DEPOSIT MANAGEMENT SYSTEM
SAKTHI SUGARS (P) Ltd, COIMBATORE

PROJECT REPORT

Submitted in partial fulfillment of the
Requirements for the award of the degree of

M.Sc APPLIED SCIENCE- SOFTWARE ENGINEERING
BHARATHIAR UNIVERSITY, COIMBATORE.

Submitted By

SHWETA ARORA
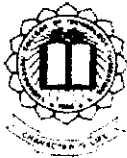**Reg . No. 0037S0110**

~~2~~ ;08ḃ

Guided By

EXTERNAL GUIDE
Mrs. K. Nalini
Senior Officer,
I.T. Division,
Sakthi Sugars(P) Ltd,
Coimbatore.

INTERNAL GUIDE
Mr. S. Mohanavel
SeniorLecturer,CSE,
Kumaraguru college
of Technology,
Coimbatore.

KUMARAGURU COLLEGE OF TECHNOLOGY
Department Of Computer science And Engineering,
Coimbatore-641006.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
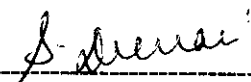## KUMARAGURU COLLEGE OF TECHNOLOGY
COIMBATORE – 641006.

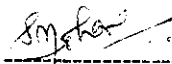## CERTIFICATE

This is to certify that the project work entitled

"DEPOSIT MANAGEMENT SYSTEM"

has been submitted by
Ms. Shweta Arora – 0037S0110

in partial fulfillment of the award of the
degree of Master of Science in Applied Science – Software Engineering,
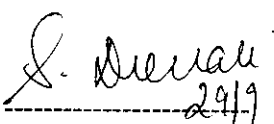Bharathiar University, Coimbatore
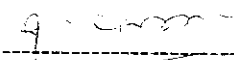During the Academic year 2003 – 2004

Head of the Department

Staff – in – Charge

Submitted for University Examination held on ....

Internal Examiner

External Examiner

Sakthi Sugars Limited

GA-26/ 3947 /2003   September 23, 2003

C E R T I F I C A T E

This is to certify that Ms.SHWETA ARORA, Fourth Year M.Sc.(Software Engineering) student of Kumaraguru College of Technology, Coimbatore has done Project Work on the topic 'Deposit Management System' in EDP Department of our organisation during the period from 27.06.2003 to 20.09.2003.

During the above period, her performance, conduct and character were found to be **GOOD**.
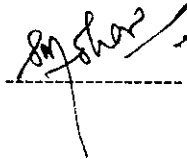
We wish all success in her career.

                                    For SAKTHI SUGARS LIMITED
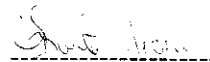
                                    P.MUTHUVELAPPAN
                                    DY.GENERAL MANAGER-HRD

DECLARATION

I hereby declare that the project work ," **DEPSOSIT MANAGEMENT SYSTEM** " submitted by me (Shweta Arora – 0037S0110) towards the fulfillment of the degree of MSc.Software Engineering from Bharathiar University has not formed the basis for the award of any degree ,diploma or association of any similar titles .The project work is done independently by me under the guidance of Mr.S.Mohanavel (Internal Guide) and Mrs.K.Nalini (External Guide).

Internal Guide   Shweta Arora

ACKNOWLEDGEMENT

i

SYNOPSIS

The project entitled **DEPOSIT MANAGEMENT SYSTEM** is windows based application developed for **Sakthi Sugars (P) Ltd**, Coimbatore. The front-end used here is Visual basic 6.0 and back-end is MS SQL 8.0.

The main objective of this system is that it helps the top management get a clear view of the existing deposit system and guides them in decision making and setting their future objectives.

The system has been developed to store and retrieve details about deposits and to maintain the transaction activities involved in the finance division of the company. The programming techniques used in the design of the system provide a scope for further expansion and implementation of changes which may occur in future.

The project throws light on various deposits and deposit schemes available along with database maintenance. The top management can get a clear view cf the existing deposit system for setting their future objectives which is a part of vision statement. The system has modules like Master, Transaction, Refund, Query and Report. Master module maintains database about Area, Bank, Broker, Category etc. Transaction module has details about a new deposit, deposit joining, splitting and renewal. The refund module deals with preclosure of deposit and payment of interest on maturity date. The queries respond to the general FAQ of the end-users and reports make it possible for the user to have a hard copy of the particular information. The software monitors and records every transaction that takes place helps to eliminate errors.

ORGANISATION PROFILE

Sakthi Group is a conglomerate of various entities having interest in various spheres like Sugar, Industrial Alcohol, Textiles, Foundry, Bus Transport, Parcel Service, Finance, Soft Drinks, Soya products, Synthetic Gems manufacture and information system, with a turnover of Rs.2000 Crores by the turn of the century. Sakthi Sugars Limited (hereinafter referred to as SSL) is the flag ship company of the Group.

SSL aims to become World class in serving its customers by continuous improvements, up gradation of human resources. It also maintains a clean and safe environment throughout the organization.

SSL is one of the largest producers of Sugar in India with a crushing capacity of 12,750 tonnes of cane crush per day having two sugar mills in Tamil Nadu and two mills in Orissa State, India.

SSL is the largest exporter of refined crystal sugar in the country and has attained the status of Export House.

Two Distilleries, one each in the States of Tamil Nadu and Orissa, with a total capacity of 37500 kilo litres are owned by SSL.

A division of SSL, Sakthi Soya has one of the best plants in Asia, combining the World's best technology from Switzerland and Germany. It uses the innovative flash desolventising technology to manufacture high-protein soya flour. The plant has a capacity to process 300 tonnes of soya per day.

The Company's High Protein Soya Meal, Soya Flour and Soya Chunks are exported to Srilanka, Thailand, Singapore and Malaysia.

SSL's expansion plan includes setting up of the following facilities:

- A co-generation unit for generation of 32 MW electric power at Sakthinagar, which is expected to commence operation from end September 2003.

- An ethanol plant with a capacity to produce 1250 lakh litres of anhydrous alcohol for mixing with petrol as per latest policy of the Central Government.

- A soft drink bottling plant with 600 bottles per minute capacity in Sivaganga.

Sakthi Auto Component Limited, the wholly owned subsidiary of SSL, has specialized in critical components for passenger cars like steering knuckles, brake drums. etc. The quantum of exports per month ranges between 250 MT to 500 MT. It is likely to grow up to 1000 MT in near future.

