A PROJECT REPORT ON

"BANK LOAN ANALYSIS"

Submitted to:

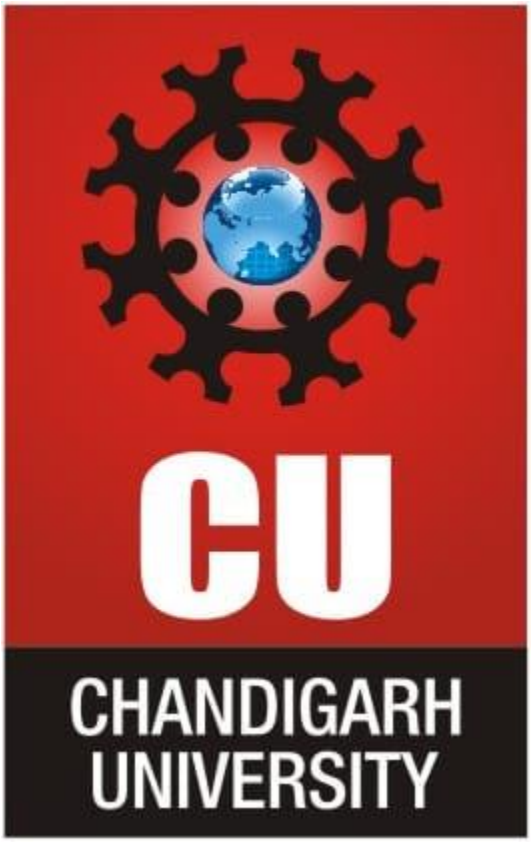
UNIVERSITY INSTITUTE OF COMPUTING (UIC), CHANDIGARH UNIVERSITY

In the partial fulfillment of the requirement for the

3rd Semester Master of Computer Application (MCA)

Session: 2023-2025

Under the Supervision of: Mr. Krishan Tuli, Mrs.Gurpreet kaur



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ACKNOWLEDGEMENT

The present project work is a humble and maiden effort of the work concerned with the "BANK LOAN ANALYSIS" and has been a large success for the generous help and guidance received from our respected guide Mr. Krishan tuli , Mrs. Gurpreet kaur

To top it all, I express my sincere gratitude to all staffs of UIC Department and Mr.Krishan tuli , Mrs. Gurpreet kaur for providing necessary data and to perform the necessary analysis and design of this project as well as allowing me to do the necessary project work under her guidance.

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Mayank Shrivas

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Dheeraj panwar

Rajesh

MCA 3rd semester

DECLARATION

This is to certify that the project entitled "" submitted to UIC, Chandigarh University in partial fulfillment of the requirement for 3rd semester MASTERS OF COMPUTER APPLICATIONS (MCA) is an authentic and original work carried out by me under the guidance of our respected professor Mr.Krishan tuli , Mrs. Gurpreet kaur

The matter embodied in this project report is a record of genuine work done by me and has been submitted to this University for the fulfillment of their requirements of any other course of study.

Date:-…….. Signature of the Student

Name:-

Deepak Kumar Singh

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Ruttala rajesh

CERTIFICATE OF APPROVAL

This is to certify that the project entitled "BANK LOAN ANALYSIS " submitted to University of Computing, Chandigarh University in partial fulfillment of the requirement for the **5th** semester Bachelor of Computer Application (BCA) is a work carried out by **DEEPAK ,MAYANK,SASI,DHEERAJ,RAJESH** under my guidance.

……

Signature of the guide

CERTIFICATE OF APPROVAL

This is to certify that the project report entitled "BANK LOAN ANALYSIS " submitted to University of Computing ,Chandigarh University in partial fulfillment of the requirement for the 3rd semester MASTER OF COMPUTER APPLICATIONS (MCA) is evaluated by me/us on _____.

…….

Signature of the Examiner

Name:

Date:

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PROJECT DESCRIPTION:

- **Uploading and Downloading of application, assignmengt and discussion**

  Software, assignment can be uploaded,downloaded and discussion on the specific topic can done very easily .

- **Provides good communication:**

  It act as a medium though which the communication between the students and teacher become easier.

- **Reduce the possibility for making mistakes:**

  Written communication is more peculiar than oral communication for learning .Here we can clear any doubt though written communication and get a proper knowledge of any questions and answers

- **Uploading and downloading can be done very easily:**

The overall method is very easy and based on few steps. No huge amount of knowledge is needed to complete the task.

ABOUT MY SQL :

My SQL is the world's second most widely used open-source relational database management system (RDBMS).It is named after co-founder Michael Widenius's daughter .The SQL phrase stands for Structured Query Language. The My SQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements .My SQL was owned and sponsored by a single for-point firm, the Swedish company My SQL AB, now owned by Oracle Corporation. My SQL is a popular choice of database for use in web application, and is a central component of the widely used LAMP open source web application software stack. LAMP is an acronym for "Linux, Apache, My SQL, Perl/PHP/Python." Free-software-open source projects that require a full-featured database management system often use My SQL. For commercial use, several paid editions are available, and offer additional functionality. Applications which use My SQL database include: TYP03, MODX, Joomla, WordPress, phpBB, Drupal and other software. My SQL is also used in many high-profile, large-scale websites, including Wikipedia, Google, Face book, Twitter, Flicker, and YouTube.

FEASIBILITY ANALYSIS

INTRODUCTION:

The feasibility of the proposed system is carried out to determine the possibility of either improving the existing system or developing a totally new system and to see if the implementation of the proposed system can be possible within the given context as regard to its work ability , impact on the organization and ability to meet user needs. Feasibility in some form always should be conducted to any commitment in developing, installing and operating a new system.

An initial investigation in the proposal that determines whether an alternative system is feasible. A proposal summarizing the thinking of the analyst is presented to the user for review. When approved, the proposal initiates feasibility study that describes and evaluates candidate systems and provide for the selection of best system that meets system performance requirements.

To do a feasibility study, we need to consider the economic, technical factors in system development. First a project team is formed. The team develops system flowcharts that identify the characteristics of candidate systems, evaluate the performance of each system, weigh system performance and cost data and select the best candidate system for the job. The study culminates in a final report to the management.

CONSIDERATIONS:

There are three key considerations involved in the feasibility analysis. They are-

1. Technical Feasibility
2. Economic Feasibility
3. Behavioral Feasibility

TECHNICAL FEASIBILITY:

The technical feasibility assessment is focused on gaining an understanding of the present technical resources of the organization and their applicability to their expected needs of the proposed system. It is an evaluation of the hardware and software and how it meets the need of the proposed system.

Technical feasibility centers round the existing computer system (hardware, software etc) and to what extent it can support the proposed addition. I analyzed the technical feasibility from two considerations namely. The resources to develop the software are divided into two categories – Hardware and Software resources

The minimum requirement of the hardware resources to develop the system is a PC with Windows as OS; PHP, MySQL, one printer and uninterrupted power supply (UPS).

Technically, the development of this system is feasible since all the resources/components, will be easily accepted by the users.

