

Agricultural Loan Management System

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Abstract: The Agricultural Loan Management System is a web-based system designed to simplify and digitize the loan application, approval, and repayment processes. The system is developed using Laravel, PHP, MySQL, HTML, CSS, JavaScript, and Bootstrap. It allows borrowers to submit loan applications and check their application status, while staff can review, approve, reject, and manage loan applications and repayments. The system provides centralized and secure data management, reduces manual work and errors, and improves the efficiency and transparency of loan management. The system enhances transparency by allowing borrowers to track their application progress and providing staff with organized access to loan records. Overall, the Agricultural Loan Management System provides a secure, efficient, and user-friendly solution for managing agricultural loans from application through repayment.

Keywords: loan management system, agricultural loan, security data management, loan repayment process, web-based system.

INTRODUCTION

Loan services are important for supporting individuals and farmers in meeting their financial needs. However, traditional loan processes often involve paperwork, manual data entry, and time-consuming approval procedures. The Agricultural Loan Management System is developed to overcome these difficulties by providing a simple and efficient web-based platform. It also provides secure and centralized data management, helping to reduce errors, save time, and improve the transparency and efficiency of the loan management process. The Agricultural Loan Management System provides a practical solution for modernizing the traditional loan management process. By using web-based technology, the system reduces unnecessary paperwork, improves data accuracy, speeds up loan processing, and makes loan information easier to manage. It is intended to create a more reliable, transparent, and user-friendly environment for both borrowers and staff while improving the overall efficiency of agricultural loan services.

PROBLEM

The traditional loan application process requires a lot of paperwork and manual data management. The system allows borrowers to apply for loans online, while staff can review, approve, reject, and manage loan applications and repayments. This can cause delays, data entry errors, difficulty in tracking applications, and inefficient management of repayment records. Borrowers may also have difficulty checking their loan status. The Agricultural Loan Management System addresses these problems by providing an online platform where borrowers can submit applications and check their application status, while authorized staff can efficiently review applications, manage approvals and rejections, and maintain repayment

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records. The system aims to provide a faster, more organized, secure, and transparent loan management process for both borrowers and staff.

APPROACH

The system is developed as a web-based application using Larval and PHP, with MySQL for database management. The development approach includes collecting requirements, designing the system and database, developing the user interface, implementing loan application and approval functions, and testing the system. The system provides separate functions for Super Admin, Staff, and Borrowers to manage the complete loan process efficiently. As show in figure 1(a), the Admin System Flow Diagram describes the main activities performed by the administrator in the Digital Loan Application and Approval System. First, the admin logs into the system using valid credentials. After successful authentication, the admin can access the dashboard and manage the system.

As shown in Figure 1(b), Employees use the system to Check In/Out, review personal records, submit leave, view policies and holidays, receive notifications, and manage their profiles. Department Heads retain these personal self-service functions but also receive delegated access to manage employee attendance, absences, leave, analytics, and reports strictly within their assigned department. To ensure accuracy, effective-dated schedules resolve by company, department, or Employee scope to control attendance and overtime calculations.

