

Bank Management System

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Abstract--- Bank management system can be consider as a most important thing in economic world.in the present scenario the banking sector is the common need in everyday life.in day to day life we face the problems and then we realize something is not done in this sector like we want to change the location (branch) of our account then we need to fill the application and then some day waiting to complete bank process. In this process amount of time is more as well as here occur manual work which is increases man power. Also in current scenario aadhar card linking is must with bank account and it is possible through the ATM but if in urgent we want to link aadhar it may be not possible there is no ATM are available in that case we provide this facility through the our project i.e. Bank management system.

Key Words---Virtual transaction, Transaction, Security system, computerization

I. INTRODUCTION

The project entitled “Bank management system” is a computerized telecommunications device that provides the customers of a financial institution with access to financial transactions in a public space without the need for a human clerk or bank taller (manpower). Thousands of bank performs millions of transactions every day and thousands of users used banking system in day to day life. As we know that if number of users increases us need more banks and more staff it means increasing manual work also we put more amount of money in bank it is more risky and not much secure. If we developed advanced computerized based banking system so there is no need to open more branches as well the manpower is reduce and maximum information are stored automatically in banking server. Banking system requires authenticity and validity if a system provides these basic logics that mean we can developed a new system that authenticate and validate the user and user can do any type of virtual transaction any time anywhere in minimum amount of time. One of the most authentic codes i.e. the customer account number for recognition of any person. It always appear on and credit, withdraw, money transferring, linking aadhar with account and changing the account location in one branch to another branch in same bank. Day to day life banking system is most useful and important thing in economical world and which is very useful to develop country as well as economic power.

Transaction: in banking transaction is the execution of a program that performs an administrative or real time function, often by accessing shared data sources, usually on behalf of a banking users who have an account in the respective bank. This transaction executed by the program

and it automatic do the transactions with balance and it check all conditions are satisfied or not in respective proses. This is the more secure and automatic process which do all the transaction with accuracy of calculation. In our project we also provide the facility to link aadhar with account number and we also provide the facility to change location of account with branch that mean the user can change the branch which is convenient for it. They will also change or update data like address, mobile number using online banking system.

II. LITERATURE SURVEY/ RELATED WORK

In [1], Information and communication technology (ICT) has helped to drive increasingly intense global Competition. In the world history the most of the countries are most developed because of they are financially very clear for how to use the high amount of money in the developing process in own country . We also use the SOA architecture for providing the scalable and reliable service therefor we studied related to the SOA architecture to know how we use to implementation process in our project using Service Oriented Architectures (SOA).we also refer the paper who give the case study information about Scandinavian bank and a Swiss bank This two banks are working on the basis of service oriented architecture for providing the service for the customer. SOA provides potential for greater organizational agility (and thereby competitiveness).

In [2], in the second paper we learn which type of problems are created in banking system during the different types of transactions. Here discuss about if any region the transaction may be fail then how to avoid it and fixed it. We also studied about Firms in Italy defaulted more against banks with high levels of past losses. This

'selective' default increases where legal enforcement is weak. Poor enforcement thus can create a systematic transaction risk by encouraging banking users to defaulted masse once the continuation value of their bank relationships comes into doubt. In banking sector the security also must and when we talk about money or property this case is more sensational then we found the security is the major thing to do in banking system.

In our project we provide the security questions when customer login with account to prevent the fraud and provide the best security in the bank management system.