The latest technology is leveraged to the hilt people whose inherent strengths lie in the winning attitude and the willingness to thrive on challenges. This forms the foundation of an organization that races into the future with the surging confidence that it would continue to contribute and touch the lives of many more people.

Thus, the group excels in the following sectors: Sugar Unit, Finance, Bus Transport, and Parcel Service. Maruti Sales and Service, Wind mill, Bus Body building, Rethreading, Beverages, Diary Division, Textiles, Tea and Coffee Estates.

For Sakthi, Industry is not the be-all and end-all. It has a deep rooted concern for the development of its area in the economic and social spheres. As a keen participant in social commitments, Sakthi Sugars has set up educational institutions and hospitals. It has also made significant contributions to rural development with a variety of social welfare activities and by creating employment opportunities.

The Company's entire accounting, material handling, and reporting systems and most of the manufacturing facilities are computerized and are supported by an in-house team of computer professionals.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

1.1 Problem definition

1.1.1 Problem statement

The system is concerned with computerization of deposit management with the help of user friendly software tools. The system should have the capability to store various deposit and depositor details etc and also retrieve them easily when needed.

It should be able to calculate the various tax and amount calculations according to the company terms and provide efficient reports and information based on queries provoked by end-users. It should guide the Top Management in decision making and have a chart view progress of the company.

1.1.2 Existing system

The existing system had many limitations. It was developed with Sybase as backend and Power Builder as front end which led to drawbacks with increasing complications.

Some of them were :-

- Retrieving and accessing large data was very slow.
- Led to duplications of data and
- Further enhancements were not possible.
- Lack of data security.
- Fewer users friendly.
- No scope for further expansion.

1.1.3 Proposed system

The proposed system is developed using <u>Visual Basic 6.0</u> as Front-end and <u>MS-SQL</u> as backend .It focuses more on the end user's Capabilities.

Advantages of the proposed system:

- More user friendly with menu driven programs.

- Quick retrieval of data.

- Data redundancy is eliminated.

- Facilities for further enhancements.

- The system can be customized and updation is easier.

1.2 Project Plan

1.2.1 Development Schedule

TASKS	JUNE		JULY				AUGUST				SEPTEMBER			
	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Project Start Date	●													
Analysis Phase	■	—	—	■										
Design Approval				●										
Designing Phase				■	—	—	■							
Testing Phase							■	—	—	—	■			
Approval											●			
Testing Phase											■	— ■		
Documentation												■	— ■	
Final Review and Q&A Session														●
Project Release														●

■ → Start , ■ → End, ● → Action takes place within the specified period

W1 - W4 → Weeks

Fig 1.2.1.a

3

1.2.2 Documents to be prepared

It is suggested that the following documents must be prepared during the time of the project.

- A system definition consisting of a product and a project plan.
- A software requirement specification.
- A design document.
- A test plan.
- A properly documented, debugged and tested program.

1.2.3 Manner of demonstration:

Reviews

Every fortnight, the completed modules are explained to the project guide, reviewed and outputs are validated.

Documents

Drafts of every document are reviewed by the project guide before it is finalized and changes are incorporated immediately.

Product

Demo of each module is shown to the project guide when it is completed and if any changes are there they are incorporated.

CHAPTER 2

SOFTWARE REQUIREMENTS SPECIFICATION

2.1 Project description

Name of the project   :   DEPOSIT MANAGEMENT SYSTEM

Duration   :   3 months

About the project

The system helps to manage the Deposit Division of the finance department. The system highlights the various deposit schemes available along with the necessary details .It maintains record of every depositor and his deposit details and other relevant information. The company accepts deposits from general public, domestic companies, and charitable trusts, minors entrusted with their guardians, Non-Resident Indians and joint account holders. The depositor is introduced to the scheme directly or through broker. In the case of broker involved brokerage is calculated according to the criteria mentioned by the company. The company deals with three kinds of deposits namely:-

- FIXED DEPOSIT

- CUMULATIVE DEPOSIT

- GUARANTEEED DEPOSIT

Fixed deposit

Deposits are made here from a period ranging from 1-3 years. Interest percentage varies from 11% for 1 year deposit period to 12% for 2 and 3 year deposit period. The minimum deposit amount is five thousand rupees. The customer will be given a receipt called as Fixed Deposit Receipt (FDR) for the amount he has deposited. The interest is paid on quarterly basis by warrant or cash receipt, as preferred by the customer. At the time of maturity the depositor can withdraw the amount by surrendering the fixed deposit receipts duly signed on the revenue stamp or renew the deposit for the same or additional amount. The additional amount should be in multiples of thousand. In case of an emergency the customer can opt for preclosure before the maturity date.

Cumulative deposit

This is also known as recurring deposit .The time period here is only 1 year or 3 years .The interest rate is 11% for 1 year time period and 12% for 3 years time period. Minimum deposit amount here too is five thousand rupees. Here the interest will be paid at the maturity time of the deposit along with the principal amount. The interest is calculated on quarterly basis and added to the principal amount .In the successive quarter the principal amount gets changed by adding the previous quarter's interest to it. Similar to fixed deposit the depositor here gets a receipt known as (CDR) Cumulative Deposit Receipt when he deposits the amount. At the time of maturity the depositor can either go for withdrawal of his amount or renew the deposit with same or additional amount, which is again in multiples of thousand. In the case of renewal alongwith additional amount interest will be calculated @ 11.50 % p.a for 1 year and 14.20 % for a 3 year deposit period.

Guaranteed deposit

This is similar to Fixed Deposit in all aspects like minimum amount , deposit period ,interest rate etc.. The only difference her is that the depositor is assured with the safety of the fund apart from higher returns. At the time of liquidation the guaranteed depositors will be reimbursed first. Here too for the amount deposited the depositor is provided with a receipt called Guaranteed Deposit Receipt (GDR) .

Tax calculation

Tax will be calculated if the yearly interest exceed Rs.10,000 and if the customer is a taxpayee. For Indian Residents the income tax rate is 10.2 % according to the TDS (Tax Deducted @ Source) scheme. If the Depositor is not an income tax assessor then he has to provide form 15-M. For the tax deducted depositors, the company has to provide the Form 16-A as the certificate for tax deduction prescribed under the income tax rules.The same rules apply to the broker too.

Cheque realization details:

The deposit amount is received in the mode of cash or cheque. In case of cheque the interest from date and the maturity date are calculated after the cheque realization i.e., the cheque realized date is taken into account to calculate the maturity dale and interest from date.