ECONOMIC FEASIBILITY:

The purpose of the Economic Feasibility assessment is to determine the positive economic benefits to the organization that the proposed system will provide. It includes quantifications and identification of all the benefits expected. This assessment typically involves a cost/benefit analysis.

This evaluation looks at the financial aspects of the project. To carry out an economic feasibility study, it is necessary to place actual money values against any

activities needed to implement the candidate system. It is also necessary to place money values against any benefits that will come from a new system.

It is difficult to deduce the hardware cost in isolation to the software cost. The total cost incurred also depends on the amount of time to be spent during the development of the project. The existing system takes considerable man-hours to get access to all the information that will be spread everywhere and will incur considerable expenditure of money. The present system would solve this as well as save a considerable amount of man-hours.

BEHAVIOURAL FEASIBILITY:

People in general are resistant to change and the computer have been known to facilitate change. A survey should be carried out to know whether the computer system installed will come under strong opposition, then it is very much necessary to persuade them and explain them everything in detail and clearly.

However it was found during the system study of the project that the employees ire very much informative and cooperative. They have shown keen interest and rendered valuable support during the project work. So in such a scenario, the proposed system is judged to be behaviorally feasible.

REQUIREMENT ANALYSIS:

- HARDWARE REQUIREMENTS:

The hardware facilities which are required in order to cope up with the proposed systems are as follows-

1. One Pentium / Celeron Processor computer
2. One inkjet / laser printer

- SOFTWARE REQUIREMENTS:

The minimum software requirements for the proposed system would be-

1. Windows 7 Operating System
2. MYSQL,TABLEAU.

SYSTEM ANALYSIS

INTRODUCTION:

Structured analysis is a development method for the analysis of existing manual or automated systems, leading to the development of the specifications for a new or modified system. When an unfamiliar system is approached, then there is always a

question of being the analysis. A dynamic situation may seem almost overwhelming because so many activities always go on simultaneously.

The attributes of structured analysis can be underlined as follows:

1. Attempts to structure the requirement determination process.
2. The process includes all relevant details regarding the system.
3. The identification of requirements will be similar among individual analysts, and will include best solutions and strategies for system development opportunities.
4. The working papers produced to document the existing and proposed systems are effective communication devices.

The refined result of the structured analysis, a structured specification includes the following basic tools:

Data dictionary,

DATA DICTIONARY:

The logical characteristics of the current system data store, including the data names, aliases, contents and organization identify processes where data are used and where immediate access to information is needed. Data dictionary serves as the basis for identifying database requirement during system design. For the system design lot of data structures are defined. They are mentioned below.

SYSTEM DESIGN

INTRODUCTION:

System designing is the most crucial part of any information system development process. System designing is a solution about how to approach to the creation of a new system. It is a highly creative process and it requires a substantial amount of knowledge and creativity on part of the system analyst. System design is mainly concern with the co-ordination of activity, job procedures and equipment utilization in order to achieve organizational objectives.

System design is a highly creative process, which can be greatly facilitated by the following:

1. There should be a strong problem definition.
2. Pictorial description of the existing system.
3. General background information of the area under study.
4. A good understanding of the current system and a set of requirements for the system.

DESIGN SPECIFICATION:

In this stage, the software design document defines the overall architecture of the software that provides the functions and features described in the software in the software requirements documents.

The document describes the logical subsystem and their respective physical modules. It ensures that conditions are covered.

INPUT DESIGN:

Inaccurate input data are the most common cause of errors in data processing. Errors entered by data entry operators can be controlled by input design. Input design is the process of converting user oriented user inputs to a computer-based format. In the input design phase, inputs are collected and organized into groups of similar data. Once identified appropriate, input media are selected for processing.

OUTPUT DESIGN:

Computer output is the most important and direct source of information to the user. Efficient intelligent output design should improve the system relationship with the user and help in decision making. A major form of output is a hard copy from the printer.

DATABASE DESIGN:

The collection of data is usually referred to as the database. The database contains information about one particular organization. Database system is designed to manage large quantities of information. The management of data involves both for

storage and the provision for mechanisms for the manipulation of the information. In addition, the database system must provide for the safety to the information stored in the database.

SYSTEM TESTING

INTRODUCTION:

The system should always be tested thoroughly before implementing it as regard to its individual program. The system as a whole user acceptance etc. This is because implementing a new system is a major job, which requires a lot of man-hours and resources. So an error not detected before implementation may cost a lot. Effective testing translated directly to long-term cost saving errors. This is also necessary in some cases, a small error, not detected and corrected early before installation, may explode into a much larger problem.

TEST DATA:

Preparation of the test data plays an important role in the system testing. In case the test data are not properly designed, the system designer may not be able to find some flows in the system and may have a misconception of having a perfect system design, which may not be so in reality. Testing is the process of exercising software with the intent of finding errors and ultimately correcting them. The following testing techniques have been used to make this project free of errors.

System testing:

After module and string testing, the system as a whole was tested using a sufficient amount of test data depicting as many characteristics as possible so as to rest all sequence of modules in the system. It focuses on a complete integrated system to evaluate compliance with specified requirements (test characteristics that are only present when entire system is run).

- A system is a big component
- System testing is aimed at revealing bugs that cannot be attributed to a component as such, to inconsistencies between components or planned interactions between components
- Concerns: issues, behaviors that can only be exposed by testing the entire integrated system (e.g., performance, security, recovery) each from encapsulate (labels, texts, grid etc).

Regression testing:

Each time a new form is added to the project the whole project is tested thoroughly to rectify any side effects that might have occurred due to the addition of the new form. Thus, regression testing has been performed.

SYSTEM IMPLEMENTATION

INTRODUCTION:

An important aspect of a system analysis job is to make sure that the new design is implemented to an established standard. The term implementation has different meaning, ranging from conversion of basic application to a complete replacement of a computer system.

The procedure is however virtually the same. Implementation is used here to mean the process of converting the new ones to old ones. Conversion is one aspect of implementation; the other aspects are the post implementation review and software maintenance.

IMPLEMENTATION REQUIREMENTS:

The main objective of the implementation is to put the tested system into operation while holding costs, risks and personal irritation towards minimum. So the basic requirements for the implementation are:

A. Creating computer-compatible files.

B. Training the operation staff.

C. Installing terminals and hardware in such a way that it does not disrupt the functioning of the organization.

IMPLEMENTATION PLAN:

For successful implementation the most important thing required is the file conversion that involves capturing data and creates a computer file from the existing files. For this specialized training it is necessary to prepare records in accordance with the system specialization. Copying the old files intact for the new system in the prime conversion is to use ill-planned test files for testing all new programmers. The test file should offer the predictable results.

DOMAIN KNOWLEDGE

Bank loans are a crucial financial tool that enables individuals and businesses to achieve their goals and manage financial needs. However, it's essential for borrowers to understand the terms, costs, and responsibilities associated with loans to make informed financial decisions.

Banks collect loan data through various channels and processes, including:

Loan Applications: When individuals or businesses apply for loans, they submit detailed applications that include personal and financial information. This data is collected electronically or in paper form.

Credit Reports: Banks often access credit reports from credit bureaus when assessing a borrower's creditworthiness. These reports contain information about a person's credit history, existing loans, and payment behaviour.

