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SHG ACCOUNT MAINTAINANCE SYSTEM (REQUIREMENT AND DESIGN ANALYSIS)

Bharath Kalasapura¹

REQUIREMENT ANALYSIS

Existing System

In existing system from the beginning of SHG till the end of the financial year every task is maintained on the paper. That is Group formation, total savings done by each member in that group, total loan given to a member, overall transaction of that group and so on. Everything will maintain on the form of paper only. In this process chances of miss placing the papers are more and to check for SHG details or about their transactions etc. are very difficult. And staff has to be arranged for each work and takes more of time and also requires more manpower.

Proposed system

To save time and manpower and reduce work, My SHG Account Maintenance software will help. Here we can maintain each and every transaction details of the SHG. We can keep these records for longer period. But in the case of existing system after few years papers will get damage.

Searching of the SHG member details and also SHG Details is very easy just by few mouse clicks & within a minute where as in existing system it may take couple of day. This application is user friendly so anybody can be used very easily.

Advantage of proposed system

- Very compact software
- Very user friendly interface
- SHG can be maintained accurate account details without missing a single NP.
- Collecting of Transaction is easier.
- Keeping track SHG members periodic updates easily and efficiently.

SYSTEM REQUIREMENT SPECIFICATION

Hardware Requirement

- Intel based PC with 400 MHz (Pentium III or above)
- At least 5GB HDD
- 128MB of RAM or above

Software Requirement

Present Application; SHG Account Maintenance Software was constructed by using two softwares they are:

- Visual Basic 6.0 and

¹ Morarji Desai Residential School, Pampa Vidyapeetha, Ramasagara, Bellary Dt., Karnataka.

- MS-Access
- Nudi 4.0

Operating system Requirement:

- Microsoft Windows 2000 professional
- Microsoft Windows XP
- Microsoft Windows XP (unlimited)

SYSTEM DEFINITION

Overview of VB

Visual Basic (VB) is an event-driven programming language. This is called because programming is done in a graphical environment unlike the previous Version BASIC where programming is done in a text only environment and executed sequentially in order to control the user interface. Visual Basic enables the user to Design the User Interface quickly by drawing and arranging the user elements. Due to this spent time is saved for the repetitive task.

Features of Visual Basic

- Full set of Objects - you 'Draw' the application
- Lots of icons and pictures for your use
- Response to mouse and keyboard actions
- Clipboard and printer access
- Full array of mathematical, string handling, and graphics functions
- Can handle fixed and dynamic variable and control arrays
- Sequential and random access file support
- Useful debugger and error-handling facilities
- Powerful database access tools

Views, stored procedures and UDF's). However, only forms, reports, macros and modules are stored in the ADP file (the other objects are stored in the back-end database). This centralization of queries and tables in the database server provides a more reliable development environment for most business.

System Architecture

Two-tier Architecture

The Two tier architecture divides an application into the following two components.

Client: Implements the User interface **Server:** Stores data

Thus in case of two-tier architecture, the user and data services are located separately, either on the same machine or on separate machines. For example, an application has a user interface developed using VB application on one machine and MS-Access on another machine or on the same machine. However, total application has two components one to implement the UI and another to store data.

An application can be divided in three layers. The first layer constitutes the user interface (user service) of an application. This layer is also called as the presentation layer.

The next layer is the business services layer which controls the enforcement of business rules on the data. Business rules include all the validation enforced when accepting or retrieving data in an application. In other words the business services layer performs validations pertaining to business rules. The Business services layer also ensures that the back - end does not receive incorrect data.

The third layer comprises of the data and the function for manipulating this data. These three layers are the base of any application.

SYSTEM DESIGN

Dataflow diagram

DFD is a very important graphic tool which is used to describe and analyse the movement of data through a system manual or automated.

Data dictionary

The data dictionary stores details and description of all data used in system. It is an organized listing of all the data elements that are pertinent to the system.