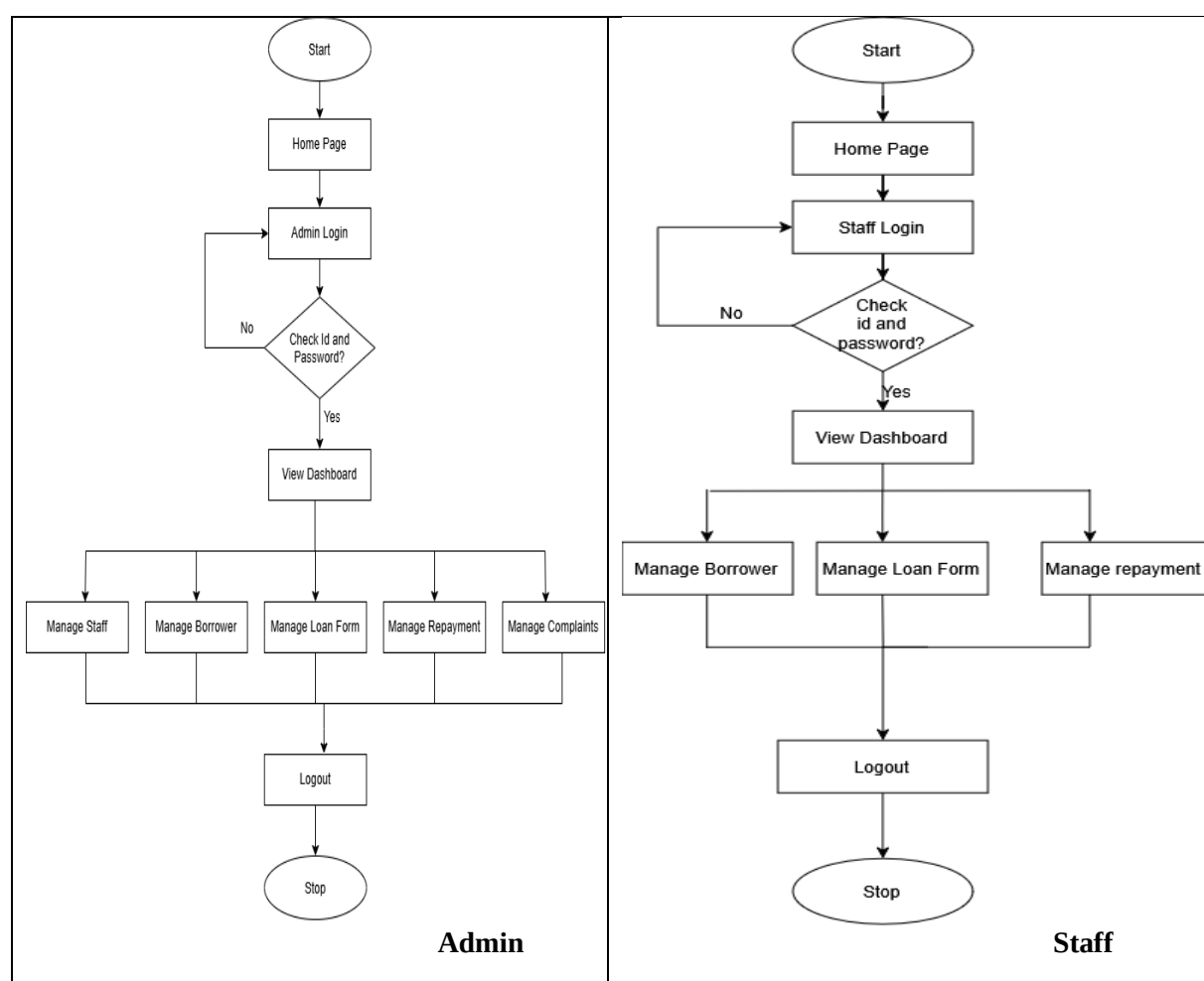


Figure 1(a). System Flow Diagram for Admin

Figure 1(b). System Flow Diagram for Staff

As shown in figure 1(c), the Borrower System Flow Diagram describes the main activities performed by borrowers in the Agricultural Loan Application and Approval System. First, the borrower registers an account and logs into the system using valid credentials.