7

Modules

The system deals with five modules .They are :

- MASTERS
- TRANSACTION
- REFUND
- QUERY
- REPORT

Module description

Masters

- Here the information regarding depositors,bank and the deposit type details,broker details etc are stored.
- This is also the input data for the system, which is used for transactions and calculations. Since data is the prime concern of the company, the input design and data holds the core for accurate transactions.

    The various masters are :
    - Area Master
    - Bank Master
    - Broker Master
    - Category Master
    - Deposit Type Master

Area Master

It has the area code depending upon the area and the name of the location .

Bank Master

This master has details like the bank code and bank name.

Broker Master

The broker master has details like the broker code, broker's name, his address, and other contact details.

Category Master

The category master tells about the various categories included like NRI, Minor, Single ,Joint Holder ,public sector, private etc.

Deposit Type Master

This master includes details about the various deposit schemes available in the company along with the information regarding the various deposit periods, interest rates and deposit amount etc.

Transaction

This module includes the following transactions. They are:
- New Deposit
- Modify
- Renewal
- Deposit Joining
- Deposit splitting

New Deposit

This has all the details required while opening a new account .It includes depositor and deposit amount details according to the type of deposit chosen by the depositor.

Modify

This is to modify an existing depositor details. Here when depositor code is selected ,his details are automatically displayed and hence modification can be carried out.

Renewal

This is for the renewal of an existing deposit after it's maturity date has occurred. Here on choosing the depositor code all his details including personal and amount are displayed and the deposit can be renewed. .In case if an additional amount is to be added to the existing deposit the details like interest amount at maturity, interest rate and others will be automatically updated according to the additional amount and deposit period chosen while renewing.

Deposit Joining

This is in the case when depositor wants to have a joint account. The joint holder's name will be added along with the actual depositor's detail.

Deposit splitting

This is when an existing joint deposit account has to be split. .On selecting the depositor code and confirming the splitting decision the joint holder's name will be deleted.

Refund

The company returns the deposit depending upon the customer. The customer can withdraw the money before the maturity date (i.e preclosure) or after the maturity date.

- Preclosure
- Maturity

Preclosure

If the depositor withdraws his deposit before the maturity date it is known as preclosure. In case of withdrawal being made after 6 months from the receipt date then 1% is reduced from the interest rate and accordingly the interest is calculated. If the withdrawal is made within the 6 months period from the date of receipt then no interest amount is given.

Maturity

Here the depositor refunds his deposit along with the interest on reaching the maturity date. The payment mode can be either cheque or cash.

Query

Here all the FAQS of the end user will be answered. The queries can be regarding deposit details, deposit category, interest payment mode, broker details, income tax details etc. In case of answer not being found regarding the query the system displays message informing the end-user to meet the concerned person.

The various queries are:

- Deposit Details– Category
- Deposit Details –no of deposits per person
- Joint Holders details
- Deposit Renewal details
- Deposit Details- Deposit Types
- Deposit Details – Status
- Interest Pay Mode
- Deposit Detail based on Broker
- Deposit Detail based on Nominee

Reports

It is the output design that makes a system useful information generator. Without a timely and quality and reports a system can't be considered as an efficient one. This section discusses about the output design of the system taking into 'consideration the level of reporting. The layout design is an arrangement of items on the printed output or the visual display. The purpose of the layout design is to show the location and position of every detail of the required output clearly.

The following criteria are considered while designing the output :

1) All Reports should be in a prescribed formal as suggested by a user and the management.

2) There should be a provision to view reports before taking final hard copy report is taken. This is to eliminate the wastage of stationary.

12

3) The reports should be printed in the ascending or descending order based on the important fields.

4) The fields in reports should be listed in such a way that location of a particular record should be easily identifiable.

5) Not all the users are allowed to take or view the reports; proper rights should be checked before printing the report.

The various reports that can be generated are as follows:

- Deposit Report – Status Wise

- Deposit Report – Category Wise

- Deposit Report – Deposit Number Wise

- Deposit Report – Deposit Type Wise

- Broker Details Report

- Broker Commission Report

- Deposit Report – Interest Pay mode Wise

- Day Wise Deposit transactions report

- Monthly Deposit Transactions Report

- Depositor's Income Tax Report

2.2 Processing environment

2.2.1 Hardware requirements

Processor	: Intel Pentium MI 800
Main memory	: 128 MB Ram
Secondary memory	: 20GB
Floppy disk drive	: 1.44 MB
CD-ROM	: 52X

Client

Processor	: Intel Pentium III 700
Memory size	: 64 MB Ram
Hard disk drive	: 4.3 GB
Floppy disk drive	: 1.44 MB

2.2.2 Software requirements

Front-End	: Visual Basic 6.0
Back-End	: SQL
Operating System	: Windows 95/98/2000/NT/XP

2.2.3 Features of the software tools

Visual Basic 6.0

Microsoft Visual Basic 6.0 is the faster and easiest way to create applications from Microsoft Windows. Whether you are an experienced professional or brand new to Windows Programming, Visual Basic provides with a complete set of tools simplify Rapid Application Development.

Visual Basic is object-oriented, that is, it revolves around readymade parts. One of the main ideas of object-oriented programming is that all of the data and procedures related to a particular object are kept together with object itself. In Visual Basic an object's data are called properties, while various procedures that can operate on the object are called its methods. Visual Basic is the simplest and easiest to use to programming language for the windows environment, it has grown into with far reaching capabilities and sophistication. Visual Basic is event – driven.

The language makes use of the features of Microsoft Windows including Multiple Document Interface (MDI), Object Linking and Embedding (OLE), Dynamic Data Exchange (DDE), Graphics, Active X Controls etc., Using this we can create powerful and full-featured applications. Visual Basic can be extended by adding the custom controls and calling procedures in Dynamic Link Libraries (DLL) i.e. specially constructed libraries can be loaded and linked at run time. Multiple applications can share DLLs which saves memory and disk space. Dynamic Linking increases program modularity because you can compile and test DLLs separately.

15

Visual Basic has a large number of built-in objects, which the user can use with maximum flexibility. The only task for the programmer is to incorporate the built-in objects to his/her programs. The core of Visual Basic programming is a set of independent pieces of code that are activated by and so respond to only the events they have been told to recognize.

Whether your goal is to create a small utility for yourself or your workgroups, a large enterprise – wide system, or even distributed applications spanning the globe via Internet, Visual Basic has the tools you need.