III. PROPOSED SYSTEM

The proposed system is highly computerized in which the data related to user accounts will be secured high with high accuracy that even reduced the machine damage and human made errors and this existing system is highly efficient to offer best services to the customers as well as bank because it has user friendly access that customers less time when compare with a normal banking system. When the data is entered it will check for its validity. Appropriate messages are provided as when needed so that the user will not be in a maize of instant. The data entry screen is design such a way that all the data manipulates can be performed, it also provide record viewing facilities. Our Project developing as per the below figures. In the below fig (a) this project is use for online banking system, the user can register first and then login. When user login successfully they will perform the operation like money withdraw, money transfer, deposit, aadhar link with own account, transfer account in one location to another location etc. Admin has all authority to handle all the user account and transactions in a sequence to avoid unauthorized user. Costumer can update his data like address, contact number etc. as well as they link aadhar number with own account number using online banking system. User can transfer money, deposit money, withdraw and check account balance through online banking system. In Bank management system we use n-tier architecture which is helpful to handle different tasks in fluently and sequential order. We use following architecture for the project are:

- [1]MVC architecture for Presentation layer
- [2]SOA architecture for Service layer
- [3]Design Pattern for data access layer
- [4]Entity framework for Data access layer

Here we work in order of Bottom-Up approach.

The flow of working of the project as shown in below

diagram:

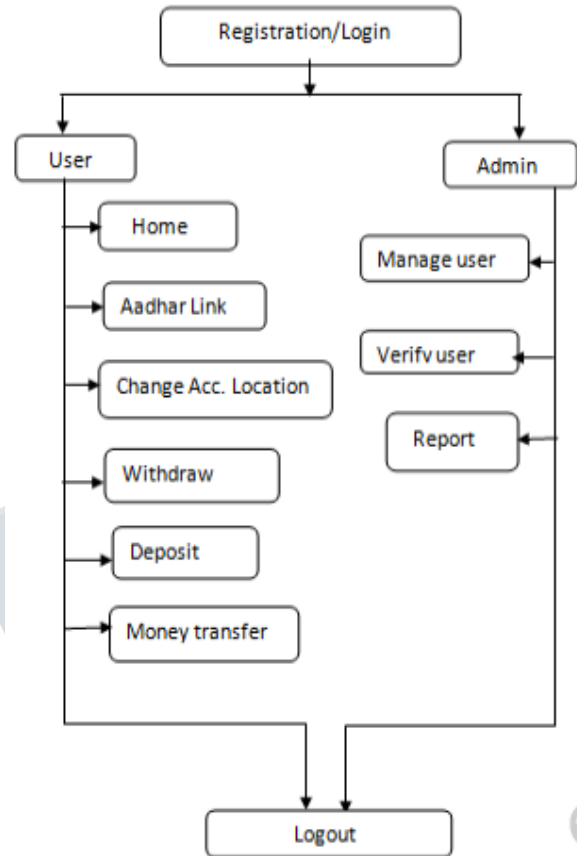


Fig (A): Bank Management system

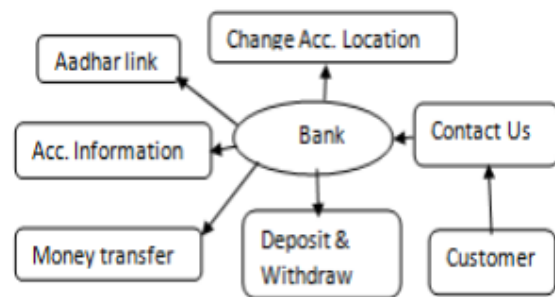


Fig. Mind map for bank management system

IV. SYSTEM ANALYSIS, RESULTS AND DISCUSSION:

Introduction:

A system requirements analysis is a complete description of the behavior of the system to be developed. It includes a

set of use cases that describe all of the interactions that the users will have with the system. In addition to use cases, the system requirement analysis contains functional requirements, which define the internal workings of the system: that is, the calculations, technical details, data manipulation and processing, and other specific functionality that shows how the use cases are to be satisfied. It also contains nonfunctional requirements, which impose constraints on the design or implementation (such as performance requirements, quality standards or design constraints).

Requirement:

The requirement is a complete description of the behavior of the system to be developed. These requirements includes: functional and nonfunctional requirements.

Functional Requirement :

A functional requirement defines the internal workings of the system: that is, the calculations, technical details, data manipulation and processing, and other specific functionality that shows how the use cases are to be satisfied. The functionalities of the system or modules are mean what the system supposes to do.

