Automation Of Collector Office

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Abstract- *Collector's office has to control many departments under its working territory, state or region. The departments are controlled by employees who are further responsible for managing records of other people. Often the records are not managed properly, so we have made an online application where employees can easily login and manage the database by entering records and keeping a check on it.*

This saves a lot of time as well and prevents data redundancy.

> 1. *Agricultural department*
> 2. *Voter ID department*
> 3. *Civil project construction department*
> 4. *School and education department*
> 5. *Energy department*

Collector office system will store data, exit data delete data and will access data through queries. Data is stored in the form of tables and will be entered into the system. In many similar topics of collectors office data is backed up to protect data against equipment failure. The agriculture loans will include pan id, address, occupation, etc. and its interest rate will depend on the salary .there will be proper data maintained including the details of the person by whom the loan is sanctioned. Similarity civil construction projects will include all the necessary attributes including project name, number, start date, and the id of the person who supervises it. We have third table named voter id generator which will include all necessary information related to it such as Voter ID, Voter name, Father name, permanent Address, etc. All these three tables will be linked with the employee table which has its own attributes. In this department the new projects proposed by various independent builders are proposed ant then are approved by the authority taking details of the various attributes of the project. The project start date ,end date budget , no of labourers are aslo taken into account while deciding the fact to approve the project or not. The project once approved is then started upon under its working program. This department provides electricity as the form of elctricity to the households in that area and then calculates the total amount of money the respective consumer has to pay. This department calculates the units of the electricity used by the consumer over the time period of one month and thereafter calculates his/her total billing amount by taking into consideration the total units used as well as the billing rate calculated by the electricity board per unit. This department manages and regulates the number of schools in that particular area . This department serves as the regulatory body for the various major and minor private as well as the public schools the that area. The school details which include its name , no of students, no of teachers, contact no, address etc are also held by this department

I. INTRODUCTION

1.1 THEORETICAL BACKGROUND

Java is a popular third-generation programming language. It is the language of choice for internet and internet applications. NetBeans IDE is a free, open- source, cross-platform IDE (Integrated Development Environment) with a built-in support for Java Programming Language. It offers many features for application development such as Efficient GUI builder , Web-services, Excellent debugging, Code generation and management tools Oracle 11g Express is an freely available open- source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). It is available either under the GNU General Public License (GPL) or under other licenses. It works on many platforms, most common of which are Linux, Max Osx, Windows etc.

1.2 PROBLEM DEFINITION

To prevent data redundancy and misuse of data, we have created an application where employees can login and check the records of the various departments mentioned above.

1.3 AIM OF THE PROPOSED WORK

This aim of the proposed system is to contribute to the goal of achieving a database management system that manages to keep records of customers or projects managed by 8 the employees in the respective departments, thereby aligning with the motivation of the project.

The stated project is targeted at the delivery of a cost effective, compact and portable system that makes it the best choice of product for the end users. The ease of installation of this system aims to make it a suitable choice for easy insertion and management of records in any domain.

The work aims to not only provide a high- quality user experience, but also provide better features than the prevalent systems, while keeping in mind that these features are provided not at the compromise or loss of any other features that the existing systems provide.

II. LITERATURE SURVEY

The title of our project is automation in collector's office. This is related with collection management system in database. Main aim is to organize, control and manage collection of objects by tracking all the information related to the objects.

The tables chosen by us are agriculture loans, voter id generator, and construction and civil projects. Already work has been done on it and also going on. We'll record the information related to the departments taken. Previously there are many collection management systems were proposed like Axiell's Collections Management Software[1]

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"In 1997, art historian and museum information studies consultant Robert A. Baron outlined the requirements for Collections Management Systems, not as a list of the kinds of collections object information that should be recorded, but rather as a list of collections activities such as administration, loan, exhibition, preservation, and retrieval, tasks that museums had been responsible for long before the invention of computers. Some conservators and institutions have taken a different approach, by assigning roles to different objects. This was achieved by renaming and remapping fields in the existing system."[3]

The agriculture loans will include pan id, address, occupation, etc. and its interest rate will depend on the salary .there will be proper data maintained including the details of the person by whom the loan is sanctioned. Similarity civil construction projects will include all the necessary attributes including project name, number, start date, and the id of the person who supervises it. [4]

We have third table named voter id generator which will include all necessary information related to it such as Voter ID, Voter name, Father name, permanent Address, etc. All these three tables will be linked with the employee table which has its own attributes.