Data access features allow you to create databases and front – end applications for most popular database formats, including SQL SERVER & ORACLE and other enterprise – level database.

Active X technologies allow you to use the functionally provided by other applications, such as Microsoft Word Processor, Microsoft Excel Spreadsheet, and other Windows Applications. You can even automate applications and objects created using the Professional or Enterprise editions of Visual Basic.

Internet capabilities make it easy to provide access to documents and applications across the Internet from within your applications

Your finished application is a true exe file that uses a runtime Dynamic Link Library (DLL) that you can freely distribute.

16

SQL server

SQL Server 2000 is a sophisticated, feature-rich relational database engine. MS SQL Server is a client/server relational database management system (RDBMS) designed for high-performance, high volume, mission critical databases in a number of application areas including Online Transaction Processing (OLTP), data warehousing, e-commerce applications.

The query analyzer is one of the graphical tools provided by MS SQL Server 2000. The query analyzer can be used to automate functionality by using scripts, triggers, functions and stored procedures. Although it is possible to create and execute queries using the SQL statements in Enterprise Manager, its greatest strength is only as a database administration tool. The query analyzer on the other hand is a programming tool. The query analyzer provides us with powerful tools for writing and debugging complex sets of transact SQL statements in various forms. It also provides a means to analyze the performance of queries via execution plans.

Security within SQL Server 2000 is managed via several security objects. Even though an individual has been granted access to a SQL Server instance by being assigned a login, the individual will not necessarily have access to a specific database unless he or she has been made a user of that database.

User-defined functions are new to SQL Server 2000. They are more powerful than stored procedures and can be used in places stored procedures cannot, such as table definitions and the FORM clause of a SELECT statement.

SQL Server supports two different login security modes for ensuring that only authorized individuals have access to sensitive data - windows authentication and SQL Server authentication.

17

Internet Integration

SQL Server is an ideal database engine for powering Websites. With Internet Information Server, SQL Server can add database capabilities to web sites. Through tight integration with Internet Information Server, SQL Server can be queried and updated via popular web browsers. SQL Server's native ODBC lets it interoperate smoothly with the Internet Information Server. SQL Server Web Assistant let's one automatically update HTML pages on the fly, either data triggered or scheduled using SQL Server's built-in scheduling system.

Transaction Processing

Consistency and recoverability of a database are guaranteed in case of system failure, even in the middle of complex updates by more than one user. SQL Server treats all database changes inside a transaction as a single unit of work. By definition, either an entire transaction is completed safely and all the resulting changes are reflected in the database, or the transaction is rolled back and all changes to the database are undone. Using a two phase commit protocol, SQL Server can even supports synchronized transactions, which span more than one server, helping to guarantee that all the servers on the network will be maintained in a consistent state.

Implicit Concurrency Control

Another benefit of SQL Server's transaction processing design is implicit concurrency control. SQL Server employs Dynamic Locking, a locking architecture that keeps concurrent users from interfering with each other during queries and updates. Page-level locking is the default, with optional insert row-level locking. All SQL Server locking is implicit-the programmer does not have to worry about locking commands. The process of obtaining a lock is exceptionally fast since lock information is stored in a memory resident table. Multiple levels of locking are supported, and SQL Server always picks the least restrictive lock needed to support the operation.

SQL Server's built-in intelligence is capable of supporting both ad hoc and programmed updates to the database using any available software with complete safety-a crucial requirement if a server is to be an open platform for popular client applications.

High Availability (Dynamic backup and automatic recovery)

SQL Server avoids costly downtime for routine maintenance tasks. Nothing is more detrimental to productivity than network resources that become periodically unavailable. SQL Server's Dynamic backup allows one to backup database even while user are actively reading and writing to them - a fundamental requirement for mission-Critical applications. In case of system failure (Operating system Crashes, Power Outages, etc), SQL Server's automatic recovery mechanism recovers all databases to the last state of consistency in a matter of minutes, with no administrator intervention. The applications can be up and running again right away. SQL Server's high availability design even allows one to perform database design or diagnostics while the system is on-line.

Client-Server Architecture

It makes it possible for multiple front-ends to share information, enabling one to choose the most appropriate tool for the job. SQL Server makes efficient use of networks. Because database queries are processed at a centralized server, network traffic is reduced.

Rich, Windows-Based system administration

SQL Enterprise Manager provides graphical management of database objects such as tables, views, stored procedures and triggers. Visual Basic-based scripting can extend these capabilities to automate remote operations across multiple servers.

19

Network Independence

Unlike database severs, which run only on proprietary operating systems or support only proprietary network protocols, SQL Server is network independent. Because SQL Server relies on open industry standards, it can run most popular networks.

Scrollable Cursor Support

SQL Server's cursors support simplifies development of rich data browsing applications with capabilities such as forward/backward scrolling, positioned updates and deletes and flexible concurrency control options.

Single Process, Multithread Architecture

Microsoft SQL Server provides consistently high performance in a Client/Server DBMS. It is optimized for Windows NT, and uses a very efficient design that incorporates multiple native threads within a single process to handle user requests - allowing queries to be processed in parallel with very little overhead and no runtime memory allocation. This architecture is also memory efficient. The major advantage is the throughput. SQL Server does not slow down as multiple users are added to the network.

Client Advantage

- Easy to use
- Supports multiple hardware platform
- Supports multiple software applications
- Familiar to the user

Server Advantage

- Reliable

- Sophisticated

    Locking

- Fault tolerant

- High-performance hardware

- Centralized control

21

CHAPTER 3

SYSTEM DESIGN AND DEVELOPMENT

3.1 Input Design

Input design is a part of overall system, which requires very careful attention. It is the process of converting user originated inputs to a computer based format. In the system design phase, the expanded data flow diagram identifies the logical flow of data, data stores, sources and destinations. A flowchart specifies master files (database), transaction files and computer programs. Often the collection of input data is the most expensive part of the system, in terms of both the equipment used and the number of people involved. The input data are collected and organized under similar groups. Once identified appropriate media is selected for processing. The objectives of input design are

- ➤ To produce a cost effective method of input.
- ➤ To achieve the highest possible level of accuracy.
- ➤ To ensure that the input is acceptable to and understood by the user staff.
- ➤ Error free and easy way of data entry.