For admin Module:

1. This system allows the admin to login with username and password
2. This system allows the admin to add a Bank branch details
3. This system allows the admin to accept or reject a manager/customer
4. This system allows the admin to approve or reject customer transaction request
5. This system allows the admin to View Managers & Customers details

For Manager Module:

1. This system allows the manager to register
2. This system allows the manager to login with email and password
3. This system allows the manager to accept/reject branch customers
4. This system allows the manager to view customer transactions

5. This system allows the manager to update personal information

6. This system allows the manager to reset password if password is forgotten 7. This system allows the manager to Register New Customer.

For Customer Module:

1. This system allows the customer to login with email and password
2. This system allows the customer to update personal details
- 3 This system allows the customer to reset password if password is forgotten 4. This system allows the customer to view his/her account balance
5. This system allows the customer to transfer money from his account to another account
6. This system allows the customer to recover password
7. This system allows the customer to change password
8. This system allows the customer to delete profile
9. This system allows the customer to choose image point.

Non-Functional Requirement:

Non-functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. It is about how the system supposes to be and specify the quality of the system, is mostly related to the satisfaction of the user, example minimum acceptable page load time. Some of these non-functional requirements are:

1. Integrity
2. Usability
3. Maintainability

Integrity: Integrity testing is basically a type of software testing that is done to check whether the application or the product is secured or not. It checks to see if this application is vulnerable to attacks, if anyone hack the system or login to the application without any authorization. It is a process to determine that an information system protects data and maintains functionality as intended. The security testing is performed to check whether there is any information leakage in the sense by encrypting the application or using wide range of software's and hardware's and firewall etc. For example

this online bank application can allow the users to login and carry out transaction but not to edit their account balance. As only when a transaction occurs their account balance should be automatically update **Usability:** This has to do with black box testing, but relating it to white box testing, usability testing is a very wide area of testing and it needs fairly high level of understanding of this field along with creative mind. People involved in the usability testing are required to possess skills like patience, ability to listen to the suggestions, openness to welcome any idea, and the most important of them all is that they should have good observation skills to spot and fix the issues or problems. As soon as the user problems are identified, if such problem arises from the internal mechanism of the product then white box testing strategy can help to identify and fix those problems

Maintainability: It basically defines that how easy it is to maintain the system. This means that how easy it is to analyses, change and test the application or product. Maintainability testing shall use a model of the maintainability requirements of the software product. The maintainability testing shall be specified in terms of the effort required to effect a change under each of the following four categories:

1. Corrective maintenance: Deals with correcting problems. The maintainability of a system can be measured in terms of the time taken to diagnose and fix problems identified within that system.

2. Perfective maintenance: This deals with system enhancements. The maintainability of a system can also be measured in terms of the effort taken to make required enhancements to that system. This can be tested by recording the time taken to achieve a new piece of identifiable functionality such as a change to the database, etc. A number of similar tests should be run and an average time calculated. The outcome will be that it is possible to give an average effort required to implement specified functionality. This can be compared against a target effort and an assessment made as to whether requirements are met.