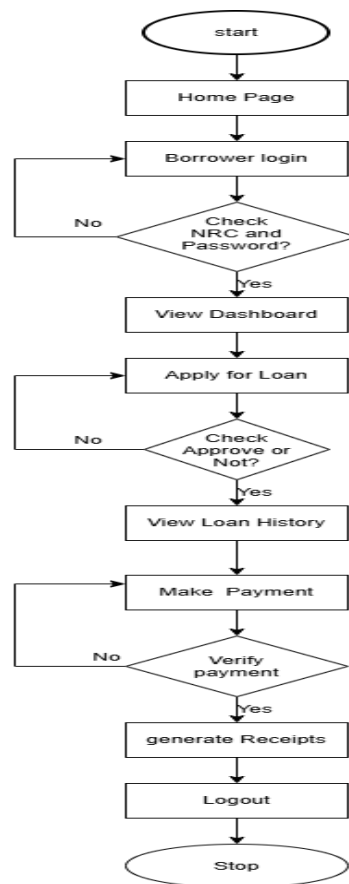


Figure 1(c). System Flow Diagram for Borrower

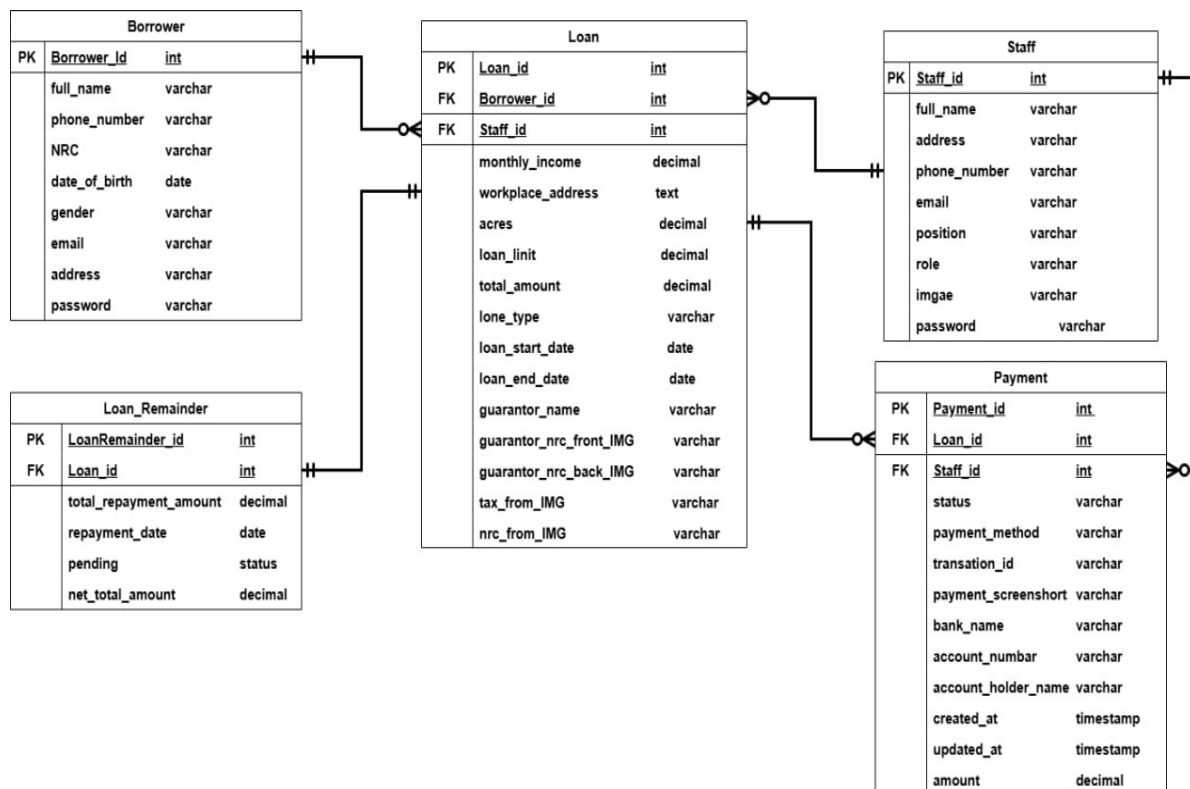


Figure 2. Database Architecture

In figure 2, the Entity Relationship Diagram (ER Diagram) illustrates the relationships among the main entities in the Agricultural Loan Management System. The main entities include Borrower, Staff, Loan Application, Loan Approval, Loan, and Repayment. A Borrower can submit one or more loan applications, while each loan application is reviewed and processed by Staff. The loan application may be approved or rejected through the loan approval process. When a loan application is approved, a loan record is created for the borrower. Each loan can have multiple repayment records because the borrower may repay the loan in several payments. The ER Diagram shows how these entities are connected through primary keys and foreign keys and helps to organize and manage borrower, loan application, approval, loan, and repayment information efficiently.

RESULTS

The Agricultural Loan Management System provides an efficient and systematic way to manage agricultural loan applications, approvals, and repayments. It helps reduce manual work and makes the overall loan management process faster and more organized. The system allows staff to record and manage borrower information, loan details, interest rates, repayment dates, and other related information. All data can be stored systematically in the database and accessed easily when needed.

