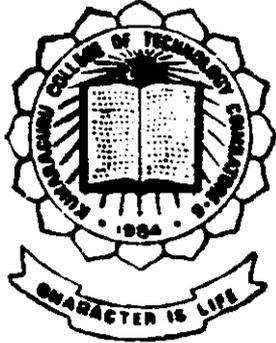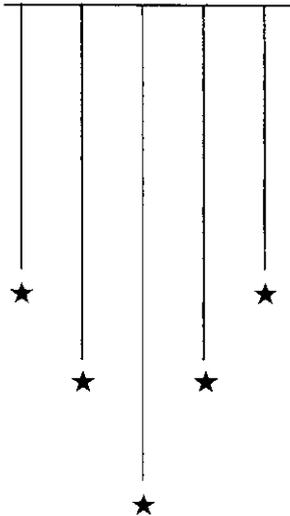# Marketing Contact Manager

PROJECT REPORT 1999 - 2000

Submitted By
M.R. Ramdas

Under the Guidance of
Mr. S. Mohanavel B.E., M.B.A., D.C.P.S.,

In Partial fulfilment of the

requirement for the award of the

Degree of **MASTER OF SCIENCES** in

APPLIED SCIENCES - COMPUTER TECHNOLOGY

of the Bharathiar University.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Kumaraguru College of Technology

COIMBATORE - 641 006.

Kumaraguru College of Technology
Coimbatore-641 006

Department of Computer Science & Engineering

<u>Certificate</u>

This is to certify that the project report entitled **MARKETING CONTACT MANAGER** has been submitted by

Mr. _____ *M. R. RAMDAS* _____

In partial fulfillment of the requirements for the award of

the degree of Master of Sciences-Applied Science   (Computer Technology)

of the Bharathiar University, Coimbatore-46 during the year 1998-00

_____   _____ 28/4
(Guide)   (Head of Department)

Certified that the candidate was examined by us in the project viva-voce

examination held on *28-4-2000* & the University Register number is

_____

_____   _____
(Internal Examiner)   (External Examiner)

Fusion Software Engineering Pvt. Ltd.,
4/1 22nd Cross 8th Main Jayanagar 3rd Block Bangalore 560 011 India

fUSION

CERTIFICATE

This is to certify that **M.R.Ramdas** has carried out a project titled "**Marketing Contact Manager**" for our organization during the period 15th **January 2000** and **15th April 2000.**

The software was developed using **Visual Basic 5.0, MS-Access-97** and **Crystal Reports 4.6.**

He has completed the project successfully and he was found to be sincere and hardworking through the course of the project.
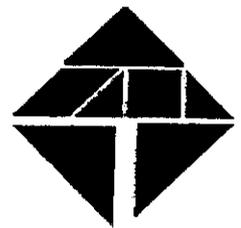
Date: 15/4/2000

Place:Bangalore
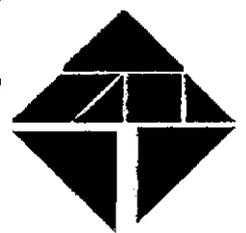
Signature

Mr.A.Kannan
Technical Director

MARKETING

CONTACT

MANAGER

Acknowledgement

ACKNOWLEDGEMENT

With profound sincerity and gratitude I thank **Mr.A.Kannan M.E. (Technical Director) Fusion Software Engineering Pvt Ltd** for permitting me to develop my project at **Fusion Software Engineering Pvt Ltd, Bangalore** and providing me the necessary help to complete the project.

It gives me great felicity to convey my deep and sincere thanks to **Dr K.K.Padmanabhan B.Sc(Engg), M.Tech, Ph.D, Principal Kumaraguru College of Technology, Coimbatore** for allowing me to undertake the project work.

I express my sincere thanks to **Dr S.Thangasamy B.E(Hons), Ph.D, Prof and Head, Dept of Computer Science and Engineering, Kumaraguru College of Technology, Coimbatore** for his valuable and regular supervision in the course of completion of this project.

I express my gratitude to my **Project-Co-ordinator Mr.Dinesh Ranganathan B.Tech, M.S, Senior Lecturer, Dept of Computer Science and Engineering, Kumaraguru College of Technology, Coimbatore** for his constant support and encouragement during the course of this project.