Input Types

Inputs are accepted with the help of Visual Basic Controls like:

- ➤ Text Box
- ➤ Combo Box
- ➤ List Box
- ➤ MS Flex Grid

22

Error Avoidance

Every effort must be made to ensure that input data remains accurate from the stage at which it is recorded and documented to the stage at which it is accepted by the computer. This can only be achieved by careful control each time the data is handled. The condition under which the tasks involved area carried out can affect the legibility and accuracy of the data. The effectiveness of checking data by verification or sight-checking can only be accessed by keeping individual records of the preparation of input data and tracing errors which area subsequently found by the computer, or even later in the system, back to their source. To avoid Error Data Validation is done for each field.

3.2 Output Design

The output is the most important and direct source of information to the user. Efficient, intelligible output design should improve the systems relationship with the user and help in decision making. A major form of output is a hard copy from the printer. Printouts should be designed around the output requirement to the user. Special emphasis is laid for output layout since the reports of the system will aid an understanding the report generated clearly. The user mostly decides areas of displaying information before building the output. The standards that were maintained for output design are:

- Each output is given a specific name or title.

- All the reports to be in clear format as suggested by the end-user and   management.

The objectives of output design are:
- Design output to serve the intended purpose.
- Design output to fit user.
- Deliver the appropriate quantity of output.
- Assure that output is where it is needed
- Provide output on time
- Choose the right output method.

3.3 Entity Relationship Diagram
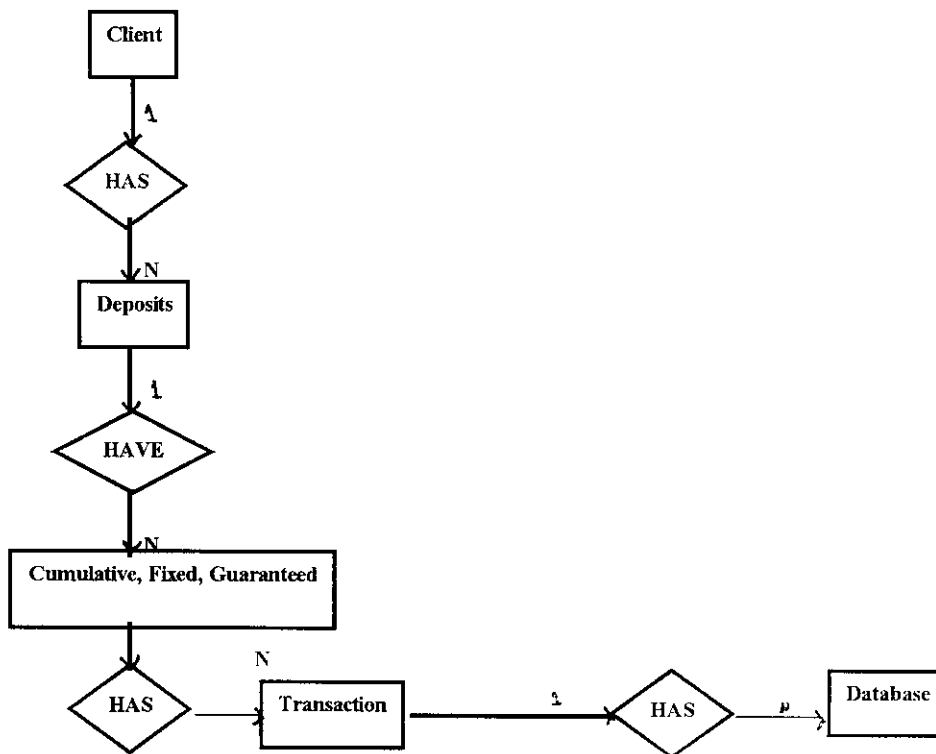
3.4 Data Flow Diagram
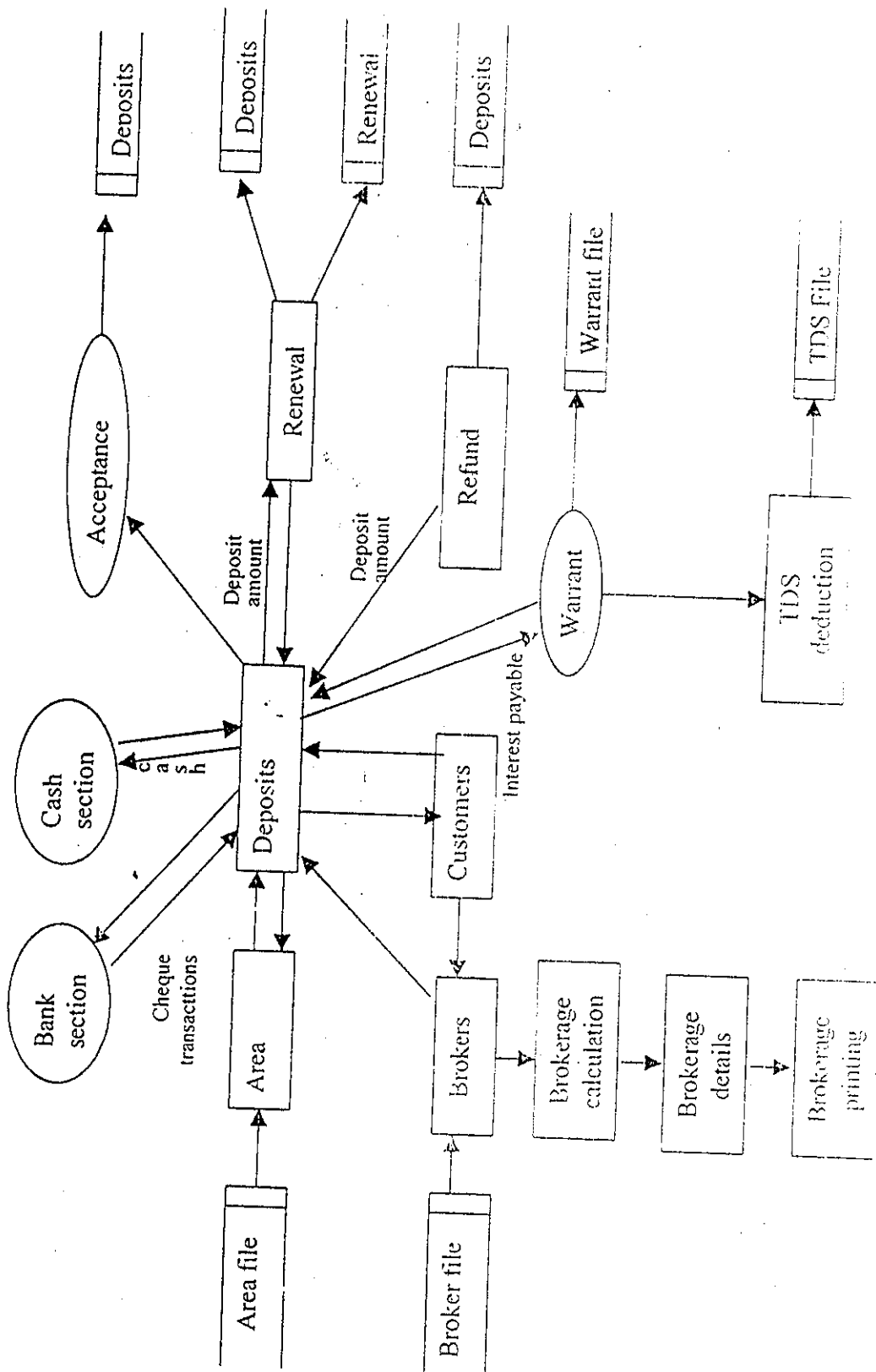
3.5 Database design