Structured English

It is a decision analysis tool which allows the analyst to list the steps in the order in which they should be taken. No symbol or format are used.

Decision trees

Are presentation of decision variables that are graphics and sequential, showing which condition to consider first, which second and so on.

Decision tables

Relate conditions and actions through decision rules. A decision rule states the condition that must be satisfied for a particular set of action to be taken. The decision rule incorporates all the conditions that must be true at one time, not just one condition.

DFD's are of two types

1. Physical DFD

The physical DFD is a model of the current system and is used to ensure that the current system has been clearly understood. Physical DFD show actual devices, department, people etc involved in the current system.

2. Logical DFD

Are the model of proposed system. They should clearly show the requirement on which the new system should be built.

DFD has two alternative symbol sets

1. Yourdon Symbol set
2. Gane – Sarson symbol set (e.g : open box)

Notations of a DFD

Data Flow (Arrow)

Process (Circle)

External Entities (Square Box)

Data Store (Open Box)

Data Flow

Passage of data in the system in a specific direction that is from origin to destination. The direction of the flow is indicated by a arrow and the line is labeled by the name of the data



Process

Process transform inputs into outputs. They are work or action that are performed by people, machine or computer on incoming data flow to produce outgoing.



External Entity

External Entities are organization, department or people which represent a source or destination of transaction or data.

Entity that supplies or receives information from the system but is not a part of the system.



Data Store

It is as the memory of the system .Any place that accumulate the data is a data store. The data in a data store must have at least one data flow pointing towards it or away from it . It can be file or device

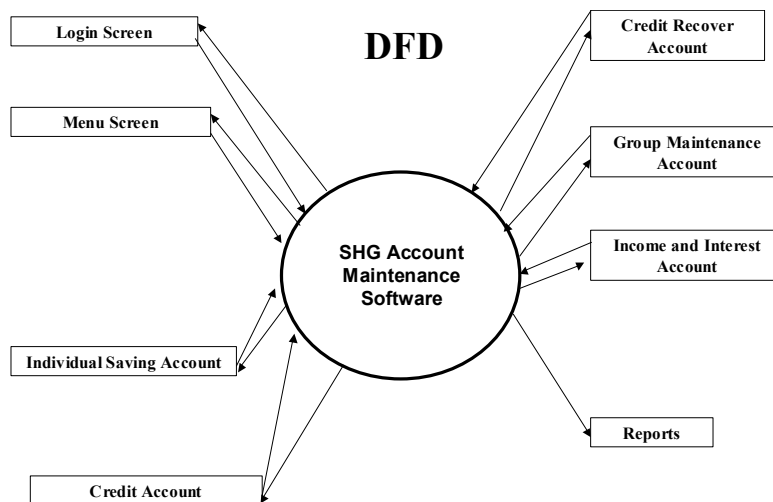


Figure 1. Data Flow Diagram For implementation of SHG Account Maintenance Software