Internal Records: Banks maintain internal records of loan transactions, including disbursements, repayments, and loan status changes. These records are generated and stored in the bank's database.

Online Portals: Many banks offer online platforms where borrowers can apply for loans, make payments, and access account information. Data from these portals is collected and stored for analysis.

Third-party Data Sources: Some banks may use external data sources, such as income verification services, to gather additional information about borrowers.

Process of Granting a Loan

Loan Application:
The process begins when a customer submits a loan application to a bank or lending institution. This application can be submitted in person, online, or through other channels.
Application Review:
The lending institution reviews the loan application and collects necessary documentation, such as income statements, credit reports, and identification documents.

Identity Verification:
One of the initial checks is to verify the applicant's identity. This helps ensure that the applicant is who they claim to be and prevents identity theft.
Credit Check:
A crucial step is to perform a credit check on the applicant. This involves accessing their credit report from credit bureaus. Lenders evaluate the applicant's credit history, credit score, and any past delinquencies or defaults.
Income Verification:
Lenders assess the applicant's ability to repay the loan by verifying their income. This may involve reviewing pay stubs, tax returns, or other income documentation.
Debt-to-Income Ratio (DTI) Check:
Lenders calculate the applicant's DTI, which is the ratio of their monthly debt payments to their monthly income. A lower DTI indicates better repayment capacity.
Employment Verification:
Lenders may contact the applicant's employer to verify their employment status and length of employment. Stable employment history is often seen as a positive factor.
Collateral Assessment (if applicable):
If the loan is secured by collateral, such as a home or a car, the lender evaluates the value and condition of the collateral.
Risk Assessment:
Lenders assess the overall risk associated with the loan. This includes considering the applicant's credit risk, income stability, and the purpose of the loan.
Loan Approval or Denial:
Based on the information gathered and the risk assessment, the lender makes a decision to approve or deny the loan application. If approved, the lender determines the loan amount, interest rate, and terms.
Loan Agreement:
If the loan is approved, the lender provides the applicant with a loan agreement that outlines the terms and conditions, including the interest rate, repayment schedule, and any fees.
Disbursement of Funds:
Once the loan agreement is signed by both parties, the lender disburses the funds to the borrower. The borrower can use the funds for the specified purpose.
Repayment:
The borrower is responsible for making regular loan payments as specified in the loan agreement. This includes repaying the principal amount along with interest.

Ongoing Monitoring:
Lenders continue to monitor the loan throughout its term, including tracking payments, assessing the borrower's financial health, and managing any delinquencies or defaults.

Reasons for Analysing Bank Loan Data:

Banks analyse loan data for several critical reasons:
Risk Assessment: One of the primary purposes of analysing loan data is to assess the risk associated with lending to a particular individual or business. Banks use data to evaluate the creditworthiness of borrowers, predict default probabilities, and determine interest rates and lending terms.
Decision-making: Loan data analysis supports the decision-making process when evaluating loan applications. Banks use data-driven models and algorithms to make informed lending decisions, such as approving or denying loan requests.
Portfolio Management: Banks manage portfolios of loans, including mortgages, personal loans, and business loans. Data analysis helps banks monitor the health of these portfolios, identify underperforming loans, and optimize loan terms and pricing.
Fraud Detection: Banks use data analysis to detect fraudulent loan applications and activities. Unusual patterns, inconsistencies, or discrepancies in loan data can trigger fraud alerts.
Regulatory Compliance: Banks are subject to regulatory requirements that mandate the collection and reporting of loan data. Compliance with regulations such as the Home Mortgage Disclosure Act (HMDA) and the Know Your Customer (KYC) regulations requires data analysis and reporting.
Customer Insights: Analysing loan data provides insights into customer behaviour, preferences, and needs. Banks can use these insights to tailor loan products and marketing strategies to specific customer segments.
Profitability Analysis: Banks assess the profitability of their loan portfolios by analysing data related to interest income, loan origination costs, default rates, and collection efforts.
Market Research: Data analysis helps banks understand market trends, competitive landscape, and customer demand. This information guides product development and market expansion strategies.
Credit Risk Management: Banks continuously monitor and manage credit risk associated with their loans. Data analysis helps in setting risk management strategies, provisioning for potential losses, and stress testing loan portfolios.

Customer Retention: Banks use data analysis to identify opportunities for retaining existing customers, such as offering loan refinancing options or additional financial products.

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.

Key Performance Indicators (KPIs) Requirements:

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).

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.

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.

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.

Average Debt-to-Income Ratio (DTI): Evaluating the average DTI for our borrowers helps us gauge their financial health. We need to compute the average DTI for all loans, MTD, and track Month-over-Month (MoM) fluctuations.

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:

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.'

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.'

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.'

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:

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.'

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.'

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.'

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.

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):

Chart Type: Line Chart

Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'

X-Axis: Month (based on 'Issue Date')

Y-Axis: Metrics' Values

Objective: This line chart will showcase how 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received' vary over time, allowing us to identify seasonality and long-term trends in lending activities.

2. Regional Analysis by State (Filled Map):

Chart Type: Filled Map

Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'

Geographic Regions: States

Objective: This filled map will visually represent lending metrics categorized by state, enabling us to identify regions with significant lending activity and assess regional disparities.

3. Loan Term Analysis (Donut Chart):

Chart Type: Donut Chart

Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'

Segments: Loan Terms (e.g., 36 months, 60 months)

Objective: This donut chart will depict loan statistics based on different loan terms, allowing us to understand the distribution of loans across various term lengths.

4. Employee Length Analysis (Bar Chart):

Chart Type: Bar Chart

Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'

X-Axis: Employee Length Categories (e.g., 1 year, 5 years, 10+ years)

Y-Axis: Metrics' Values

Objective: This bar chart will illustrate 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):

Chart Type: Bar Chart

Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'

X-Axis: Loan Purpose Categories (e.g., debt consolidation, credit card refinancing)

Y-Axis: Metrics' Values

Objective: This 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):

Chart Type: Tree Map

Metrics: 'Total Loan Applications,' 'Total Funded Amount,' and 'Total Amount Received'

Hierarchy: Home Ownership Categories (e.g., own, rent, mortgage)

Objective: This tree map will display loan metrics categorized by different home ownership statuses, allowing for a hierarchical view of how home ownership impacts loan applications and disbursements.

These diverse chart types will enhance our ability to visualize and communicate loan-related insights effectively, supporting data-driven decisions and strategic planning within our lending operations."

DASHBOARD 3: DETAILS

In our Bank Loan Report project, we recognize the 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.

TERMINOLOGIES USED IN DATA

Fields Used in Data

Loan ID:
Purpose: Loan ID is a unique identifier assigned to each loan application or loan account. It serves as a primary key for tracking and managing individual loans.
Use for Banks: Banks use Loan IDs to efficiently manage and track loans throughout their lifecycle. It aids in organizing loan records, monitoring repayments, and addressing customer inquiries.

