DEVELOPMENT OF LOAN MODULE USING MAKE EASY FINANCE

[1] Mrs. Mohana Priya .A, [2] G. Shyamala, [3] R. Dharshini, [4] Gayathri .S, [5] Karkuvel Singh .M, [6] Keerthana .D

[1, 2, 3] Assistant Professor,

[4, 5, 6] UG Scholar,

[1, 2, 3, 4, 5, 6] Department of Computer Science and Engineering,

[1, 2, 3, 4, 5, 6] Sri Shakthi Institute of Engineering and Technology,

[1, 2, 3, 4, 5, 6] Anna University, Chennai.

ABSTRACT: The project "MAKE EASY FINANCE" is a unique website that helps the staffs to make their loan sanction process easier. It is a full ERP software for finance application. It is a full offline and server based project with complete package of accounts and loan process. The customer who request for the Loan, we will allocate loan process. The details of the customer will be provided to the finance team. If the details are given by the customer gets satisfied ,then Discussion with the customer will be carried on. In that the income of the family and the property details will be verified. If the verification is done with original documents, then the field inspection will be done and the photo copies of the property will be uploaded and it is verified by the higher authority. If it is satisfied ,the Legal verification will be carried out in the government office Whether the property is belongs to them. In the First approval, the customer will request for certain amount for the land ,if that amount is valid for their property then they will proceed or else they will sanction the amount which suitable for their property. If the customer satisfies the loan given by the bank they will continue the final approval process or else stop the process immediately. In Final approval the loan will be approved to the customer and the EMI dates will be given to the customer. The reports of all modules will be maintained.

Banking loan module is a runtime business application. It is the automatic processing of property based loans, due to which the loan form can be filled from anywhere and the finance person approves loan within short span of time. There is very big crowd to fill the loan form manually which is very tiresome job. Also the manual process is very lengthy process which requires 3 days for approval of loan. Our customers will having their loan applications approved within 60 minutes of lodging the application instead of 3 days as per the paper-centric solution we were persisting with. This paper consists of method of development of dynamic loan module system which includes the loan origination process, loan form filling process and loan verification process. The method is developed by using the RETE pattern matching algorithm. Due to which the loan module system becomes very fast and work effective. In addition to this loan module system, we have also developed the CIBIL score generating system for the approved loan applications and determination of rupee dollar calculation of rate of interest of

loans. Due to which the manager originates the ROI of loans that also helps the manager to stabilize the India's economy and prevents itself from recession and other economic falls.

1. INTRODUCTION

Make easy finance system is a complete, easy-to-deploy and maintains solution offering flexible prices based upon the organization needs and scope of activities. The make easy finance system has low hardware requirements both on finance side and end user sides. The make easy finance system application includes the cibil score generating system. It has become popular in recent years. Loan system is very easy for officers to access customer account, check loan details within minutes. Currently the loan holders of a MEFL want to easy and quick access and securable way to withdraw his money or other loan products. Make easy finance is one of the best way to access loan products, Client can check their account details with officers assistance in finance web portal. Make easy finance services means the services are provided by a finance to their customers through internet. Some examples of internet loan services are as below; Electronic Fund Transfers (EFT),loan legal Statement. Make easy finance is a software system that executes one or more business rules in a runtime production environment. A business rules engine enables an organization to increase its agility and speed to adapt to business process execution. Facing the complexity of business processes and rules user find it difficult to understand the underlying logic of the business. They are not able to analyze and make appropriate decisions in a timely fashion when business process issues arise. In recent make easy finance (MEFL) have become a key component in almost every major enterprise class projects.

2. CONCEPT OVERVIEW

It has been widely recognized that many future database applications including communications, manufacturing and engineering processes will require some kind of rule based reasoning. Rule based systems often spend a large fraction of their execution time matching rule patterns with data. A Make easy finance(MEFL) enables an organization to increase its agility and speed to adapt to business process execution. Today's dynamic business environment presents many new business process management challenges. The number of business rules in a typical information system can range from several hundred to several thousands and the number of computer and process controls for reasons of data compliance, quality control and internal audit can similarly reach into the thousands. In recent years Make easy finance system(MEFL) have become a key component in almost every major enterprise class projects. The increased importance of projects using MEFL has been recognized throughout the industry. Business rules engines have not only have become a more powerful, scalable and robust technology, which is capable to process an extremely high number of complex rules per minute, per hour, and even per second; but whole MEFL platform is evolved. The MEFL platform is a complex environment with the special tools for development, analysis and design as well as numerous enhancements, making the process of performing encountering of business rules very efficient. Make Easy Finance System(MEFL) provides an automated rule application of processes on which inference such as backward and forward chaining is enabled. As the recent study on modernizing information systems, less than 30% of