I express my sincere thanks to my guide **Mr.S.Mohanavel B.E, M.B.A, DCPA, Lecturer, Dept of Computer Science and Engineering, Kumaraguru College of Technology, Coimbatore** for his valuable support and help without which this project would not have been completed.

I take this opportunity to thank each and every staff member of the **CSE Dept,** my parents and friends for their constant guidance and support which went a long way in the development of this project.

Synopsis
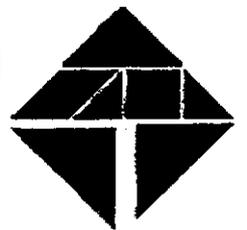
SYNOPSIS

This project titled **Marketing Contact Manager** deals with the issue of interaction between the marketing executives and the management of a company. It has a set of **input forms** which enable the executive to enter all the details related to the meetings with the customers. The details include all the **contact** and **calls** information pertaining to the customers.

The data entered are stored in a **central database**. Based on the data, **periodic reports** are generated for the review by the management. These reports are interactive and convey the relevant information in a clear manner. This enables the management to take decisions promptly.

It can be used as a **single user system** where the user interface and the database reside on the same machine. In case of a **LAN** the database is put on the server and the user-interface is loaded on the clients.

It can be still upgraded and by using **Active Server Pages** and other technologies it can be made in to a **Web Enabled** product.

The current version is developed using **Visual Basic 5.0** and the **RDBMS** used to store the data is **MS-Access-97**. All the reports are generated using **Crystal Reports-4.6**. The reports are generated weekly, monthly, and also based on the customer information.
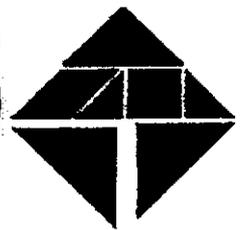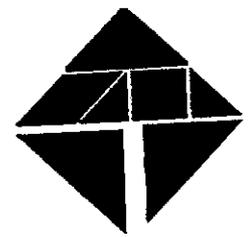
Contents

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Introduction

Importance Of Information Technology

In the present world which has become very fast in all respects the need for information has increased manifold.This need for information which must be easily available and which must be supplied promptly has given rise to the emergence of the field of information technology.This field is mainly concerned with the acquisition,processing and reporting or presenting of information in the relevant format.

With the advent of internet and other emerging technologies the world has indeed become a small place.Information all around the world are being exchanged without any barriers pertaining to national boundaries or language barriers.This has enabled many people from all walks of life to get in touch with many other people and exchange information.

In today's world it has almost become mandatory for everyone to come under the influence of this field.This has affected almost everyone's way of living.Hence it is the job of software professionals like us to make use of this opportunity and create applications which enable the easy and prompt processing of information.

In short we can list out the main functions of IT as

Acquire information from a wide range of sources

Filter out all the unwanted details and refine the information

Process the information based on a given set of specifications

Make the information available to all those who need it in an accurate and prompt manner

To ensure fast and effective communication facilities

Hence from the above we can come to know that IT has indeed come to play a very important role in our lives and it is upto us to use it according to our requirements.

Organization Profile

Fusion S/W Engg Pvt Ltd is a systems and applications software development company.It was founded in 1985 and from then has been providing software solutions to the industrial,defence and commercial sectors.

It has a strength of over 250 dynamic and young software professionals and is likely to expand in the future.

The various services offered are in the fields of **Avionics,Communications,Internet Security,Real-Time and Embedded Systems,Banking and Finance,Business and Manufacturing,and Multimedia.**

The expertise of the company encompasses the following

GUIs	MS-Windows,Motif,Open Look,OS/2 PM
Languages	C/C++,VC++,Ada,Oracle,Cobol,Power Builder,Visual Basic
Operating Systems	DOS,Unix,pSOS,OS/2,HP-UX
Communications	TCP/IP,1553B,ARINC,GPIB,RS 422,SNMP
Hardware	Networked PC's,SUN/HP Workstations,Mainframes