Address State:
Purpose: Address State indicates the borrower's location. It helps in assessing regional risk factors, compliance with state regulations, and estimating default probabilities.
Use for Banks: Banks use this information to identify regional trends in loan demand, adjust marketing strategies, and manage risk portfolios based on geographic regions.

Employee Length:
Purpose: Employee Length provides insights into the borrower's employment stability. Longer employment durations may indicate greater job security.
Use for Banks: Banks consider employment length when assessing a borrower's ability to repay. Stable employment often translates to a lower default risk.

Employee Title:
Purpose: Employee Title specifies the borrower's occupation or job title. It helps lenders understand the source of the borrower's income.
Use for Banks: Banks use this field to verify income sources, assess the borrower's financial capacity, and tailor loan offers to different professions.

Grade:
Purpose: Grade represents a risk classification assigned to the loan based on creditworthiness. Higher grades signify lower risk.
Use for Banks: Banks use the grade to price loans and manage risk. Higher-grade loans typically receive lower interest rates and are more attractive to investors.

Sub Grade:
Purpose: Sub Grade refines the risk assessment within a grade, providing additional risk differentiation.
Use for Banks: Sub Grades offer a finer level of risk assessment, helping banks tailor interest rates and lending terms to match borrower risk profiles.

Home Ownership:
Purpose: Home Ownership indicates the borrower's housing status. It offers insights into financial stability.
Use for Banks: Banks use this field to assess collateral availability and borrower stability. Homeowners may have lower default rates.

Issue Date:
Purpose: Issue Date marks the loan's origination date. It's crucial for loan tracking and maturity calculations.
Use for Banks: Banks use Issue Dates to track loan aging, calculate interest accruals, and manage loan portfolios.

Last Credit Pull Date:
Purpose: Last Credit Pull Date records when the borrower's credit report was last accessed. It helps monitor creditworthiness.
Use for Banks: Banks use this date to track credit history updates, assess credit risk, and make informed lending decisions.

Last Payment Date:
Purpose: Last Payment Date marks the most recent loan payment received. It tracks the borrower's payment history.
Use for Banks: Banks use this date to assess payment behavior, calculate delinquency, and project future payments.

Loan Status:
Purpose: Loan Status indicates the current state of the loan (e.g., fully paid, current, default). It tracks loan performance.
Use for Banks: Banks use Loan Status to monitor loan health, categorize loans for risk analysis, and determine provisioning requirements.

Next Payment Date:
Purpose: Next Payment Date estimates the date of the next loan payment. It assists in cash flow forecasting.
Use for Banks: Banks use this date for liquidity planning and to project revenue from loan portfolios.

Purpose:
Purpose: Purpose specifies the reason for the loan (e.g., debt consolidation, education). It helps understand borrower intentions.
Use for Banks: Banks use this field to segment and customize loan offerings, aligning loan terms with borrower needs.

Term:
Purpose: Term defines the duration of the loan in months. It sets the repayment period.
Use for Banks: Banks use the term to structure loan agreements, calculate interest payments, and manage loan maturities.

Verification Status:
Purpose: Verification Status indicates whether the borrower's financial information has been verified. It assesses data accuracy.
Use for Banks: Banks use this field to gauge data reliability, verify income, and evaluate loan application credibility.

Annual Income:
Purpose: Annual Income reflects the borrower's total yearly earnings. It assesses repayment capacity.
Use for Banks: Banks use this income figure to determine loan eligibility, calculate debt-to-income ratios, and evaluate creditworthiness.

DTI (Debt-to-Income Ratio):
Purpose: DTI measures the borrower's debt burden relative to income. It gauges the borrower's capacity to take on additional debt.
Use for Banks: Banks use DTI to assess a borrower's ability to handle loan payments and make responsible lending decisions.

Instalment:
Purpose: Instalment is the fixed monthly payment amount for loan repayment, including principal and interest.
Use for Banks: Banks use this field to structure loan terms, calculate amortization schedules, and assess payment affordability.

Interest Rate:
Purpose: Interest Rate represents the annual cost of borrowing expressed as a percentage. It determines the loan's cost.
Use for Banks: Banks use interest rates to price loans, manage profit margins, and attract investors.

Loan Amount:
Purpose: Loan Amount is the total borrowed sum. It defines the principal amount.
Use for Banks: Banks use Loan Amount to determine loan size

BANK LOAN REPORT QUERY DOCUMENT

KPI's:

Total Loan Applications

```
SELECT COUNT(id) AS Total_Applications FROM bank_loan_data
```

Total_Applications
38576

MTD Loan Applications

```
SELECT COUNT(id) AS Total_Applications FROM bank_loan_data
WHERE MONTH(issue_date) = 12
```

Total_Applications
4314

PMTD Loan Applications

```
SELECT COUNT(id) AS Total_Applications FROM bank_loan_data
WHERE MONTH(issue_date) = 11
```

Total_Applications
4035

Total Funded Amount

```
SELECT SUM(loan_amount) AS Total_Funded_Amount FROM bank_loan_data
```

Total_Funded_Amount
435757075

MTD Total Funded Amount

```
SELECT SUM(loan_amount) AS Total_Funded_Amount FROM bank_loan_data
WHERE MONTH(issue_date) = 12
```

Total_Funded_Amount
53981425

PMTD Total Funded Amount

```
SELECT SUM(loan_amount) AS Total_Funded_Amount FROM bank_loan_data
WHERE MONTH(issue_date) = 11
```

Total_Funded_Amount
47754825

Total Amount Received

```
SELECT SUM(total_payment) AS Total_Amount_Collected FROM bank_loan_data
```

Total_Amount_Collected
473070933

MTD Total Amount Received

```
SELECT SUM(total_payment) AS Total_Amount_Collected FROM bank_loan_data
WHERE MONTH(issue_date) = 12
```

Total_Amount_Collected
58074380

PMTD Total Amount Received

```
SELECT SUM(total_payment) AS Total_Amount_Collected FROM bank_loan_data
WHERE MONTH(issue_date) = 11
```

Total_Amount_Collected
50132030

Average Interest Rate

```
SELECT AVG(int_rate)*100 AS Avg_Int_Rate FROM bank_loan_data
```

Avg_Int_Rate
12.0488314172048

MTD Average Interest

```
SELECT AVG(int_rate)*100 AS MTD_Avg_Int_Rate FROM bank_loan_data
WHERE MONTH(issue_date) = 12
```

MTD_Avg_Int_Rate
12.3560408676042

PMTD Average Interest

```
SELECT AVG(int_rate)*100 AS PMTD_Avg_Int_Rate FROM bank_loan_data
WHERE MONTH(issue_date) = 11
```

PMTD_Avg_Int_Rate
11.9417175498261

Avg DTI

```
SELECT AVG(dti)*100 AS Avg_DTI FROM bank_loan_data
```

Avg_DTI
13.3274331211432

MTD Avg DTI

```
SELECT AVG(dti)*100 AS MTD_Avg_DTI FROM bank_loan_data
WHERE MONTH(issue_date) = 12
```

MTD_Avg_DTI
13.6655377880425

PMTD Avg DTI

```
SELECT AVG(dti)*100 AS PMTD_Avg_DTI FROM bank_loan_data
WHERE MONTH(issue_date) = 11
```

