Query Document: Financial Loan

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|  | Requirement | SQL Query | Output |
| 1. | -Total loan application  -Month-to-Date (MTD)  -Previous Month-to-Date | SELECT COUNT(id) AS Total\_Loan\_Application FROM bank\_loan\_data  --Monitor month-to-date (MTD) loan applications  SELECT COUNT(id) AS MTD\_Total\_Loan\_Applications FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021  --Check previous month loan applications  SELECT COUNT(id) AS PMTD\_Total\_Loan\_Applications FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021 |  |
| 2. | -Total funded amount  -MTD  -PMTD | --Calculate total loan amount issued to customers for the year  SELECT SUM(loan\_amount) AS Total\_funded\_Amount FROM bank\_loan\_data  --Calculate MTD total loan amount issued to customers for the year  SELECT SUM(loan\_amount) AS MTD\_Total\_funded\_Amount FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021  --Calculate previous MTD total loan amount issued to customers for the year  SELECT SUM(loan\_amount) AS PMTD\_Total\_funded\_Amount FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021 |  |
| 3. | -Total Amount received  -MTD  -PMTD | --Calculate total amount received from customers  SELECT SUM(total\_payment) AS Total\_amount\_receved FROM bank\_loan\_data  --Calculate MTD total amount received from customers  SELECT SUM(total\_payment) AS MTD\_Total\_amount\_receved FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021  --Calculate PMTD total amount received from customers  SELECT SUM(total\_payment) AS PMTD\_Total\_amount\_receved FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021 |  |
| 4. | **-**Average Interest Rate  -MTD  -PMTD | --Calculate average interest rate  SELECT ROUND(AVG(int\_rate), 4) \* 100 AS Avg\_interest\_rate FROM bank\_loan\_data  --Calculate MTD average interest rate  SELECT ROUND(AVG(int\_rate), 4) \* 100 AS MTD\_Avg\_interest\_rate FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021  --Calculate PMTD average interest rate  SELECT ROUND(AVG(int\_rate), 4) \* 100 AS PMTD\_Avg\_interest\_rate FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021 |  |
| 5. | -Average Debt-to-Income Ratio  -MTD  -PMTD | --Calculate average debt to income ratio  SELECT ROUND(AVG(dti), 4) \* 100 AS AVG\_DTI FROM bank\_loan\_data  --Calculate MTD average debt to income ratio  SELECT ROUND(AVG(dti), 4) \* 100 AS MTD\_AVG\_DTI FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 12 AND YEAR(issue\_date) = 2021  --Calculate PMTD average debt to income ratio  SELECT ROUND(AVG(dti), 4) \* 100 AS PMTD\_AVG\_DTI FROM bank\_loan\_data  WHERE MONTH(issue\_date) = 11 AND YEAR(issue\_date) = 2021 |  |
|  |  | **Good Loan v Bad Loan** |  |
| 6. | -Good Loan Application Percentage | --Good Loan Application Percentage  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 |  |
| 7. | -Good Loan Applications | -- Good loan applications  SELECT COUNT (id) AS Good\_Loan\_Applications FROM bank\_loan\_data  WHERE loan\_status = 'Fully Paid' OR loan\_status = 'Current' |  |
| 8. | - Good Loan Funded Amount | -- 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' |  |
| 9. | -Good Loan Total Received Amount | --Good Loan Total Received Amount  SELECT SUM (total\_payment) AS Good\_Loan\_Received\_Amount  FROM bank\_loan\_data  WHERE loan\_status = 'Fully Paid' OR loan\_status = 'Current' |  |
|  |  | **Bad Loan** |  |
| 10. | **Bad Loan Application Percentage** | --Bad Loan Application Percentage  SELECT (COUNT(CASE WHEN loan\_status = 'Charged Off' THEN id END) \* 100)  /  COUNT (id) AS Bad\_loan\_percentage  FROM bank\_loan\_data |  |
| 11. | **Bad Loan Applications** | --Bad Loan Applications  SELECT COUNT (id)  FROM bank\_loan\_data AS Bad\_Loan\_Applications  WHERE loan\_status = 'Charged Off' |  |
| 12. | **Bad Loan Funded Amount** | --Bad Loan Funded Amount  SELECT SUM (loan\_amount) AS Bad\_loan\_Funded\_Amount  FROM bank\_loan\_data  WHERE loan\_status = 'Charged Off' |  |
| 13. | **Bad Loan Total Received Amount** | --Bad Loan Total Received Amount  SELECT SUM (total\_payment) AS Bad\_Loan\_Total\_Received\_Amount  FROM bank\_loan\_data  WHERE loan\_status = 'Charged Off' |  |
|  | **Loan Status Grid View** | SELECT  loan\_status,  COUNT(id) AS Total\_Loan\_Applications,  SUM(loan\_amount) AS Total\_Funded\_Amount,  SUM(total\_payment) AS Total\_Amount\_Received,  AVG (int\_rate \* 100) AS Interest\_Rate,  AVG(dti \* 100) AS DTI  FROM bank\_loan\_data  GROUP BY loan\_status  SELECT  loan\_Status,  SUM(loan\_amount) AS MTD\_Funded\_Amount,  SUM(total\_payment) AS MTD\_amount\_Received  FROM bank\_loan\_data  WHERE MONTH(issue\_Date) = 12  GROUP BY loan\_status |  |
|  | **. Monthly Trends by Issue Date** | 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\_Received\_Amount  FROM bank\_loan\_data  GROUP BY MONTH(issue\_date),DATENAME(MONTH, issue\_date)  ORDER BY MONTH(issue\_date) |  |
|  | **-Regional Analysis by State** | -- -Regional Analysis by State SELECT  address\_state,  COUNT(id) AS Total\_Loan\_Applications,  SUM(loan\_amount) AS Total\_Funded\_amount,  SUM(total\_payment) AS Total\_Received\_Amount  FROM bank\_loan\_data  GROUP BY address\_state  ORDER BY COUNT(id) DESC |  |
|  | **Loan Term Analysis** | SELECT  term,  COUNT(id) AS Total\_Loan\_Applications,  SUM(loan\_amount) AS Total\_Funded\_amount,  SUM(total\_payment) AS Total\_Received\_Amount  FROM bank\_loan\_data  GROUP BY term  ORDER BY term |  |
|  | **Employee Length Analysis** | SELECT  emp\_length,  COUNT(id) AS Total\_Loan\_Applications,  SUM(loan\_amount) AS Total\_Funded\_amount,  SUM(total\_payment) AS Total\_Received\_Amount  FROM bank\_loan\_data  GROUP BY emp\_length  ORDER BY emp\_length |  |
|  | **Loan Purpose Breakdown** | SELECT  purpose,  COUNT(id) AS Total\_Loan\_Applications,  SUM(loan\_amount) AS Total\_Funded\_amount,  SUM(total\_payment) AS Total\_Received\_Amount  FROM bank\_loan\_data  GROUP BY purpose  ORDER BY COUNT(id) DESC |  |
|  | **Home Ownership Analysis** | SELECT  home\_ownership,  COUNT(id) AS Total\_Loan\_Applications,  SUM(loan\_amount) AS Total\_Funded\_amount,  SUM(total\_payment) AS Total\_Received\_Amount  FROM bank\_loan\_data  GROUP BY home\_ownership  ORDER BY COUNT(id) DESC |  |