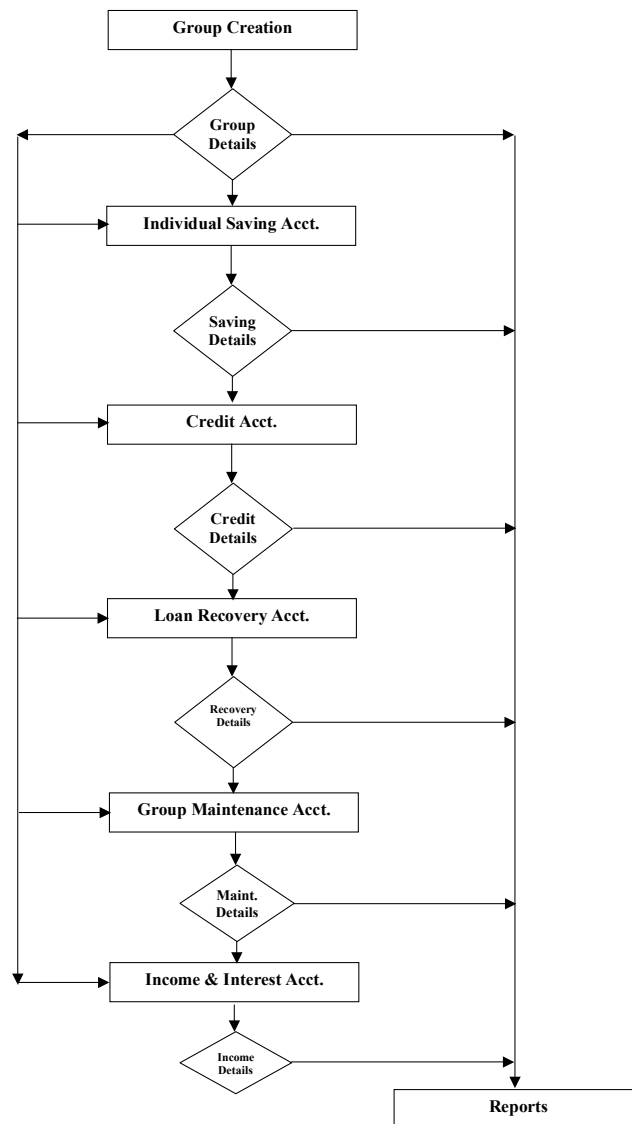


Figure 2.ER Diagram For implementation of SHG Account Maintenance Software

- ☐ ActiveX support
- ☐ Package and Deployment Wizard makes distributing our applications in a precise sophisticated manner

Overview of Microsoft Access

Microsoft Office Access, previously known as Microsoft Access is a relational database management system from Microsoft that combines the relational Microsoft Jet Database Engine with a graphical user interface and software development tools.

Features of Microsoft Access

- One of the benefits of access from a programers perspective is its relative compatibility with SQL (Structured Query Language) - queries can be viewed graphically or edited as SQL statements, and SQL statements can be used directly in Macros and VBA Modules to manipulate Access tables. Users can mix and use both VBA and “Macros” for programming forms and logic and offers objected- oriented possibilities.
- MSDE (Microsoft SQL Server Desktop Engine) 2000, a scaled down version of Microsoft SQL Server 2000, has been a free download for a decade and may be used with Access as an alternative to the Jet Database Engine
- Starting in Access 2000 (Jet 4.0), there is a new syntax for creating queries with parameters, in a way that looks like creating stored procedures, but these procedures are still limited to one statement per procedure.
- In ADP files (Supported in Access 2000 and later), the database-Related feautres are geared more towards a client-server architecture with MSDE or Microsoft SQL Server serving as the back-end instead of using the Jet Engine. Thus, it supports the creation of nearly all objects in the underlying server (tables with constraints and triggers,

Database Design

SHG Account Maintenance Software

| | | |
|---------------------------|-------------------------|--|
| Login Table | Login Details | All the username & password are stored |
| Group_Creat_Tab | Group Creation Table | All the group information stored |
| Group_Creat_Tab2 | Group Creation Table2 | All the group information stored |
| Saving_Tab | Individual Saving Table | All the Individual Saving details are stored |
| Credit_Tab | Credit Account Table | All the Credit details are stored |
| Recov_Tab | Loan Recovery Table | All the Loan recovery details are stored |
| Group_Maintain_Tab | Group maintenance | All the group maintenance details Table are stored |
| Incom_Interest_Tab | Income & Interest Table | All the Income and interest details are stored |

Login Table

| | | |
|------------------|------|---|
| User_Name | Text | Name of the user enter here |
| Password | Text | Respective password to user name enter here |