The following is the table structure for the developed product. The tables are for the various modules involved in the system.

Area Table

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Acode	Area code	Varchar (primary key)
Aname	Area Name	Varchar

3. 5. a

Bank Table

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Bcode	Bank code	Varchar (primary key)
Bname	Bank Name	Varchar

3. 5. b

Interest Details

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Dtype	Deposit type	Varchar (Primary Key)
Period	Deposit Period	Varchar
Percent	Interest Percentage	Decimal

3. 5.c

27

Deposit Type Details

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Depcode	Deposit Type Code	Varchar (Primary key)
Deptype	Deposit Type	Varchar

3. 5.d

Category List

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Ccode	Category code	Varchar (Primary Key)
Cname	Category Name	Varchar

3. 5. e

New Deposit 1

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Dname	Depositor's Name	Varchar
Dcode	Depositor's code	Varchar
Rdate	Receipt Date	Date
Dtype	Deposit Type	Varchar
Damt	Deposit Amount	Money

3. 5. f

28

User login

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Uname	Username	Varchar
Pwd	Password	Varchar
accgnt	Access Grant	Varchar

3.5.g

Broker Table

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Bcode	Broker Code	Varchar(primary key)
Bname	Broker Name	Varchar
Address	Broker Address	Varchar
Pincode	pincode	Numeric
Cno	Contact No	Numeric

3.5.h

29

Other details

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Dcode	Deposit code	Varchar (primary key)
Depname	Deposit name	Varchar
Address	Address	Varchar
Pnicode	Pincode	Varchar
Category	Category	Varchar
Jntholder	Joint holder name	Varchar
Brname	Broker Name	Varchar
Nomname	Nominee name	Varchar

3.5.i

New Deposit 2

FIELD NAME	FIELD DESCRIPTION	DATA TYPE
Dcode	Deposit code	Varchar (primary key)
Deprecno	Deposit Receipt Number	Numeric
Recdate	Receipt date	Date
Deptype	Deposit type	Varchar
Perofdep	Period of deposit	Numeric
Intper	Interest percentage	Varchar
Infromdate	Interest from date	Date
Damt	Deposit amount	Money
Chenum	Cheque number	Varchar
Intpaymode	Interest paymode	Varchar
Matdate	Maturity date	Date
Chdate	Cheque realization date	Date
Bname	Bank name	Varchar
Incentive	Incentive amount	Varchar
Totint	Total interest	Money
Totamt	Total amount	Varchar
Status	Status	Varchar
Addamt	Additional amount	Varchar
Old amt	Old amount	Varchar
preclose	Preclosure date	Date
Odepno	Old deposit number	Varchar
Taxamt	Tax Amount	Money
Bamt	Brokerage Amount	Money

3.5.j

31

CHAPTER 4

TEST PLAN

4.1 Objectives of Testing:

The Objectives of testing are as follows:

- Testing is a process of executing a program with the intent of finding an error,
- A good test is one that has a high probability of finding an
- undiscovered error.
- A successful test is one that uncovers an as-yet undiscovered error.

Testability

Software testability determines how easily a program can be tested.

Operability

The better it works, the more efficiently it can be tested.

Observability

What we see is what we test. Incorrect output is easily identified.

Controllability

The better we control the software, the more the testing can be optimized.

Understandability

The more information we have the smarter we will test.

4.2 Testing Techniques

Unit Testing

Unit testing comprises the set of tests performed by an individual programmer prior to integration of the unit into a larger system. The situation is illustrated as follows:
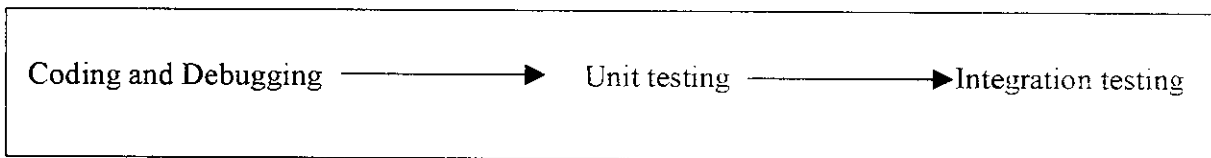
Coding and Debugging ⟶ Unit testing ⟶ Integration testing

Fig 4.2.a

A program unit is usually small enough that the programmer who developed it can test it in great detail and certainly in greater detail than will be possible when the unit is integrated into an evolving software product.

Module testing

Each module is tested for errors .Module Testing is done to check whether each module is working as per requirements under various conditions.

Login testing

The login process was tested with both authorizized and both unauthorized login. Access was denied for invalid login ids and incorrect passwords. Passwords were changed and addition and deletion of new users were done. The results were as expected.

Display testing

Display testing was conducted to ensure that all display procedures are working properly. The displayed information is checked for errors and corrected.

Black box testing

➤ Functional tests
➤ Performance tests
➤ Stress tests

This testing focuses on the functional requirements of the software. Black box testing finds errors in the following functions: Incorrect or missing functions, interface errors, errors in database access, performance errors or initialization or termination error. In this project there are various functions. We have mentioned each function separately. For example function like add delete, modify and view are mentioned separately. Here we have implemented the concepts of equivalence partitioning. We have given some important conditions for each attribute of the entity and developed the application accordingly. For

34

example for each entity we specified the size beyond which the entity could not be entered. Tests were carried out to see if the conditions were working properly or not.