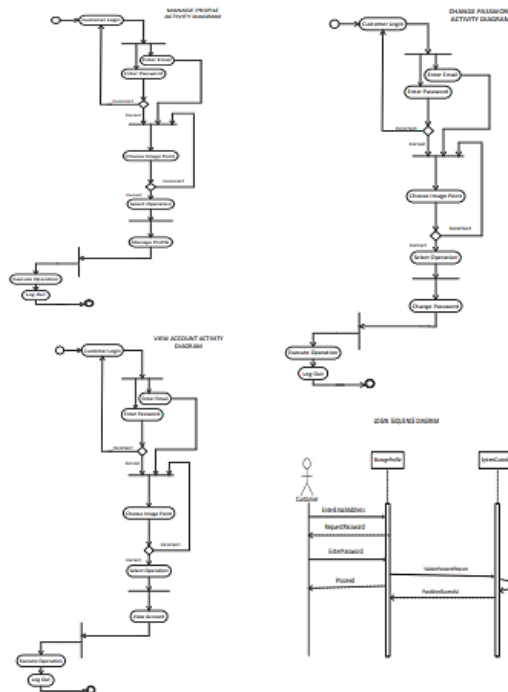
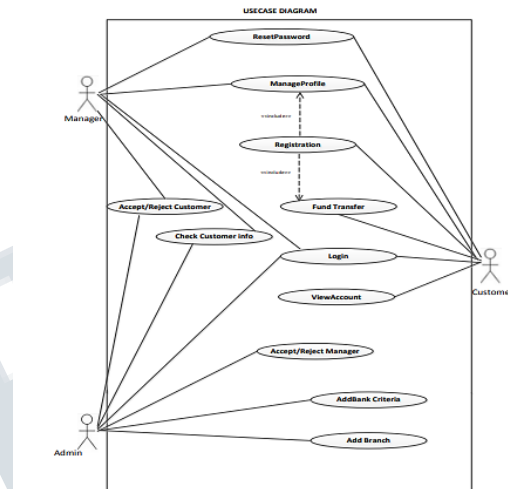
3. Adaptive maintenance: Adapting to changes in environment. The maintainability of a system can also be measured in terms on the effort required to make required adaptations to that system. This can be measured in the way described above for perfective maintainability testing.

4. Preventive maintenance: Actions to reduce future maintenance costs. This refers to actions to reduce future

maintenance costs and to maximize profit while reducing cost. It also important to note that maintainability deals with; modular structure of software, internal program documentation, Programmers manual typical requirements, Code to company standards and guidelines.

System Architecture:

3.1 Use case Diagram



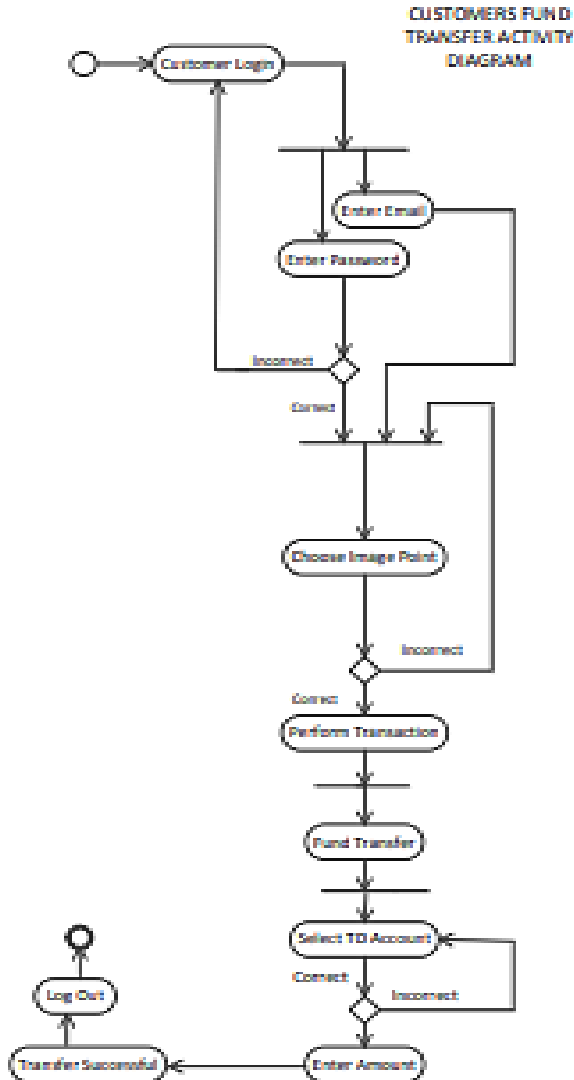


Fig 9. Customer Fund Transfer Activity Diagram

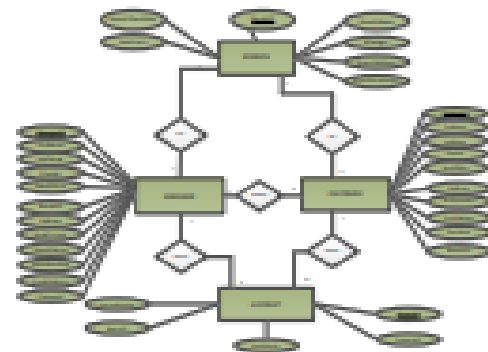
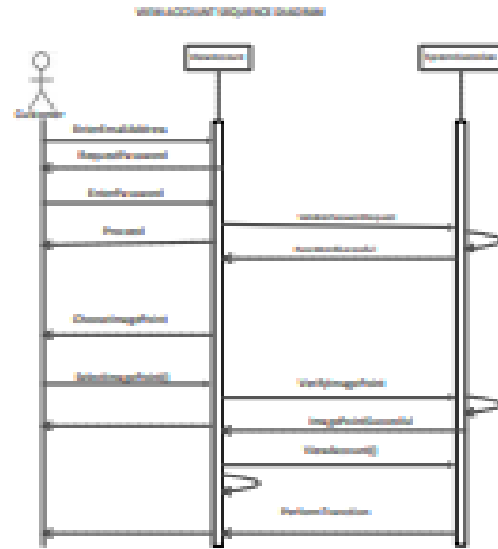


Fig 18. Entity Relationship Diagram (ERD)

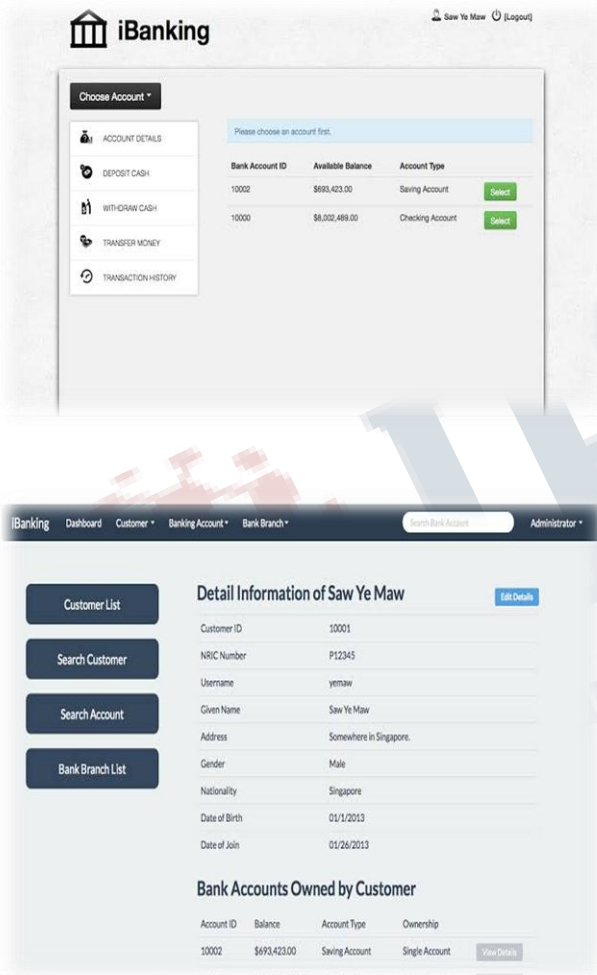


V. CONCLUSION:

I have successfully designed, develop and implemented this Bank customers Management system which provides a more secured approach in managing bank customer's

information and strengthens the relationships between banks and their customers by providing the right solutions that uses a multilevel security to improve customer satisfaction. I therefore encourages other developers of similar application to think twice on how best they can improve in developing a more secured system that will meet the challenges we face today especially on the banking sector and other financial institutions.

VI. INTERFACES:



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