GROUP CREAT TABLE-1

| | | |
|-------------------------|----------------------|--|
| SHG_Name | Text here | Name of the SHG Member is display |
| SHG_Place | Text here | In which Village that SHG reside enter |
| SHG_Post | Text here | In which Post of that SHG reside enter |
| SHG_Talluk | Text | In which Talluk that SHG reside enter here |
| SHG_Dist | Text here | In which District that SHG reside enter |
| Group_Begin_Date | Date / Time | Group commencement date enter here |
| BPL_Mem | Number | Number of BPL members are there in SHG |
| APL_Mem | Number | Number of APL members are there in SHG |
| Total_Mem | Number enter here | Number of members are there in SHG |
| Meet_Period | Text enter here | Meeting duration like weekly, monthly etc. |
| Meet_Place | Text | Meeting conduct place enter here |
| Meet_Day | Text | Meeting conduct Day enter here |
| Meet_Time | Date / Time | Meeting conduct time enter here |
| Bank_Name | Text here | Name of the Bank SHG Corresponds enter |
| Branch_Name | Text | Name of the bank branch enter here |
| Sav_acct_Bal | Number | Balance in Saving account enter here |
| Loan_amount | Number | Borrowed Loan amount enter here |
| Which_Bank | Text sponds | Name of the Bank does the SHG Corre |
| Ind_Sav_amount | Number Enter here | How much Individual Saving amount fixed? |

GROUP CREAT TABLE-2

| | | |
|---------------------------|-------------|--|
| Tildate_Sav_amount | Number | Total Saving till date enter here |
| Loan_Sanct_Period | Text etc | Loan sanctioned for the period of 1year, 2year |
| Sanct_Loan_Amount | Number | Sanctioned loan amount enter here |
| Recov_Status | Text | Status of Recovery like average, good, Not bad are enter here |
| Loan_Purpose | Text | Purpose of the loan enter Here |
| SHG_Mem_Name | Text | Name of the SHG Member is Enter here |
| SHG_Mem_Age | Number | Age of the SHG Member is Enter here |
| SHG_Mem_Qulif | Text | Qualification of the SHG Member is Enter here |
| SHG_Mem_Cast | Text | Cast of the SHG Member is Enter here |
| SHG_Mem_Class | Text | Class of the SHG Member is Enter here |

INDIVIDUAL SAVING TABLE

| | | |
|---------------------------|-------------|--|
| Sav_Method | Text | Method of Saving Whether weekly, Monthly Etc. |
| Sav_Date | Date / Time | On which Date Saving is done |
| Sav_amount | Number | Saving amount |
| Interest_on_Sav | Number | Interest on present saving amount |
| Insure_on_Sav | Number | Insurance amount on present saving amount |
| Sav_amount_Tildate | Number | How much amount saved on till date |

Credit Table

| | | |
|------------------------|----------|---|
| Loan_Benficiary | Yes / No | Whether group or individual mention here |
| SHG_Mem_Name | Text | Name of the SHG Member is display here |
| Sav_Amount | Number | Saving Amount enter here |
| Bank_Name | Text | Name of the Bank does the SHG Corresponds enter here |
| Bank_addr | Text | Corresponding bank address enter here |

| | | |
|----------------------------|-------------|--|
| Loan_Acct_No | Number | Bank loan account no. enter here |
| Fin_Inst_Name | Text | Finance institute name enter here |
| Fin_Addr | Text | Finance institute address enter here |
| Fin_Loan_Acct_No | Number | Finance institute loan account no. enter here |
| Other_Source | Text | Mention other source of finance enter here |
| Source | Text | other source details enter here |
| Credit_Date | Date / Time | Loan borrowed date enter here |
| Credit_Purpose | Text | Purpose of the loan enter here |
| Loan_Amount | Number | Loan amount enter here |
| Interest_Rate | Number | Rate of Interest enter here |
| Recov_Duration | Text | Recovery duration like 1year, 2year enter here |
| Tot_Instalments | Number | Number of instalments enter here |
| Recov_Begin_Date | Date / Time | Loan repayment beginning date enter here |
| Instalment_Duration | Text | Duration of the Instalment like montly, yealy etc.enter here |
| Instalment_Amount | Number | Instalment amount enter here |