software source code contains business logic, while the remaining code supports infrastructure-related activities. It follows that, if the large part of software changes are due to the need to adopt its functionality to the changed business requirements, then facilitating comprehension of software with automated business knowledge extraction methods may significantly reduce the cost of software maintenance and evolution. This hypothesis has been investigated by many researches during the past several decades resulting in numerous methods for development of business rule engine for rule based systems. When working with a MEFL the main entity is a rule. A rule is a set of conditions and associated actions which performed when the conditions met satisfaction. A rule is written in the form of an "If" and "else" statements, which might have preconditions that are other rules which must have to be executed or matched for the further processing of application should be in the same rule set. HDFC banks develop the online loan module for personal and car loan using SOA technique. Also various methods such as YES/MVS real time expert systems, YES/OPS system Set-Oriented Constructs, LEAPS, BPRE Rule Matching Algorithm are used for development of business rules engine. In addition to the online loan module system, we includes loan origination, calculation of rupee dollar rate, cibil score generating system, interest rate increment system, currency calculator and loan and emi calculator.

3. PROPOSED METHOD

The method proposed includes basically some phase's loan origination, pre evaluation/loan form filling, Application form verifying, personal verification and mailing to customer.

A.   Loan Origination

Loan origination phase includes calculation of rupee dollar rate on the

Basis of factors Strength of the economy such bas import and export, Public Debt, Market Sentiments (Demand and Supply) and Growth of the Economy.

These factors dynamically changes according to the market, which changes the rupee dollar rate and due to which the rate of interest on loans increases or decreases. This phase helps the finance manager to decide the interest rate of home loan, and business loan. Also this phase decides the factor of rupee dollar rate, so that NRI people can check the particular dollar amount in rupee form.

B. Pre Evaluation/Loan Form Filling

This phase includes pre evaluation of the applied person by using loan and emi calculator which has the parameters such as tenure, loan amount, interest rate, monthly salary and existing emi. This calculator decides the pre evaluation of the applied person that how much the emi for the particular loan amount, what the eligible loan amount is and whether the applied person is eligible for that much amount of loan. This phase also includes the customer loan form which contains various parameters such as Applicant details, Loan details, and occupation details and Upload the required documents. In this phase, the person fills the particular form of loan. The customer can apply for home loan, personal loan, education loan and car loan according to his requirements.

C. CIBIL Score Checking

In this phase, the manager checks the cibil score of particular applied person by entering the pan id of the applied person or checks any history of that person in the database. This gives the information about the person's cibil score, personal information, contact information, employment information, account information, loan enquiry information, persons existing loans if any. This cibil report also gives the information about check bounce, ecs bounce, ecs bounce on date payment, fourth closed loan, ecs

bounce late payment. This helps the manager to check out the persons cibil score which tells the institution how likely the applicant pay back a loan based on past credit usage and loan repayment behavior. High credit score leads to the eligibility for particular loan and Low credit score leads to rejection for particular loan.

D. Application form verifying

In this phase, the manager verifies the loan application by using the business rules engine developed by using basic facts of rete pattern matching algorithm. Rules of loan checking process is very complex and facilitating comprehension of software with automated business knowledge extraction methods may significantly reduce the cost of software maintenance and evolution. The business rules engine checks the different facts such as Age: Between 21 & 65, Documents attached: Id proof, Salary details and Property cost slip, Emi must fit in payable emi, Cibil score(if done with previous loan)>=700 and entered loan amount should be less than the eligible amount. The rule engine gives suggestion about Candidate Age Is Not automatically Eligible For Loan, Don't have Employment in stable company, As per Salary Statement Candidate Is Not Eligible For Loan, Bad Cibil Score, Emi Can Not be Payable, The Applied Customer is Defaulter For a Loan. In this phase, the manager checks out with those facts for the possible approval of loan of applied customer.

E. Personal verification

In this phase, the manager checks with the persons following personal verification facts: Address Verification, Living Years (More than 10 years), Age Verification, Business/Company Verification, Medical Verification and Living Style. For the possible move towards the approval of loan these all facts have to be checked of the person. Thus manager checks out with these verifications and decides that whether to give loan to the applied person or not.

4. PROPOSED APPROACH

In our approach, the manager originates the rate of interest of loan by using the rupee calculator and sets the particular rate to the home loan, personal loan, education loan and car loan. The rate of interest depends upon the values of rupee dollar rate. The rate of rupee vs. dollar is calculated by the formulae Rate = Addition of Values of parameters / (Number of factors*1000) And ROI to change= (Current rate – Previous rate)/ Number of factors