White box testing

Using the white box Testing all the logical decisions on the true and false side of the product are tested. All the loops within the operational bounds are tested. Logical error and incorrect assumptions are identified and rectified. We have implemented the white box testing concepts in the following manner. We have developed the application, which consisted of forms independent of each other. Then we combined all the independent forms and tested to see the overall performance of the application being developed. The control flow was tested according to the required logic

Integration Testing

The individual programs were combined together to form modules. Integrated tests were performed on each of the modules and again the validity was checked. After that, all modules were brought under a single module and the integrity test found to be successful. This system was validated in such a way that even the slightest deviation in inputting the data will invoke error messages and provide guide lines regarding the input. Strategies for integrating software component into a functioning product include the bottom-up, the top-down, and the sand wich strategies. Bottom-up integration consists of unit testing, followed by subsystem testing, followed by testing of the entire system. Unit testing has the goal of discovering errors in the individual modules of the system. The primary purpose of the subsystem testing is to verify operation of the interfaces between modules in the subsystem. Top-down integration starts with the main routine and one or two immediately subordinate routines in the system structure. Top-down integration requires the use of program stubs to simulate the effect of

35

lower level routines that are called by those being tested. Sandwich integration is predominately top-down, but bottom-up techniques are used on some modules and subsystems. This solves many of the problems encountered in pure top-down testing and retains the advantages of top-down integration at the subsystem and system leve.

CHAPTER 5

IMPLEMENTATINON AND MAINTAINENCE

After testing the modules successfully, the necessary privileges are given to users. All the users are requested to handle the system properly. The real time problems that occur are successfully solved. Some features of the old system are dropped and completely changed to the new system.

The objective is to put the tested system into operation. It consists of:-

- Testing the developed program with sample data.

- Detection and corrections of errors.

- Making necessary changes in the system.

- Checking of reports with that of existing system.

- Testing the user personnel.

- Creating computer compatible files

- Installation of hardware and software utilities

CHAPTER 6

CONCLUSION

The deposit management system has been developed as per the requirements of Sakthi Sugars. The system eases the work in deposit division. This system has many advantages over the existing manual system .This system has been designed, developed and implemented after tedious testing and debugging. The goals of the system have been reached in such a manner that the system is flexible for any change in the near future.

The system is user-friendly and simple.

The end user finds it easy to enter all the details and maintain them and perform various operations. The advantage of the system is that, it reduces the response time and data retrieval is more efficient. The coding style is followed as per the company EDP rules. The various timely reports generated by the system have provided to be quite useful.

REFERENCES

Books

1. Noel Jerke, ' VISUAL BASIC COMPLETE REFERENCE " ,Tata McGraw-Hill,1995.

2. Rebecca .M. Riordan , " MICROSOFT SQL SERVER 2000 PROGRAMMING STEP BY STEP ", Microsoft Press, New Edition, 2000.

Websites

www.vbworld.com

www.vbexplorer.com

www.microsoft.com

ANNEXURE

Screen Shots:

Login Screen

Deposit Management System
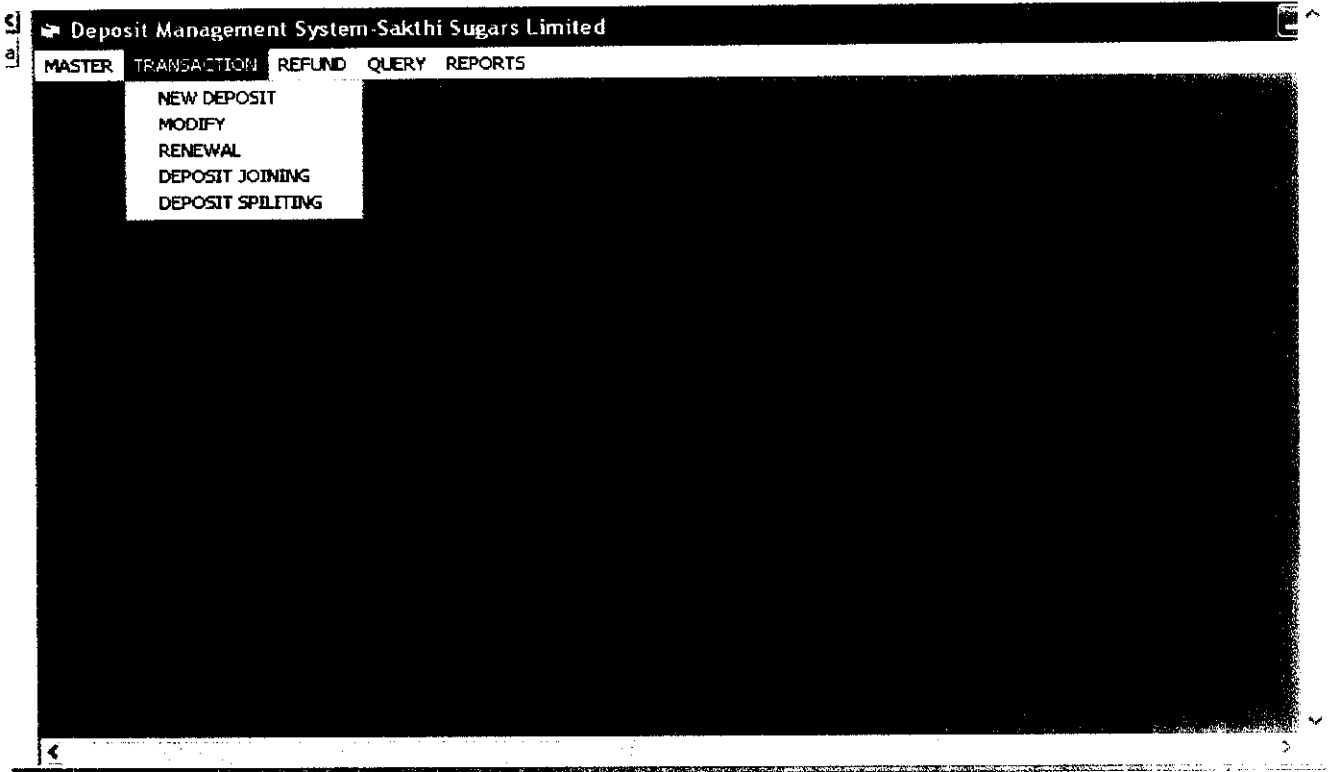
Sakthi Sugars Limited