III. PROPOSED SYSTEM MODEL

The aim of our project is:

- To restrict unauthorized access of the project and important data.
- To increase the security and safety of data as every manager has its own login area.
- To get validated data through constraints implemented on Oracle tables.
- To maintain different accounts of manager.
- To maintain different items data like New civil and construction projects, voter ID generation, agricultural details, etc.
- To search a specific item.
- To generate necessary reports like Bill Details, income details, tax payment details, etc.

3.1 Functional Module description :

AGRICULTURAL DEPARTMENT

In this module, the agricultural department contains the records of the customers where we insert Principle, rate and time, where Amount gets calculated automatically and hence we submit the data, which gets stored in the back end.

VOTER ID DEPARTMENT

In this module, the Voter ID department contains the records of the customers where we insert the information taken from the Applicants and hence we submit the data, which gets stored in the back end.

CIVIL PROJECT CONSTRUCTION DEPARTMENT

In this module, we record the details of the Projects in the territory. The records of the contractor as well as project are recorded.

SCHOOL AND EDUCATION DEPARTMENT

This module keeps the records of the various schools in the state, containing its information such as no. of students, faculties and area name

ENERGY DEPARTMENT

This department contains the details of the energy consumption by people. The 0units consumed are inserted and rate per unit is mentioned and total bill gets calculated. Hence, after submission we store the whole record in the backend.

SIGN UP

The module consists the employee information. Whenever there is no employee in the office the employee signs up and the respective data gets stored and the employee can later on login in order to work on theapplication.

LOGIN

The module is basically used for employees to login the application. It contains the field username and password which if correctly filled then user gets access to the office.