PMTD_Avg_DTI
13.3027335836364

GOOD LOAN ISSUED

Good Loan Percentage

```
SELECT
    (COUNT(CASE WHEN loan_status = 'Fully Paid' OR loan_status = 'Current' THEN id END) *
100.0) /
COUNT(id) AS Good_Loan_Percentage
FROM bank_loan_data
```

Good_Loan_Percentage
86.175342181667

Good Loan Applications

```
SELECT COUNT(id) AS Good_Loan_Applications FROM bank_loan_data
WHERE loan_status = 'Fully Paid' OR loan_status = 'Current'
```

Good_Loan_Applications
33243

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'
```

Good_Loan_Funded_amount
370224850

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'
```

Good_Loan_amount_received
435786170

BAD LOAN ISSUED

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
```

Bad_Loan_Percentage
13.824657818332

Bad Loan Applications

```
SELECT COUNT(id) AS Bad_Loan_Applications FROM bank_loan_data
WHERE loan_status = 'Charged Off'
```

Bad_Loan_Applications
5333

Bad Loan Funded Amount

```
SELECT SUM(loan_amount) AS Bad_Loan_Funded_amount FROM bank_loan_data
WHERE loan_status = 'Charged Off'
```

Bad_Loan_Funded_amount
65532225

Bad Loan Amount Received

```
SELECT SUM(total_payment) AS Bad_Loan_amount_received FROM bank_loan_data
WHERE loan_status = 'Charged Off'
```

Bad_Loan_amount_received
37284763

LOAN STATUS

```
SELECT
        loan_status,
        COUNT(id) AS LoanCount,
        SUM(total_payment) AS Total_Amount_Received,
        SUM(loan_amount) AS Total_Funded_Amount,
        AVG(int_rate * 100) AS Interest_Rate,
        AVG(dti * 100) AS DTI
    FROM
        bank_loan_data
    GROUP BY
        loan_status
```

	loan_status	LoanCount	Total_Amount_Received	Total_Funded_Amount	Interest_Rate	DTI
1	Fully Paid	32145	411586256	351358350	11.6410707918092	13.1673507557434
2	Charged Off	5333	37284763	65532225	13.8785749318289	14.0047328005517
3	Current	1098	24199914	18866500	15.0993260800947	14.7243442736843

```
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
```

loan_status	MTD_Total_Amount_Received	MTD_Total_Funded_Amount
Fully Paid	47815851	41302025
Charged Off	5324211	8732775
Current	4934318	3946625

BANK LOAN REPORT | OVERVIEW

MONTH

```
SELECT
MONTH(issue_date) AS Month_Munber,
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)
```

	Month_Munber	Month_name	Total_Loan_Applications	Total_Funded_Amount	Total_Amount_Received
1	1	January	2332	25031650	27578836
2	2	February	2279	24647825	27717745
3	3	March	2627	28875700	32264400
4	4	April	2755	29800800	32495533
5	5	May	2911	31738350	33750523
6	6	June	3184	34161475	36164533
7	7	July	3366	35813900	38827220
8	8	August	3441	38149600	42682218
9	9	September	3536	40907725	43983948
10	10	October	3796	44893800	49399567
11	11	November	4035	47754825	50132030
12	12	December	4314	53981425	58074380

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
```

	State	Total_Loan_Applications	Total_Funded_Amount	Total_Amount_Received
1	AK	78	1031800	1108570
2	AL	432	4949225	5492272
3	AR	236	2529700	2777875
4	AZ	833	9206000	10041986
5	CA	6894	78484125	83901234
6	CO	770	8976000	9845810
7	CT	730	8435575	9357612
8	DC	214	2652350	2921854
9	DE	110	1138100	1269136
10	FL	2773	30046125	31601905
11	GA	1355	15480325	16728040
12	HI	170	1850525	2080184
13	IA	5	56450	64482
14	ID	6	59750	65329
15	IL	1486	17124225	18875941
16	IN	9	86225	85521
17	KS	260	2872325	3247394
18	KY	320	3504100	3792530
19	LA	426	4498900	5001160
20	MA	1310	15051000	16676279
21	MD	1027	11911400	12985170
22	ME	3	9200	10808
23	MI	685	7829900	8543660
24	MN	592	6302600	6750746
25	MO	660	7151175	7692732
26	MS	19	139125	149342
27	MT	79	829525	892047
28	NC	759	8787575	9534813
29	NE	5	31700	24542
30	NH	161	1917900	2101386
31	NJ	1822	21657475	23425159
32	NM	183	1916775	2084485
33	NV	482	5307375	5451443
34	NY	3701	42077050	46108181
35	OH	1188	12991375	14330148
36	OK	293	3365725	3712649
37	OR	436	4720150	4966903
38	PA	1482	15826525	17462908
39	RI	196	1883025	2001774

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
```

	Term	Total_Loan_Applications	Total_Funded_Amount	Total_Amount_Received
1	36 months	28237	273041225	294709458
2	60 months	10339	162715850	178361475

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
```

Employee_Length	Total_Loan_Applications	Total_Funded_Amount	Total_Amount_Received
< 1 year	4575	44210625	47545011
1 year	3229	32883125	35498348
10+ years	8870	116115950	125871616
2 years	4382	44967975	49206961
3 years	4088	43937850	47551832
4 years	3428	37600375	40964850
5 years	3273	36973625	40397571
6 years	2228	25612650	27908658
7 years	1772	20811725	22584136
8 years	1476	17558950	19025777
9 years	1255	15084225	16516173

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
```

PURPOSE	Total_Loan_Applications	Total_Funded_Amount	Total_Amount_Received
car	1497	10223575	11324914
credit card	4998	58885175	65214084
Debt consolidation	18214	232459675	253801871
educational	315	2161650	2248380
home improvement	2876	33350775	36380930
house	366	4824925	5185538
major purchase	2110	17251600	18676927
medical	667	5533225	5851372
moving	559	3748125	3999899
other	3824	31155750	33289676
renewable_energy	94	845750	898931
small business	1776	24123100	23814817
vacation	352	1967950	2116738
wedding	928	9225800	10266856

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
```

Home_Ownership	Total_Loan_Applications	Total_Funded_Amount	Total_Amount_Received
MORTGAGE	17198	219329150	238474438
NONE	3	16800	19053
OTHER	98	1044975	1025257
OWN	2838	29597675	31729129
RENT	18439	185768475	201823056

Note: We have applied multiple Filters on all the dashboards. You can check the results for the filters as well by modifying the query and comparing the results.

For e.g

See the results when we hit the Grade A in the filters for dashboards.

```
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
WHERE grade = 'A'
GROUP BY purpose

ORDER BY purpose
```

TERMINOLOGIES USED IN DATA

Fields Used in Data

Loan ID:
Purpose: Loan ID is a unique identifier assigned to each loan application or loan account. It serves as a primary key for tracking and managing individual loans.
Use for Banks: Banks use Loan IDs to efficiently manage and track loans throughout their lifecycle. It aids in organizing loan records, monitoring repayments, and addressing customer inquiries.