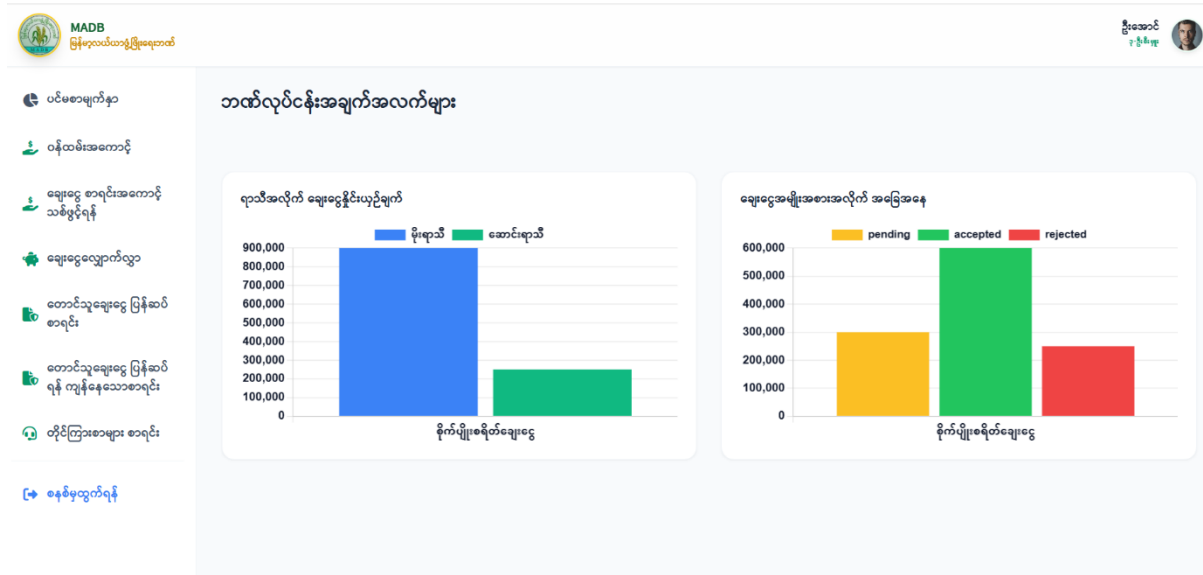


Figure 3. Analysis Dashboard of the Agricultural Loan management System

In Figure 3, the system also helps staff review loan applications and make the approval or rejection decisions efficiently. Loan repayment records can be monitored, and repayment schedules can be managed accurately, reducing errors in manual calculations and record keeping.

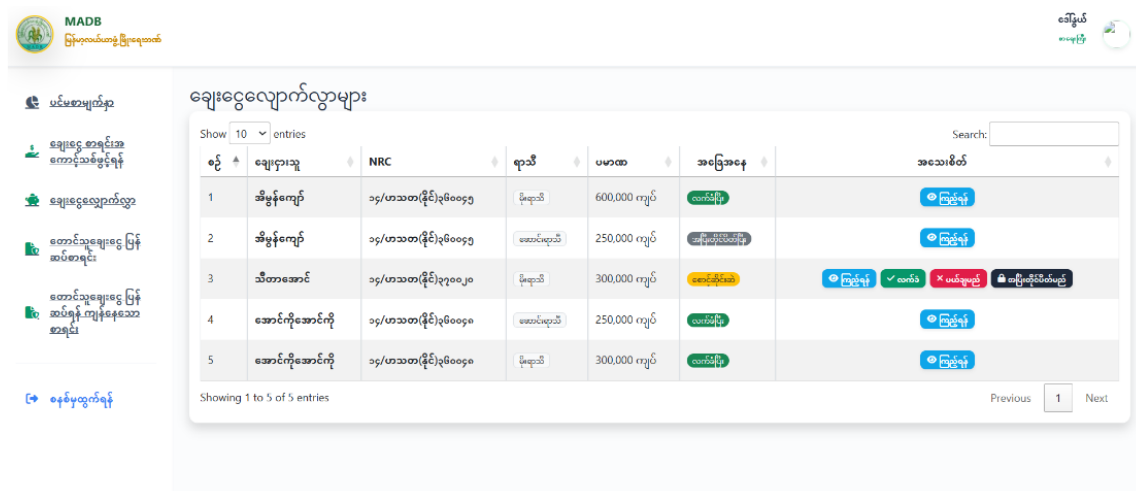


Figure 4. Loan Application Page

In Figure 4, The Loan Application Page allows borrowers to submit their loan applications online through the Agricultural Loan Management System. Borrowers can enter the required information, such as loan amount, loan purpose, repayment period, and other necessary details. After completing the application form, the borrower can submit the application for review by the staff. The page is designed to make the application process simple and convenient by reducing paperwork and allowing borrowers to apply without visiting the office.

CONCLUSION

The Agricultural Loan Management System provides a simple, efficient, and secure way to manage loan applications, approvals, and repayments. It reduces paperwork and manual errors while saving time for both borrowers and staff. The Agricultural Loan Management System was developed to improve the efficiency, accuracy, and transparency of the loan application and approval process by replacing traditional manual procedures with a web-based digital solution. The system allows borrowers to submit loan applications online and check the status of their applications without needing to visit the office repeatedly. Staff can efficiently manage borrower information, review submitted applications, approve or reject loan requests, and maintain repayment records through a centralized system. This helps ensure that loan information is organized, accurate, and easily accessible when required. Overall, the system aims to provide a faster, more reliable, transparent, and user-friendly approach to agricultural loan management while reducing the workload associated with traditional loan processing.

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