3.2 SOFTWARE DESIGN SPECIFICATION DIAGRAMS :
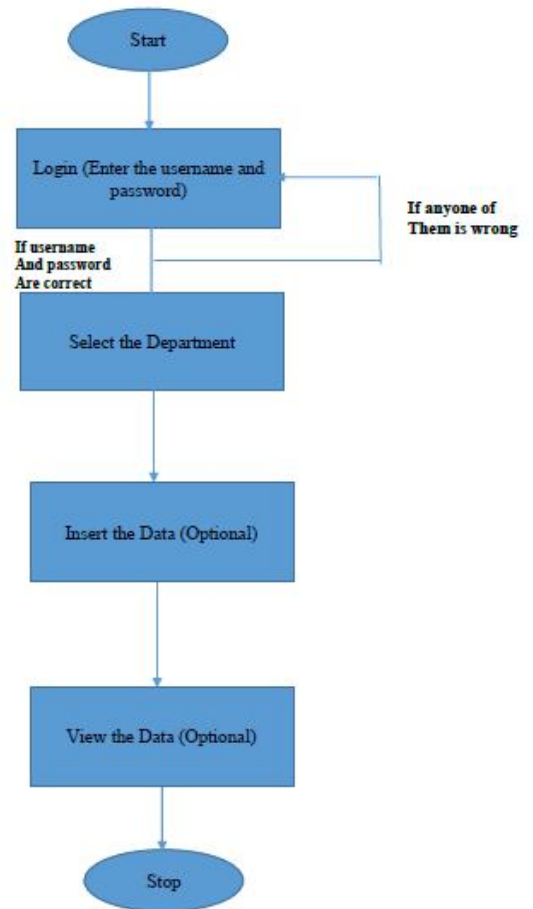
Fig 1 Module diagram
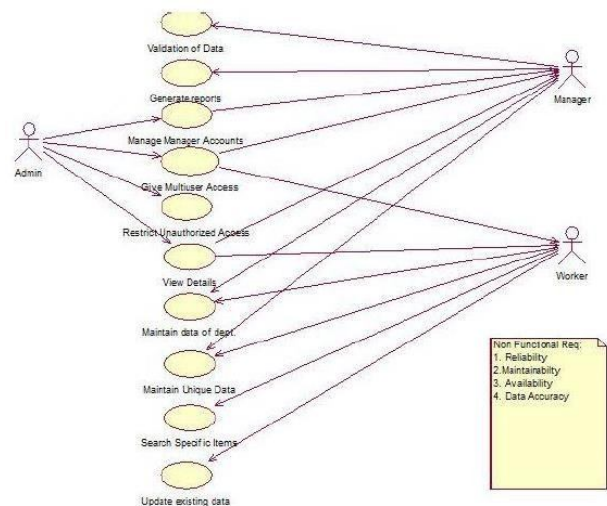
Fig 2 Use case diagram
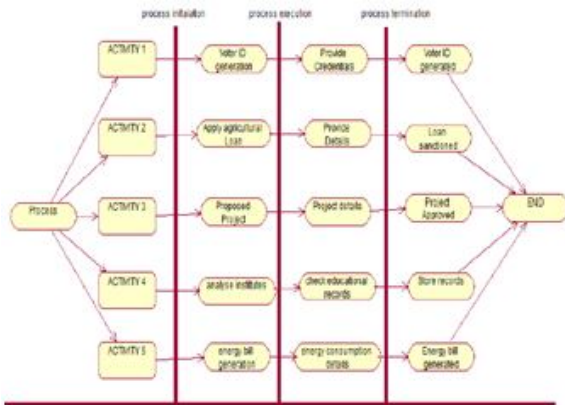
FIG 3 Sequence diagram
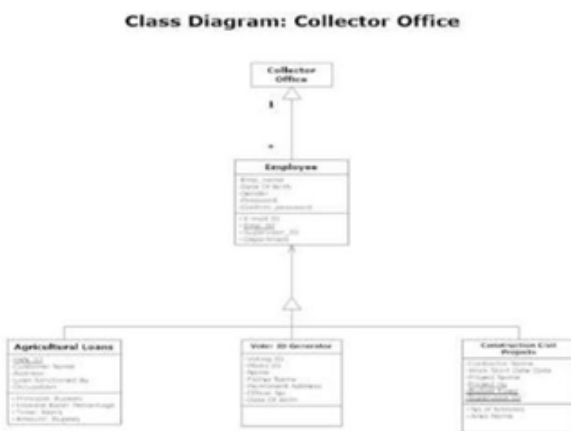
Fig 4 Class diagram
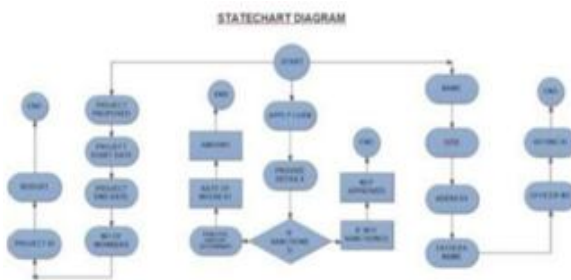
Fig 5 Statechart diagram

3.3 SYSTEM REQUIREMENTS

3.3.1   HARDWARE REQUIREMENTS

PROCESSOR : i7-6500U CPU@2.50GHz RAM : 16.00 GB RAM
MONITOR : 15.6" color screen HARD DISK : 40 GB
SYSTEM TYPE : 64 bit Operating System, x64 based processor

3.3.2   SOFTWARE REQUIREMENTS

Windows 10 Mysql
Java Netbeans 8.2
Microsoft word 2013 Notepad

IV. IMPLEMENTATION

Front-End:

We have used Java Netbeans 8.2 to connect with Mysql. We insert the data in Netbeans application created and the data gets stored in the database created in MySql.