The following comprises the list of **Clients**

Defence	Aeronautical Development Establishment British Aerospace-HAL
Information Technology	Aztec Hewlett Packard Kirloskar Computer Systems Motorola Sonata Texas Instruments Wipro
Banks	ANZ Grindlays Deutsche Bank

It has branches in **Bangalore(India),San Jose(USA) and in Switzerland.**

Requirement Analysis
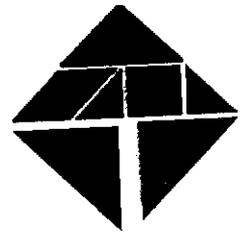
2.1 Purpose

The purpose of this project is to develop a software which will enable the marketing executives of the organization to report all the details pertaining to the meetings with their customers to the management.

These details should be provided to the management in a prompt manner and the executives should be provided with input forms which will enable them to enter all the details in a very easy and simple manner.

The executives should also be able to access the software without any problems.The reports generated based on the stored data which will be used for review by the management should be interactive in nature and should convey all the relevant details in a very clear manner.

2.2 Executive Overview

The project overview can be seen as dividing the project into many modules.The main modules which can be differentiated in this project are:

Input Module-It consists of all the input forms and other related user interfaces.This will take care of all the input information.All the input validation will be done by this module which will ensure an accurate database.

Database Module-It deals with the issues of the database design,structure and tables.This is concerned with the storage of data which is got by the input module.We must perform database validation to ensure and maintain the validity and consistency of data.Based on the needs it is better to make use of a RDBMS in order to maintain the data.

Report Module-This module deals with the reports that are generated.It looks after all the report forms which give options to the management so as to get the reports that they need.The reports can be periodic like monthly,weekly, and so on where the month or the week is specified or an option wherein the from date and to date can also be given.It can also be based on the customer.

2.3 Problem Definition

The basic requirement is to provide a means to the marketing executives to report their meetings with the customers to the management.They should be able to convey all the information to the management promptly.Moreover as they may be spread across a wide area they should be able to access the software from the same place at which they are present.

As it is not necessary that all the executives should know about computers the software should be in such a way that it provides a highly interactive user interface which can be easily understood and used.It should provide all the necessary options to the user to enter all the details in a very clear manner.

The database design should be done in such a manner that the validity,integrity and consistency of data is maintained.A RDBMS should be used for the effective handling of data.We must also specify access rights for the various tables so that data is not corrupted.

All the reports that are generated based on the stored data should be very interactive and clear.It should present all the relevant details to the management in a very unambiguous manner.It should provide the management with all the details which will enable them to make prompt decisions.

2.4 System Objectives

The objectives can be broadly listed as :

To provide an easy and simple means for the marketing executives to interact with the management irrespective of where they are.

To provide a set of highly interactive input forms to enable the user to enter the data in a very simple and clear manner.

To provide an effective way of storing the data ensuring its validity,integrity and consistency.

To provide an easy way of retrieving the data based on the user requirements promptly and without any problems.

To generate interactive reports based on the stored data for review by the management and to enable them to take prompt decisions.

2.5 Scope

The system can be viewed at three different levels.

Single User System:

Here both the user interface and the data will be stored at the same machine.This supports only a single user at a time.This can be easily implemented.

On The Intranet

Here the data will be stored in a central machine which will act as a server.All the clients will be loaded with the user interface.Here we have to look into the various issues of client/server communication.This supports multiple users at a time.

Cost Feasibility

Under this we look into the cost involved with the development of the project.We must see to it that all the resources are used optimally and that nothing is wasted.The project should be cost effective.We must list out all the possible costs and see to it that all the unwanted costs are cut and that money is spent only on important things.

Legal Feasibility

Under this we look into all the details related to the laws which govern the project development.We must see to it that the project follows all the copyright and other related laws.It should also take into account all the laws existing at the client's place if it is in another country so that the software can be used without any legal hassles.