LOAN RECOVERY TABLE

| | | |
|---------------------------|-------------|---|
| SHG_Mem_name | Text | Name of the SHG member who borrow the loan and made repayment |
| Credit_Source | Text | Source of the Loan enter here |
| Loan_Amount | Number | Total loan borrowed is enter here |
| Recov_Date | Date / Time | Recovery beginning date enter here |
| Instlmt_Amount_Pay | Number | It display Per instalment how much is to pay |
| Bal_to_pay | Number | Balance to be pay is display here |
| Instalments_Remain | Number | Remaining installments shown here |

Group Maintenance Table

| | | |
|------------------|-------------|--|
| SHG_Mem_Name | Text | Name of the SHG Member is display here |
| SHG_Tot_Mem | Number | Number of members are there in SHG Display Here |
| Maintain_Date | Date / Time | Date of Maintenance enter here |
| Maintain_Purpose | Text | Purpose of the maintenance enter here |
| Bill_No | Number | Bill no. for the particular expenditure enter here |
| Maintain_Exp_Now | Number | Present Maintenance expenditure enter here |
| Maintain_Per_Mem | Number | Maintenance expenditure per member here calculate |
| Tot_Maintain_Exp | Number | Total maintenance expenditure calculate here |

INCOME AND INTEREST TABLE

| | | |
|--------------------|--------|--|
| SHG_Mem_Name | Text | Name of the SHG Member is display here |
| SHG_Tot_Mem | Number | Number of members are there in SHG Display Here |
| Income_Source | Text | Source of the Income enter like Interest or any projects |
| Income_Amount | Number | Income amount enter here |
| Interst_Income | Number | Group income on interest is display here |
| Indiv_Inter_Incom | Number | Individual income on loan interest is display here |
| Maintain_Per_Mem | Number | Maintenance expenditure per member display here |
| Group_Maintain_Exp | Number | Group maintenance expenditure display here |
| Group_Incom | Number | Group Income display here |
| Indiv_Incom | Number | Individual Income display here |

SCREEN DESIGN

There are Nine Screens in this project. Each Screen can take certain action to do the Account maintenance process of the SHG.

Screens designed for this application as follows:

Login Screen

This is security Gate for SHG Account maintenance Software. You must enter username and password to open complete application. Suppose you are a new user, then you can create new username and password to logon.

Main menu Screen

This is the main screen after the login Screen. Link will be created from this screen to start other screen like Group Creation, Individual Saving etc.,

Group Creation Screen-1, Group Creation Screen-2

All the Details of the SHG is stored by using This Screen.

Individual Saving Screen

Saving Events are carried out by this Screen

Credit Account Screen

Credit details of the SHG is maintained in this Screen

Loan Recovery Screen

Recovery Information of SHG is managed in this Screen

Group maintenance Screen

Group maintenance Expenditure are handle in this Screen

Income & Interest Screen

Income and Interest of the SHG is maintained by this Screen

SOFTWARE DEVELOPMENT STRATEGY AND IMPLEMENTATION

Development methods and procedure for software development that can scale up for a large systems can be used to consistently produce high quality software at low cost and with a small cycle time that is, the key objectives are consistency, low cost, high quality, small cycle time and scalability.

As the information system requirements were predictable, it was decided to follow classical system development life cycle method. It is the oldest and most widely used paradigm for software development that begins at the system level and progress to analysis, design, coding, testing and maintenance. The steps are applicable to all software engineering paradigms. Modeled after the conventional engineering cycle, the life cycle approach encompasses the following activities.

System Engineering and analysis

Because software is always a part of large system, work begins by establishing requirements for all system elements and then when software must interface with other elements such as hardware, people and database. System engineering and analysis encompasses requirement gathering at system level with a small amount of to level design analysis.