Fig 6 Login Page

Fig 7 Admin page

Fig 8 Office administrator
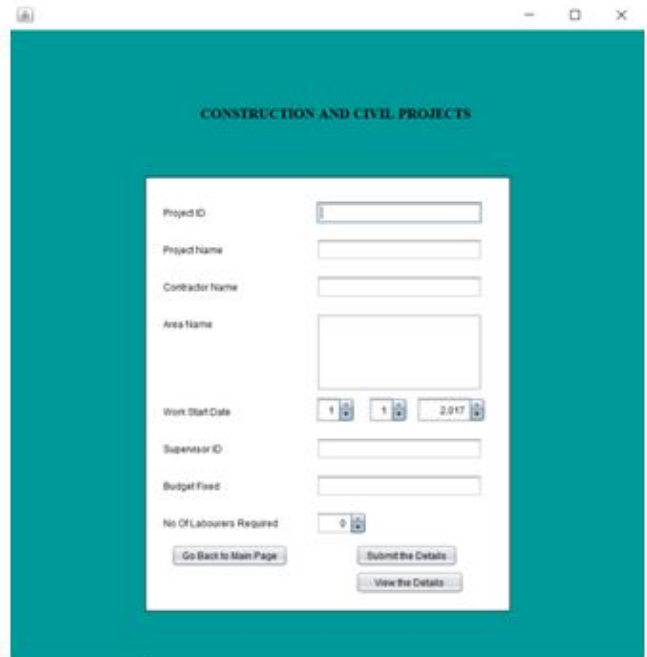
Fig 10 Civil project department
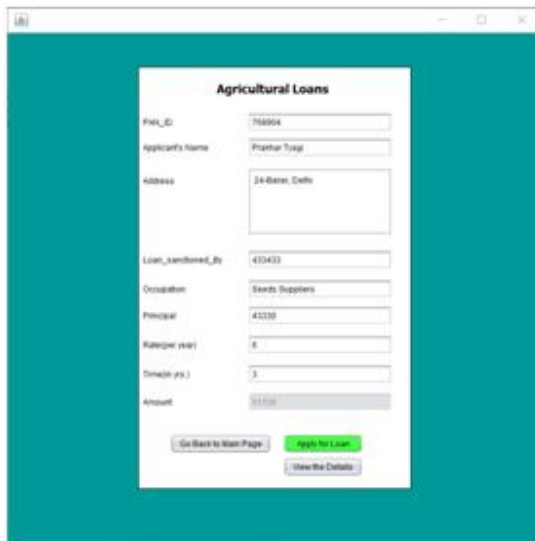
Fig 9 Agricultural loan sign up

Fig 11 Voter ID generation department

Fig 12 School details department

Fig 14 Energy department details

Fig 13 Energy department

Fig 15 Agricultural loan details

Fig 16 Voter ID details

Fig 17 Civil project registration details

Fig 18 School details

BACK-END:

SQL DATABASE COMMANDS RUNNING THE DATABASE USING THE FOLLOWING METHODS.

Fig 19 Table employee

Fig 20 Table employee login

Fig 21 Table for agricultural loans

Fig 22 Table for construction and civil projects

Fig 23 Table for Voter ID generation

Fig 24 Table school

Fig 25 Table energy requirements

V. CONCLUSION

We conclude, using this application we can easily insert the records and maintain them for long period of time. There is no chance of losing data and prevents data redundancy. We have prepared application where no other person other than the employee of the collector office can make changes in the database. The departments we used were Agricultural loans, Civil and construction projects, Voter ID department, and school and education department and energy consumption department. The main records are to be recorded and handled by the collector office's employees in order to keep a check on the customers and applicants.

The employees cannot lose the data as there is delete option provided, but could be altered from the backend for future purpose. We can easily view the present details of the department so that we can cross check or do verification.

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[4] http://www.tangedco.gov.in/linkpdf/Agri%20- Form.pdf: The pdf is a form to apply for agricultural loan. This gives us the idea about attributes required in database "Agricultural loans".

[5] http://ceoharyana.nic.in/?module=pages&pageid =42: The link tells us about the requirements forVoter ID Generation. This information can be used to maintain the database.

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