Funded Amount:

SELECT SUM(loan\_amount) AS PMTD\_Funded\_Amount

FROM bank\_loan\_data

WHERE MONTH(issue\_date) = 11

1. To find MoM Change in Funded Amount:

SELECT

CAST(

ROUND(

(

(SELECT SUM(loan\_amount) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021) -

(SELECT SUM(loan\_amount) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021)

) \* 100.0 /

NULLIF(

(SELECT SUM(loan\_amount) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021), 0

), 2

) AS DECIMAL(10, 2)

) AS MoM\_Change\_Percentage;

1. To find out the Total Amount Received:

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

FROM bank\_loan\_data

1. To find out MTD Amount Received:
2. To find out PMTD Amount Received:
3. To find MoM Change in Amount Received:

SELECT

CAST(

ROUND(

(

(SELECT SUM(total\_payment) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021) -

(SELECT SUM(total\_payment) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021)

) \* 100.0 /

NULLIF(

(SELECT SUM(total\_payment) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021), 0

), 2

) AS DECIMAL(10, 2)

) AS MoM\_Change\_Percentage;

1. To find out Average Interest Rates across all loans:

SELECT (ROUND(AVG(int\_rate), 4) \* 100) AS Average\_Interest\_Rate

    FROM bank\_loan\_data

1. To find out MTD Average Interest Rates(for December):

SELECT (ROUND(AVG(int\_rate), 4) \* 100) AS MTD\_Average\_Interest\_Rate

FROM bank\_loan\_data

WHERE MONTH(issue\_date) = 12;

1. To find MoM Variations in Average Interest Rates:

SELECT

CAST(

ROUND(

(

(SELECT AVG(int\_rate) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021) -

(SELECT AVG(int\_rate) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021)

) \* 100.0 /

NULLIF(

(SELECT AVG(int\_rate) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021), 0

), 2

) AS DECIMAL(10, 2)

) AS MoM\_Change\_Percentage;

1. To find out Average Debt-to-Interest Ratio(DTI) across all loans:

SELECT ROUND(AVG(dti), 4) \* 100 AS Average\_DTI

FROM bank\_loan\_data

1. To find out MTD Average Debt-to-Interest Ratio(DTI)(for December):

SELECT ROUND(AVG(dti), 4) \* 100 AS MTD\_Average\_DTI

FROM bank\_loan\_data

WHERE MONTH(issue\_date) = 12;

1. To find out PMTD Average Debt-to-Interest Ratio(DTI)):

SELECT ROUND(AVG(dti), 4) \* 100 AS PMTD\_Average\_DTI

FROM bank\_loan\_data

WHERE MONTH(issue\_date) = 11;

1. To find MoM Variations in Average Debt-to-Interest Ratio(DTI):

SELECT

CAST(

ROUND(

(

(SELECT AVG(dti) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021) -

(SELECT AVG(dti) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021)

) \* 100.0 /

NULLIF(

(SELECT AVG(dti) FROM bank\_loan\_data WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021), 0

), 2

) AS DECIMAL(10, 2)

) AS MoM\_Change\_Percentage;

1. To find out the Good Loan Percentage across all loans:

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

1. To find out the Good Loan Applications across all loans:

SELECT COUNT(loan\_status) AS Good\_Loan\_Applications

FROM bank\_loan\_data

WHERE loan\_status = 'Fully Paid' OR loan\_status = 'Current';

1. To find out 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';

1. To find out 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';

1. To find out the Bad Loan Percentage across all loans:

SELECT

(COUNT(CASE WHEN loan\_status = 'Charged Off' THEN id END) \* 100)/ COUNT(id) AS Bad\_Loan\_Percentage

FROM bank\_loan\_data

1. To find out the Bad Loan Applications across all loans:

SELECT COUNT(loan\_status) AS Bad\_Loan\_Applications

FROM bank\_loan\_data

WHERE loan\_status = 'Charged Off';

1. To find out Bad Loan Funded Amount:

SELECT SUM(loan\_amount) AS Bad\_Loan\_Funded\_Amount

FROM bank\_loan\_data

WHERE loan\_status = 'Charged Off';

1. To find out Bad Loan Amount Received:

SELECT SUM(total\_payment) AS Bad\_Loan\_Amount\_Received

FROM bank\_loan\_data

WHERE loan\_status = 'Charged Off';

1. To analyse the Loan status across all the loans:

SELECT

COUNT(id) AS Total\_Loan\_Applications,

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

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

AVG(int\_rate) AS Interest\_Rate,

AVG(dti \* 100) AS DTI

FROM bank\_loan\_data

GROUP BY loan\_status;

1. To carry out the MTD Loan status analysis(for December):

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;

30) Analysis w.r.t. 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), DATENAME(MONTH, issue\_date);

31) Analysis w.r.t. Region (State):

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\_data

GROUP BY address\_state

ORDER BY address\_state;

32) Analysis w.r.t. Loan term:

SELECT

term AS 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;

33) Analysis w.r.t Employment Lengths:

SELECT

emp\_length AS Employment\_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;

34) Analysis w.r.t. Loan purpose:

SELECT

purpose AS 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;

35) Analysis w.r.t. 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;