Login Screen

User Name

ADMIN

Password

××××××××××

Login   Exit

Main Screen

Bank Details

Bank Code   B2   Choose Code

                                Combo1 ▼

Bank Name   CANARA BANK

New   Save   Modify   Delete   Exit

Deposit Management System-Sakthi Sugars Limited

Broker Details

Broker Code	BR1	
Broker Name	RAJAN	Choose Code
Address	11,NEHRU NAGAR,COIMBATORE	Combo1
Pincode	641055	
Phone	2442135	

New · Save · Modify · Delete · Exit

Deposit Management System-Sakthi Sugars Limited

Deposit Details

Deposit Code	DC1	Choose Code
Deposit Type	FIXED	Combo1 ▼
Deposit Period	1 YEAR	
Percentage	11 %	

New   Save   Modify   Delete   Exit

44

New Deposit

Depositor Details

Depositer Name	ANAND
Address	35,k nagar,coimbatore
Category	PRIVATE
Joint Holder Name	NIL
Nominee Name	INDRA
Broker Name	NIL

Depositor Details

DeposiT Type	FIXED
Deposit Number	DF001
Receipt Date	
Deposit Receipt Number	56003
Period Of Deposit	1 YEAR
Maturity Date	01/01/2004
Interest Payable Mode	DRAFT
Interest Percentage	11%

Deposit Amount Details

Mode of Receipt	Cash Cheque/DD
Cheque/DD Date	NA
Cheque/DD Number	NA
Interest from Date	01/01/2003
Bank Name	NA

Deposit Amount	5000
Total Interest	550
Incentive Amount	0
Brokerage Amount	0
Income Tax	0
Total Amount	5550

45

Renewal 1

⌐ Deposit Management System-Sakthi Sugars Limited   ▢▢▢

Deposit Number	DC01 ▾

Depositor Details

Depositor Name	MAHESH	Joint Holder Name	NA
Address	23,T Nagar,Coimbatore	Nominee Name	DEEPAK
Category	SINGLE	Broker Name	NIL ▾

Deposit Details

Deposit Type	FIXED ▾	Old Deposit Amount	5000
New Deposit Number	DC25	Additional Amount	5000
Receipt Date		Total Interest	1100
Deposit Receipt Number	560023	Incentive Amount	0
Period Of Deposit	1 YEAR ▾	Brokerage Amount	0
Maturity Date	02/02/2004	Income Tax	0
Interest Payable Mode	CASH ▾	Total Amount	10100
Interest Percentage	11%		

Next

Renewal 2

Mode of Receipt

Mode of Payement	○ cheque cash
Cheque/DD Number	NA
Cheque/DD Date	NA
Interest From Date	02/02/2003
Bank Name	NA

Submit
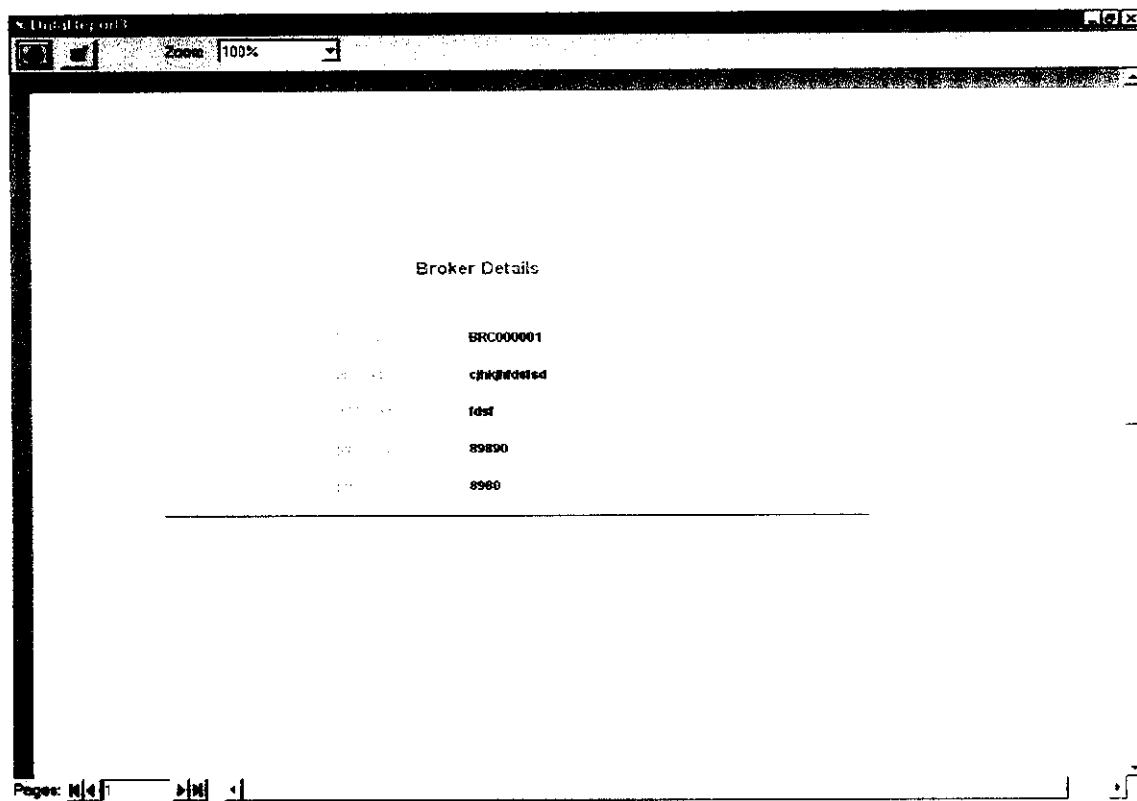
Query Based On Depositor Details

48

Report 1

Report 2

Zoom 100%

Broker Details

BRC000001

cjhkjhfdsfsd

fdsf

89890

8980

Pages: 1

50

Report 3

Zoom 100%

Deposit Report-Det

deptype: **Fixed Deposit**

depno: f2

depreciptno: 1

recdate: 1.7.00

deptype: Fixed Deposit

predep: 1 year

intper: 10

bankname: hkjhjkd

cheqno: 999

mode: Cash

matdate: 1.7.01

intdate: 1.7.00

Pages:

51

Report 4

Zoom 100%

Deposit Report-Deposit Type...

depno	f3
depname	changed
deptype	Fixed Deposit
enddep	2 year
depno	f2
depname	hjkh
deptype	Fixed Deposit
enddep	1 year

52