

## PROBLEM STATEMENT

### DASHBOARD 1: SUMMARY

"In order to monitor and assess our bank's lending activities and performance, we need to create a comprehensive Bank Loan Report. This report aims to provide insights into key loan-related metrics and their changes over time. The report will help us make data-driven decisions, track our loan portfolio's health, and identify trends that can inform our lending strategies.

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#### **Key Performance Indicators (KPIs) Requirements:**

- 1. Total Loan Applications:** We need to calculate the total number of loan applications received during a specified period.  
Additionally, it is essential to monitor the Month-to-Date (MTD) Loan Applications and track changes Month-over-Month (MoM).
- 2. Total Funded Amount:**  
Understanding the total amount of funds disbursed as loans is crucial. We also want to keep an eye on the MTD Total Funded Amount and analyse the Month-over-Month (MoM) changes in this metric.
- 3. Total Amount Received:**  
Tracking the total amount received from borrowers is essential for assessing the bank's cash flow and loan repayment.  
We should analyse the Month-to-Date (MTD) Total Amount Received and observe the Month-over-Month (MoM) changes.
- 4. Average Interest Rate:**  
Calculating the average interest rate across all loans, MTD, and monitoring the Month-over-Month (MoM) variations in interest rates will provide insights into our lending portfolio's overall cost.
- 5. Average Debt-to-Income Ratio (DTI):**  
Evaluating the average DTI for our borrowers helps us gauge their financial health.

## **Good Loan v Bad Loan KPI's**

In order to evaluate the performance of our lending activities and assess the quality of our loan portfolio, we need to create a comprehensive report that distinguishes between 'Good Loans' and 'Bad Loans' based on specific loan status criteria.

### **Good Loan KPIs:**

- 1. Good Loan Application Percentage:**

We need to calculate the percentage of loan applications classified as 'Good Loans.' This category includes loans with a loan status of 'Fully Paid' and 'Current.'

- 2. Good Loan Applications:**

Identifying the total number of loan applications falling under the 'Good Loan' category, which consists of loans with a loan status of 'Fully Paid' and 'Current.'

- 3. Good Loan Funded Amount:**

Determining the total amount of funds disbursed as 'Good Loans.' This includes the principal amounts of loans with a loan status of 'Fully Paid' and 'Current.'

- 4. Good Loan Total Received Amount:**

Tracking the total amount received from borrowers for 'Good Loans,' which encompasses all payments made on loans with a loan status of 'Fully Paid' and 'Current.'

### **Bad Loan KPIs:**

- 1. Bad Loan Application Percentage:**

Calculating the percentage of loan applications categorized as 'Bad Loans.' This category specifically includes loans with a loan status of 'Charged Off.'

- 2. Bad Loan Applications:**

Identifying the total number of loan applications categorized as 'Bad Loans,' which consists of loans with a loan status of 'Charged Off.'

- 3. Bad Loan Funded Amount:**

Determining the total amount of funds disbursed as 'Bad Loans.' This comprises the principal amounts of loans with a loan status of 'Charged Off.'

- 4. Bad Loan Total Received Amount:**

Tracking the total amount received from borrowers for 'Bad Loans,' which includes all payments made on loans with a loan status of 'Charged Off.'

## Loan Status Grid View

In order to gain a comprehensive overview of our lending operations and monitor the performance of loans, we aim to create a grid view report categorized by 'Loan Status.' This report will serve as a valuable tool for analysing and understanding the key indicators associated with different loan statuses. By providing insights into metrics such as **'Total Loan Applications,' 'Total Funded Amount,' 'Total Amount Received,' 'Month-to-Date (MTD) Funded Amount,' 'MTD Amount Received,' 'Average Interest Rate,'** and **'Average Debt-to-Income Ratio (DTI),'** this grid view will empower us to make data-driven decisions and assess the health of our loan portfolio.

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## DASHBOARD 2: OVERVIEW

In our Bank Loan Report project, we aim to visually represent critical loan-related metrics and trends using a variety of chart types. These charts will provide a clear and insightful view of our lending operations, facilitating data-driven decision-making and enabling us to gain valuable insights into various loan parameters.

Below are the specific chart requirements:

1. **Monthly Trends by Issue Date (Line Chart):**

To identify seasonality and long-term trends in lending activities.

2. **Regional Analysis by State (Filled Map):**

To identify regions with significant lending activity and assess regional disparities.

3. **Loan Term Analysis (Donut Chart):**

To allow the client to understand the distribution of loans across various term lengths.

4. **Employee Length Analysis (Bar Chart):**

How lending metrics are distributed among borrowers with different employment lengths, helping us assess the impact of employment history on loan applications.

5. **Loan Purpose Breakdown (Bar Chart):**

Will provide a visual breakdown of loan metrics based on the stated purposes of loans, aiding in the understanding of the primary reasons borrowers seek financing.

## 6. Home Ownership Analysis (Tree Map):

For a hierarchical view of how home ownership impacts loan applications and disbursements.

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### Metrics to be shown:

*'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'*

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## PROBLEM STATEMENT

### DASHBOARD 3: DETAILS

#### GRID

Need for a comprehensive 'Details Dashboard' that provides a consolidated view of all the essential information within our loan data. This Details Dashboard aims to offer a holistic snapshot of key loan-related metrics and data points, enabling users to access critical information efficiently.

#### Objective:

*The primary objective of the Details Dashboard is to provide a comprehensive and user-friendly interface for accessing vital loan data. It will serve as a one-stop solution for users seeking detailed insights into our loan portfolio, borrower profiles, and loan performance.*