System Requirement analysis

The requirement gathering process is intensified and focused specifically on software. Requirement analysis is done in order to understand the problem the software system is to solve. The emphasis is requirement analysis is on identifying what is needed from the system, not how the system will achieve its goals. This task is complicated by the fact that there are often at least two parties involved in software development - a client and a developer. The developer has to develop the system to satisfy the client's needs. The developer usually does not understand client's problem domain. and

the client does not understand the issue involved in the software system. This causes communication gap, which has to be adequately bridged during requirement analysis.

Design

The purpose of the design phase is to plan a solution of the problem specified by the requirement document. Software design is actually a multi step that focus on four distinct attributes of program: data structure, software architecture, procedural details and interface characterization. The design process translates requirement into a representation of the software that can be accessed for the quality before a part of software configuration.

Coding

Once the design is complete, most of the major decisions about the system had been made. However, many details about the coding design, which often depend on the programming language chosen, are not specified during the design. The goal of the coding phase is to translate the design of the system into code in a given programming language. For a given design, the aim in this phase is to implement the design in the best manner.

Testing

The Testing is major quality control measure used during the software development. The testing process focussed on the logical internal of the software, ensuring that all the statements have been tested and on the functional externals, that is conducting tests to uncover errors. This ensures that defined input will produce actual results that agree with the required results.

Maintenance

Software will undoubtedly change after it has been encountered because the software must be adapted to accommodate changes in the external environment, or because the user requires external or performance enhancements. Software maintenance replies each of the preceding life cycle steps to an existing program rather than a new one. The basic idea of the SDLC method is that there is a well-defined process by which an application is conceived, developed and implemented. It gives structure to creative process. The phases in the SDLC provide a basis for management and controls because they define the segments of the flow of the work, which can be identified for managerial purpose and specify documents or other deliveries to be produced in each phase.

TESTING AND RESULT

Testing is a process of executing a program with the incident of finding any errors. A good test of course has the high probability of finding an error. A successful testing is the one that uncovers an undiscovered error.

Testing is vital to the success of the system. Software testing makes a logical assumption whether all parts of the system are correct and whether the goal is successfully achieved. The candidate system is subjected to variety of tests online. a Series of test are performed before the system is ready for user acceptance.

Types of Testing

The different types of testing are

- Unit Testing

- Integration Testing
- User Acceptance Testing

Unit Testing

During this stage, the software design is realized as a set of program or program unit. Unit testing involves verifying that each unit meets the specification.

Integration Testing

Individual program and units are integrated and tested as a complete system to ensure that the user requirements have been met. After testing the software, the system is delivered to the customer.

User Acceptance Testing

User acceptance testing of the system is the key factor for the success of any system. The under consideration is the test for user acceptance by constantly keeping in touch with the prospective system at the time of development and making changes whenever required. This is done with regard to the input screen and output screen.

SUMMARY

The product is perfectly tested for the data to prove the stated proposed system. it has been checked thoroughly with all data in different circumstances and found to be working perfect. With this project there will not be any loss or mis placing of data. It reduces lots of paper work as well as time as we stated before.

This project can be enhanced to send E-mails or SMS to the members of SHG about there transaction status. or we can keep the transaction details on internet. Even we can add some more modules to this application like Classify the SHG by District wise, Search the particular SHG in the entire state SHG Database. Prepare and record the Meeting Resolutions, Conducting Activities Information, Financial Growth Chart in different intervals, Bank accessing facility and so on.,

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Miscellany

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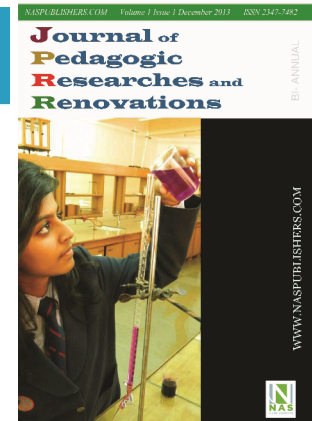
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