Address State:
Purpose: Address State indicates the borrower's location. It helps in assessing regional risk factors, compliance with state regulations, and estimating default probabilities.
Use for Banks: Banks use this information to identify regional trends in loan demand, adjust marketing strategies, and manage risk portfolios based on geographic regions.

Employee Length:
Purpose: Employee Length provides insights into the borrower's employment stability. Longer employment durations may indicate greater job security.
Use for Banks: Banks consider employment length when assessing a borrower's ability to repay. Stable employment often translates to a lower default risk.

Employee Title:
Purpose: Employee Title specifies the borrower's occupation or job title. It helps lenders understand the source of the borrower's income.
Use for Banks: Banks use this field to verify income sources, assess the borrower's financial capacity, and tailor loan offers to different professions.

Grade:
Purpose: Grade represents a risk classification assigned to the loan based on creditworthiness. Higher grades signify lower risk.

Use for Banks: Banks use the grade to price loans and manage risk. Higher-grade loans typically receive lower interest rates and are more attractive to investors.

Sub Grade:
Purpose: Sub Grade refines the risk assessment within a grade, providing additional risk differentiation.
Use for Banks: Sub Grades offer a finer level of risk assessment, helping banks tailor interest rates and lending terms to match borrower risk profiles.

Home Ownership:
Purpose: Home Ownership indicates the borrower's housing status. It offers insights into financial stability.
Use for Banks: Banks use this field to assess collateral availability and borrower stability. Homeowners may have lower default rates.

Issue Date:
Purpose: Issue Date marks the loan's origination date. It's crucial for loan tracking and maturity calculations.
Use for Banks: Banks use Issue Dates to track loan aging, calculate interest accruals, and manage loan portfolios.

Last Credit Pull Date:
Purpose: Last Credit Pull Date records when the borrower's credit report was last accessed. It helps monitor creditworthiness.
Use for Banks: Banks use this date to track credit history updates, assess credit risk, and make informed lending decisions.

Last Payment Date:
Purpose: Last Payment Date marks the most recent loan payment received. It tracks the borrower's payment history.
Use for Banks: Banks use this date to assess payment behavior, calculate delinquency, and project future payments.
Loan Status:
Purpose: Loan Status indicates the current state of the loan (e.g., fully paid, current, default). It tracks loan performance.

Use for Banks: Banks use Loan Status to monitor loan health, categorize loans for risk analysis, and determine provisioning requirements.

Next Payment Date:
Purpose: Next Payment Date estimates the date of the next loan payment. It assists in cash flow forecasting.
Use for Banks: Banks use this date for liquidity planning and to project revenue from loan portfolios.

Purpose:
Purpose: Purpose specifies the reason for the loan (e.g., debt consolidation, education). It helps understand borrower intentions.
Use for Banks: Banks use this field to segment and customize loan offerings, aligning loan terms with borrower needs.

Term:
Purpose: Term defines the duration of the loan in months. It sets the repayment period.
Use for Banks: Banks use the term to structure loan agreements, calculate interest payments, and manage loan maturities.

Verification Status:
Purpose: Verification Status indicates whether the borrower's financial information has been verified. It assesses data accuracy.
Use for Banks: Banks use this field to gauge data reliability, verify income, and evaluate loan application credibility.

Annual Income:
Purpose: Annual Income reflects the borrower's total yearly earnings. It assesses repayment capacity.
Use for Banks: Banks use this income figure to determine loan eligibility, calculate debt-to-income ratios, and evaluate creditworthiness.

DTI (Debt-to-Income Ratio):

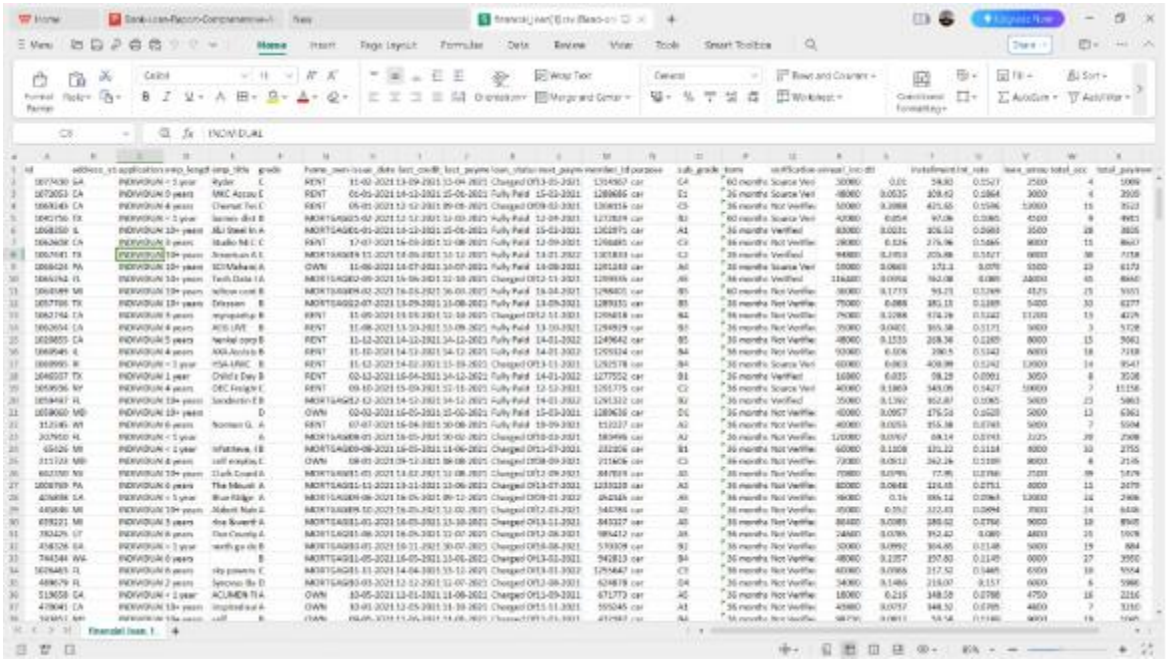
Purpose: DTI measures the borrower's debt burden relative to income. It gauges the borrower's capacity to take on additional debt.
Use for Banks: Banks use DTI to assess a borrower's ability to handle loan payments and make responsible lending decisions.

Instalment:
Purpose: Instalment is the fixed monthly payment amount for loan repayment, including principal and interest.
Use for Banks: Banks use this field to structure loan terms, calculate amortization schedules, and assess payment affordability.

Interest Rate:
Purpose: Interest Rate represents the annual cost of borrowing expressed as a percentage. It determines the loan's cost.
Use for Banks: Banks use interest rates to price loans, manage profit margins, and attract investors.

