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Finance Management System in Loan Management System using Lending Tree.

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Abstract—Most of the bank out-sources pre-loan process to loan agencies to reduce the burden and let the agencies pickup the information from customers and verify it before it is being forwarded to the actual bank for approval of loan. Lending Tree is an interface which facilitates a customer to apply for a loan from on-line and to track the status from time-to-time along with aiding the loan approval agency to verify and accept/reject the customer file. Lending Tree is unique in such a way, it not only helps the customers but also the loan agency to check the pending, assign it to a departments, complete the formalities and procedures between the departments and arrive at decisions to very fact in addition to providing a transparency system for every one. The customer can directly apply for a loan by selecting a bank and loan type from the list available. The application is received by loan agency who will have three departments- Pickup , Verification and Legal

1. INTRODUCTION

The system mainly deals with the automation of the activities performed at any particular Finance Corporation , which issued various kinds of loans to their Customers and accepts monthly instalments from them.All the master information is gathered pertaining to the employees working in the organization, Industries to whom the loans are issued. Different types of loans available are designed and the interest rates applicable are set in the master tables.Initially after registering the customer, loan is sanctioned according to his requirement and eligibility. Details of a particular loan are gathered such as loan number, customer number, loan code, amount, interest, and number of months, monthly installment and date of sanction.When the Industries pay the loan installments, details of loan number, payment id, amount and date of payment are gathered and stored.Simply choosing the appropriate menus such as Employee details report, Customer details report, generates various reports, Loans detail report, Interest report, Customer-loan details report & Payment details report.The system security is taken care of by a login form, which is allows only authorized users to utilize the system.The main aim/objective is to develop an effective system, which is fast, accurate, consistent, reliable, and flexible enough so that in can accommodate any further expansion.

2. LITERATURE SURVEY

Bank Oriented Model*:* Every thing is done manually at present such as customer registration, issuing loans and keeping track of payments.As the number of customers is high and the risk involved in the transactions due to huge amount involved, the manual system was considered to be inefficient due to huge amount involved, the manual system was considered to be inefficient due to the volume of errors & lesser security.First when a customer comes to the company he has to be registered and in the manual system it is difficult to verify whether he is already registered. But in the computerized package it would be very easier to check all the customer details.When a loan is sanctioned to a customer, calculation of monthly installment is done manually in old system, which may result in wrong monthly installments. Where as in the automated system, it is exactly calculated according to the number of months and the interest rates applicable.Also payments from the customers is difficult to maintain which is could be made easier in the computerized package in which simply by entering the loan number all the other information is displayed.Therefore the problems in the current system have forced the firm to automate it by developing a software package, which would reduce their problems and increase the efficiency.

3. FUTURE SCOPE

The system does not handle the loan recovery form the defaulters who fail to pay the loan installments, which could be done in future expansions.Presently scrutiny of application forms and eligibility criteria for sanction of loans is done manually but it can be included in the system easily.Backup facility is not provided in the present system but in future it could be easily coupled with the present system.The system does not consider prepayment of loan amount by the customer and hence do not impose any surcharge for prepayment. But it could be added to the system's functionality.

A. ***Proposed System***

This system maintains the information related different departments and stored at a central DB, which leads easy accessibility and consistency .Interest rates of different banks and the other details are also available at the click of a mouse.Customer can apply for a loan and track his file details from online. The decision process in faster and more consistentProvides good communication

between two departmentsProvides a facility to generate the reports very easily.

B. SYSTEM SPECIFICATION

Hardware Requirements

- Processor :i3 processor
- Speed : 202 GHz.
- Hard Disk : 400 GB.
- Monitor :15VGA Colour.
- Mouse : Logitech.
- Ram : 4 Gb.

Software Requirements:

- Operating system :WindowsXP Professional/7LINUX.
- Front End :JAVA,JDK 1.8 webserver
- Programming Language : JAVA/J2EE
- Database : Oracle 8.1
- IDE : Eclipse

C. ***System Architecture.***

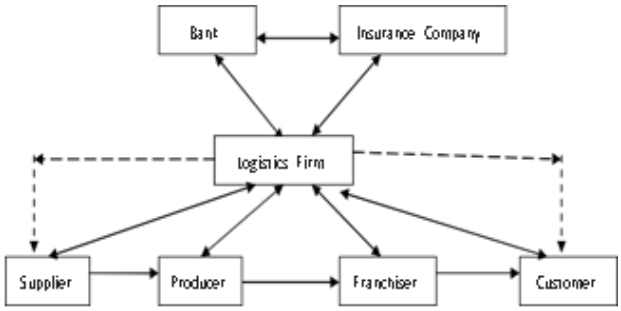


Figure: System Architecture of Proposed System

A. ***Algorithms***

1. J48 Algorithm

J48 builds decision trees from a set of labeled training data using the concept of information entropy. It uses the fact that each attribute of the data can be used to make a decision by splitting the data into smaller subsets. J48 examines the normalized information gain (difference in entropy) that results from choosing an attribute for splitting the data. To make the decision, the attribute with the highest normalized information gain is used. Then the algorithm recurs on the smaller subsets. The splitting procedure stops if all instances in a subset belong to the same class. Then a leaf node is created to the decision tree telling to choose that class. But it can also happen that none of the features give any information gain. In this case j48 creates a decision node higher up in the tree using expected value of the class. j48 can handle both continuous and discrete attributes; training data with missing attribute values and attributes with differing costs.

4. AES ALGORITHM

AES algorithm is the very popular algorithm. It is the most used symmetric encryption algorithm. It is six times faster than 3DES (Triple DES algorithm). Since the key size in DES was too small there was a need for a better replacement algorithm. It has increased computing power and it is vulnerable against attacks. 3DES was developed initially to overcome this shortcoming but it was slow.
And so AES was developed. Some of the features of AES are:
1. Stronger and Quicker than 3 DES
2. Less prone to attacks
3. Symmetric key and block cipher
4. 128 bit data
5. 128,192,256 bit keys

B. Modules.

1. Administrator
2. User

1. *Administrator*

- ❖ Login
- ❖ Customer module

A. Login

- ➢ Administrator will login to the system using username and password.

B. Upload File

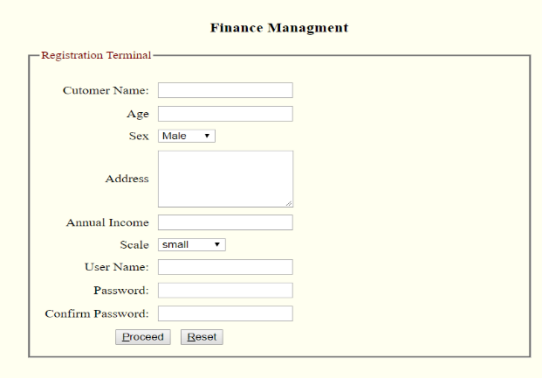
- ➢ Here Administrator will able to access each every data of customer except the password of customer
- ➢ Those login password of customer are stored in encrypted format using AES algorithm.

2. User

- ❖ **Registration**
- ❖ **Login**
- ❖ **Type of loan**

A. Registration

User will register to the system with normal information.



B. Login

For login the user will enter the user name and password, if entered information is correct then the system will redirect to the home page, otherwise it will show an error message.

Type of loan

- After login the user will search for loan which he/she required.
- Then user's will get credit score is checked.
- Then he/she can get required loan after verification.

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