Figure -1.1 Rupee calculator in market

Figure - 1.2 Data flow Diagram of MEFL process

5. THE PROPOSED SYSTEM MODULES

A. CUSTOMER ENQUIRY

Figure - 1.3 Customer Enquiry

b. Discussion with customer

Figure - 1.4 Discussion phase-1

Figure - 1.5.1 Phase-2 –income

Figure - 1.5.2 Pahse3 and 4 loan Details

C. FIELD INSPECTION
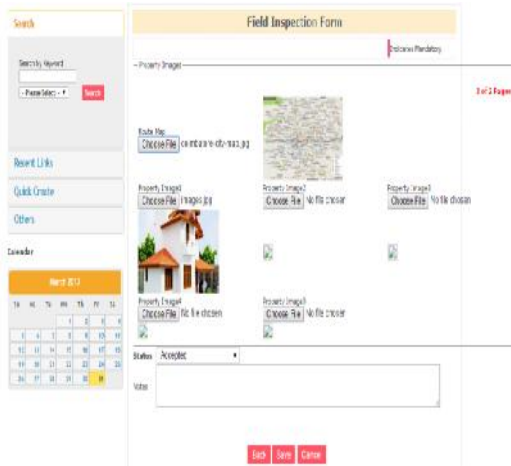

Figure - 1.6.1 Field inpection1

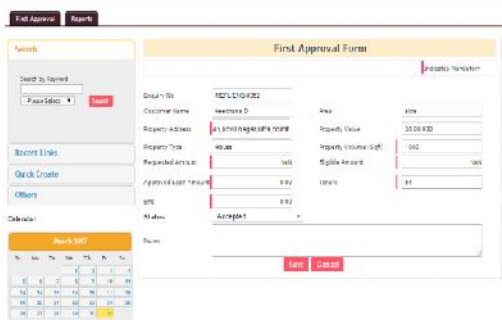**Figure - 1.6.1 Field inpection2**
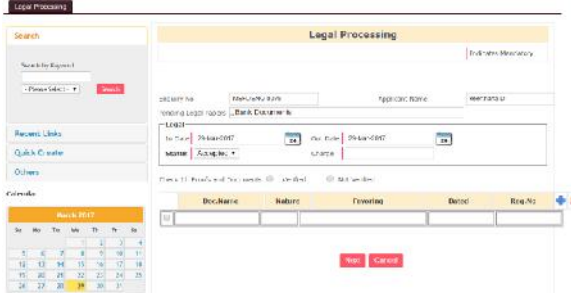
d. First Approval

Figure - 1.7 First Approval

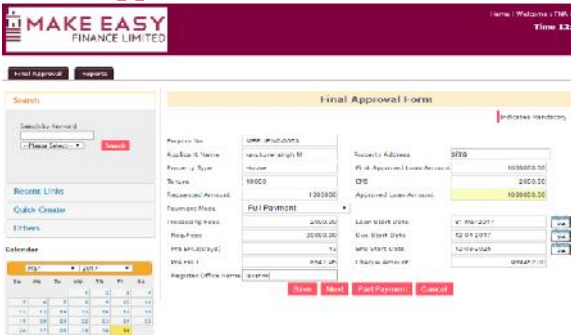## e. Legal Process

Figure - 1.8 Legal Process

f. Final Approval

Figure - 1.9 Final approval

5. EXISTING SYSTEM

There is no backup and restore facility. As for as Finance application is concerned there is no proper automated system for land approval for loan, proper system for providing all legal documents, so it is very difficult in the existing site

6. DECISION TREE ALGORITHM – ID3

Decide which attrib the attribute (splitting (splitting -point) to test at node N by determining the "best" way to separate or partition the tuples in D into individual classes
• The splitting criteria is determined so that , ideally, the resulting partitions at each branch are as "pure " as possible.
 – A partition is pure if all of the tuples in it belong to the same class
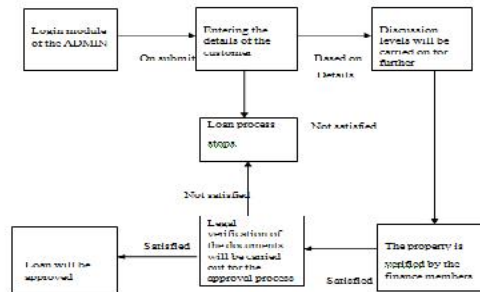
a. Influence diagram

Much of the information in a decision tree can be represented more compactly as an influence diagram, focusing attention on the issues and relationships between events.
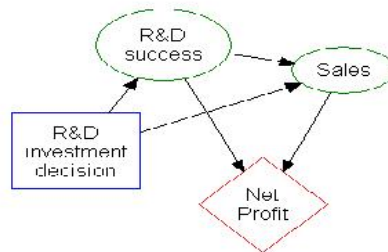
CONCLUSIONS

At the outset of this project, we had two major concerns: Would the database-oriented MEFL perform efficiently in a

production environment and would business administrators find the approach both easier to use and more transparent. First, the database-oriented MEFL has been found to run efficiently in a production environment and to scale very efficiently. Second, the MEFL design has been found to be easy to use and understand. The MEFL helps the application users in both understanding the business rule logic and executing the intended tasks. This design can be easily implemented in a database workflow application. Future issues to be studied include developing a rule validation process to prevent rule conflicts and investigating rule management issues at the enterprise level. We have successfully developed the business rule engine for the bpm of loan module with following features:

The internet bank has low hardware requirements both on bank and end user sides. User friendly interface can be easily redesigned according to the bank needs. Internet bank is a complete, easy-to-deploy and maintains solution offering flexible prices based upon the organization needs and scope of activities. New functionality and developments can be easily reflected in the system.

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