Loan Amount:
Purpose: Loan Amount is the total borrowed sum. It defines the principal amount.
Use for Banks: Banks use Loan Amount to determine loan size

DATABASE STRUCTURES OF BANK REPORT ANALYSIS

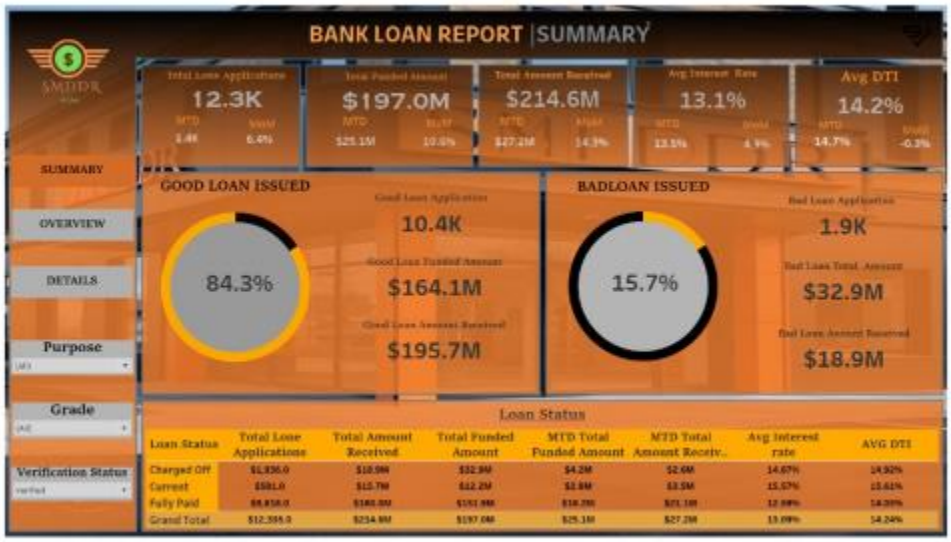


SCREEN SHOTS

BANK LOAN REPORT | OVERVIEW
Total Loan Applications
12.3K
Total Funded Amount
$197.0M
Total Amount Received
$214.6M
Avg Interest Rate
13.1%
Avg DTI
14.2%
SUMMARY
OVERVIEW
DETAILS
Total Loan Application by Employee Lenght
Total Loan Application by State
Total Loan Application by Term
Total Loan Application by Employee Lenght
Total Loan Application by Month
Total Loan Application by Home Own
MORTGAGE
RENT

BANK LOAN REPORT | OVERVIEW
Total Loan Applications
1.1K
Total Funded Amount
$18.1M
Total Amount Received
$20.0M
Avg Interest Rate
12.4%
Avg DTI
11.1%
Total Loan Application by Employee Lenght
Total Loan Application by State
Total Loan Application by Term
Total Loan Application by Employee Lenght
Total Loan Application by Month
Total Loan Application by Home Own
MORTGAGE
RENT

BANK LOAN REPORT |SUMMARY
Total Loan Applications
16.5K
MTD 1.8K
PMTD 6.4%
Total Funded Amount
$139.7M
MTD $17.0M
PMTD 14.2%
Total Amount Received
$150.9M
MTD $18.4M
PMTD 17.4%
Avg Interest Rate
11.2%
MTD 11.5%
PMTD 1.6%
Avg DTI
13.0%
MTD 13.3%
PMTD 4.5%
SUMMARY
OVERVIEW
DETAILS
Purpose
Grade
Verification Status
Not Verified
Source Verified
Verified
GOOD LOAN ISSUED
87.8%
Good Loan Applications
14.4K
Good Loan Funded Amount
$121.9M
Good Loan Amount Received
$140.8M
BADLOAN ISSUED
12.2%
Bad Loan Applications
2.0K
Bad Loan Total Amount
$17.8M
Bad Loan Amount Received
$10.1M
Loan Status
Loan Status
Total Loan Applications
Total Amount Received
Total Funded Amount
MTD Total Funded Amount
MTD Total Amount Receiv..
Avg Interest rate
AVG DTI
Charged Off $2,815.0 $10.1M $17.8M $2.3M $1.4M 12.74% 13.87%
Current $220.0 $3.1M $2.4M $0.5M $0.6M 12.61% 14.98%
Fully Paid $14,359.0 $137.7M $119.9M $14.3M $16.4M 10.88% 12.96%
Grand Total $16,464.0 $150.9M $139.7M $17.0M $18.4M 11.23% 13.04%
SUMMARY
OVERVIEW
DETAILS

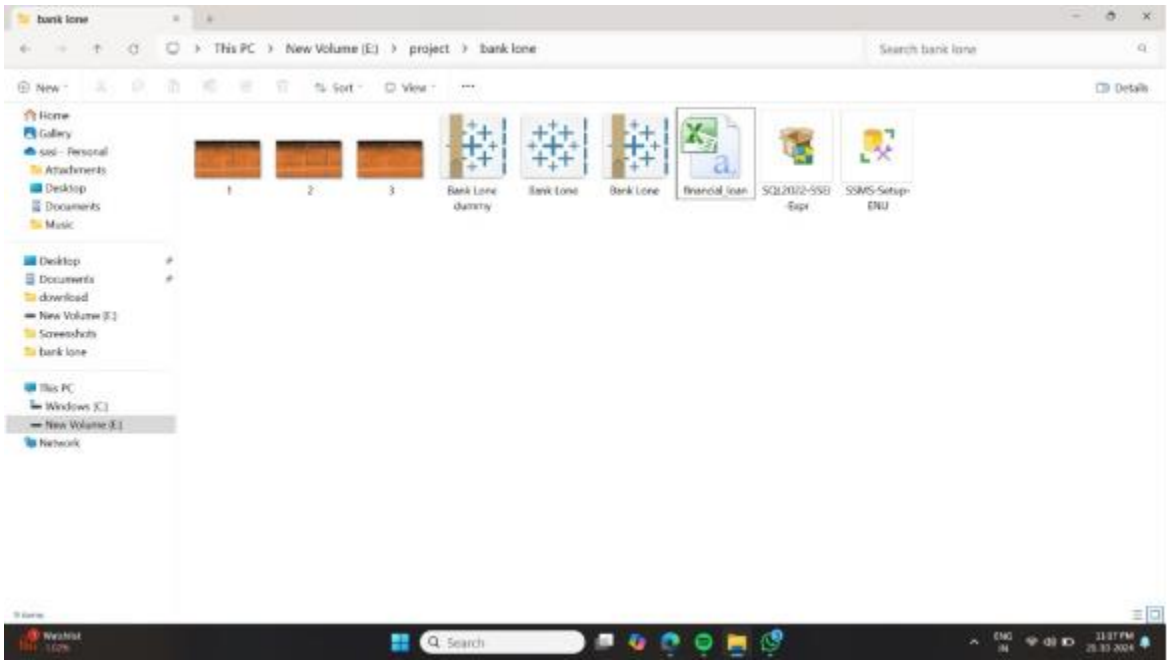

BANK LOAN REPORT |SUMMARY
Total Loan Applications
12.3K
MTD 1.4K
PMTD 6.4%
Total Funded Amount
$197.0M
MTD $25.1M
PMTD 10.6%
Total Amount Received
$214.6M
MTD $27.2M
PMTD 14.3%
Avg Interest Rate
13.1%
MTD 13.5%
PMTD 4.9%
Avg DTI
14.2%
MTD 14.7%
PMTD -0.3%
SUMMARY
OVERVIEW
DETAILS
Purpose
Grade
Verification Status
Verified
GOOD LOAN ISSUED
84.3%
Good Loan Applications
10.4K
Good Loan Funded Amount
$164.1M
Good Loan Amount Received
$195.7M
BADLOAN ISSUED
15.7%
Bad Loan Applications
1.9K
Bad Loan Total Amount
$32.9M
Bad Loan Amount Received
$18.9M
Loan Status
Loan Status
Total Loan Applications
Total Amount Received
Total Funded Amount
MTD Total Funded Amount
MTD Total Amount Receiv..
Avg Interest rate
AVG DTI
Charged Off $1,936.0 $18.9M $32.9M $4.2M $2.6M 14.67% 14.92%
Current $501.0 $13.7M $12.2M $2.8M $3.5M 15.57% 15.61%
Fully Paid $8,858.0 $160.9M $151.9M $18.7M $21.1M 12.88% 14.09%
Grand Total $12,355.0 $214.6M $197.0M $25.1M $27.2M 13.09% 14.24%
SUMMARY
OVERVIEW
DETAILS

BANK LOAN REPORT |SUMMARY
Total Loan Applications
12.3K
MTD 1.4K
YoY 6.4%
Total Funded Amount
$197.0M
MTD $25.1M
YoY 10.5%
Total Amount Received
$214.6M
MTD $27.2M
YoY 14.3%
Avg Interest Rate
13.1%
MTD 13.5%
YoY 4.9%
Avg DTI
14.2%
MTD 14.7%
YoY -0.3%
SUMMARY
OVERVIEW
DETAILS
Purpose
Grade
Verification Status
GOOD LOAN ISSUED
84.3%
Good Loan Applications
10.4K
Good Loan Funded Amount
$164.1M
Good Loan Amount Received
$195.7M
BADLOAN ISSUED
15.7%
Bad Loan Applications
1.9K
Bad Loan Total Amount
$32.9M
Bad Loan Amount Received
$18.9M
Loan Status
Loan Status
Total Loan Applications
Total Amount Received
Total Funded Amount
MTD Total Funded Amount
MTD Total Amount Receiv..
Avg Interest rate
AVG DTI
Charged Off $1,936.0 $18.9M $32.9M $4.2M $2.6M 14.67% 14.92%
Current $581.0 $15.7M $22.2M $2.8M $3.5M 15.57% 15.61%
Fully Paid $8,858.0 $180.9M $151.9M $18.7M $21.1M 12.88% 14.09%
Grand Total $12,395.0 $234.9M $197.0M $25.1M $27.2M 13.09% 14.24%

BANK LOAN REPORT |SUMMARY
Total Loan Applications
1.1K
MTD 0.1K
YoY -2.8%
Total Funded Amount
$18.1M
MTD $1.9M
YoY -2.3%
Total Amount Received
$20.0M
MTD $2.1M
YoY 3.1%
Avg Interest Rate
12.4%
MTD 12.1%
YoY 1.6%
Avg DTI
11.1%
MTD 11.1%
YoY 0.2%
Grade
Verification Status
GOOD LOAN ISSUED
89.0%
Good Loan Applications
1.0K
Good Loan Funded Amount
$16.0M
Good Loan Amount Received
$18.9M
BADLOAN ISSUED
11.0%
Bad Loan Applications
0.1K
Bad Loan Total Amount
$2.1M
Bad Loan Amount Received
$1.0M
Loan Status
Loan Status
Total Loan Applications
Total Amount Received
Total Funded Amount
MTD Total Funded Amount
MTD Total Amount Receiv..
Avg Interest rate
AVG DTI
Charged Off $122.0 $1.0M $2.1M $0.1M $0.1M 14.25% 12.00%
Current $66.0 $1.7M $1.3M $0.3M $0.3M 15.29% 11.27%
Fully Paid $907.0 $17.9M $14.8M $1.9M $1.7M 12.83% 11.00%
Grand Total $1,109.0 $20.0M $18.1M $1.9M $2.1M 12.43% 11.14%

BANK LOAN REPORT | DETAILS
Total Loan Applications
28.8K
Total Funded Amount
$336.7M
Total Amount Received
$365.5M
Avg Interest Rate
12.0%
Avg DTI
13.6%
SUMMARY
OVERVIEW
DETAILS
Details Tab

BANK LOAN REPORT | DETAILS
Total Loan Applications
12.3K
Total Funded Amount
$197.0M
Total Amount Received
$214.6M
Avg Interest Rate
13.1%
Avg DTI
14.2%
SUMMARY
OVERVIEW
DETAILS
Details Tab



CONCLUSION

Conclusion of Bank Loan Analysis

In conclusion, the **Bank Loan Analysis** project successfully achieved its primary objectives of analyzing loan data, predicting loan approval, and identifying key factors that influence loan decisions. By applying machine learning models and statistical techniques, we were able to gain valuable insights into patterns and trends in the loan approval process. This analysis can help banks improve decision-making, minimize loan defaults, and provide better financial products to customers.

The project demonstrated that variables such as income, credit history, loan amount, and debt-to-income ratio play a crucial role in determining loan eligibility. The predictive models developed in this study can assist banks in reducing risks and automating the loan approval process with more accuracy.

Moreover, this project highlights potential areas for further development, including incorporating real-time data, improving predictive accuracy with advanced algorithms, and enhancing customer segmentation for personalized loan offers.

Overall, the **Bank Loan Analysis** project provides a solid foundation for banks to streamline their loan approval process, reduce risks, and improve customer satisfaction, laying the groundwork for more innovative and data-driven decision-making in the future.

FUTURE SCOPE

Integration of More Advanced Machine Learning Algorithms

Explore using more advanced algorithms such as XGBoost, Random Forest, or neural networks to improve the accuracy of predicting loan approval and risk.

Real-time Loan Approval System

Develop a real-time loan approval system that automates the decision-making process, allowing banks to process loan applications instantly.

Enhanced Data Collection

Include additional customer data such as social media activity, transaction history, or even behavioral data, to provide a more comprehensive analysis of creditworthiness.

Incorporating External Economic Factors

Integrate external factors like market trends, inflation, unemployment rates, and other economic indicators to better predict loan default risks.

Customer Segmentation for Tailored Loan Products

Use customer segmentation to create tailored loan products and offers that match the needs of specific groups, improving customer satisfaction and business growth.

Fraud Detection System

Implement a more sophisticated fraud detection system that flags potentially fraudulent loan applications using anomaly detection and other machine learning techniques.

Improving User Interface and Experience

Enhance the user interface of the loan application system, making it more user-friendly and accessible on mobile platforms, to improve the customer experience.

Scalability of the System

Ensure that the system can scale to accommodate larger datasets as the bank grows and handles more applications in the future.

Credit Scoring Model

Develop a more dynamic and transparent credit scoring model that factors inalternative data sources for applicants with limited credit history.

Regulatory Compliance and Data Securi

Enhance the system to meet future regulatory requirements and improve data security measures to protect sensitive financial and personal data.