System Analysis
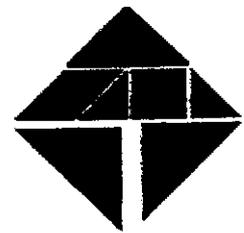
System Design
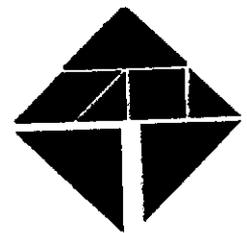
Database Design
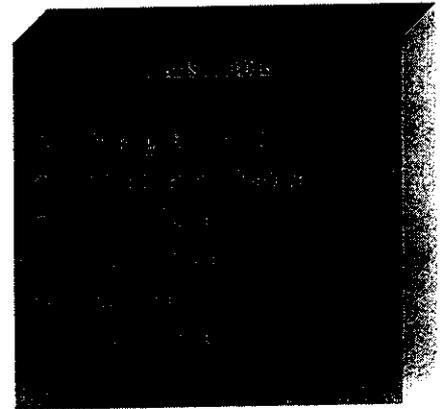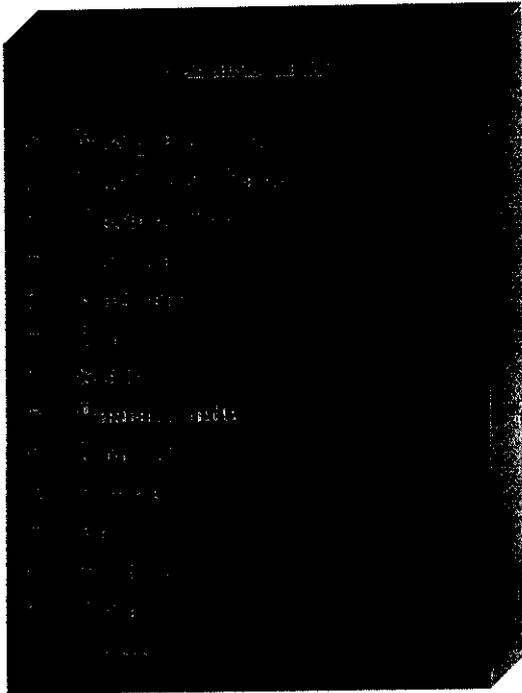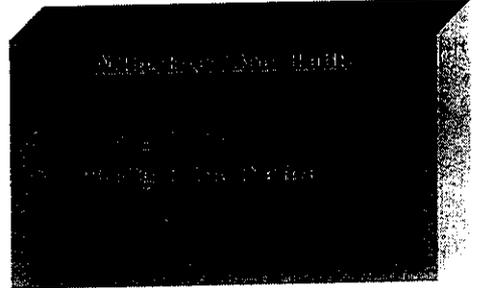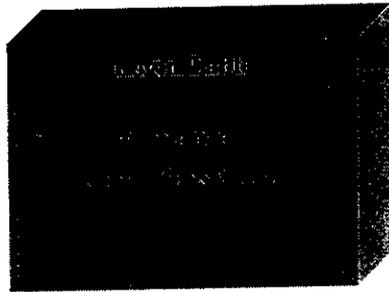
Database Structure

Table Name: mcalls

Field Name	Field Type	Field Size
mid	Number	Long Integer
cfname	Text	25
csname	Text	25
dcall	Date/Time	Short Date
tcall	Date/Time	Medium Time
sub	Text	50
callno	Text	255

Table Name: mcontacts

Field Name	Field Type	Field Size
mid	Number	Long Integer
cfname	Text	25
csname	Text	25
desig	Text	25
comp	Text	50
addr	Text	100
city	Text	25
state	Text	25
pcode	Text	10
coun	Text	25
phone	Text	20
fax	Text	20
mobile	Text	20
email	Text	50
notes	Text	255

Table Name: login

Field Name	Field Type	Field Size
Uname	Text	25
Passwd	Text	25

Table Name: mdata

Field Name	Field Type	Field Size
mid	Number	Long Integer
mfname	Text	25
msname	Text	25

Data Flow Diagram

```
                    +--------------------------+
                    | Server Machine           |
                    |                          |
                    |   +------------------+   |
                    |   | Central Database |   |
                    |   +------------------+   |
                    +--------------------------+
                                 ↕
                         _____
                        /               \
                       (  Middleware     )
                       (  Technology     )
                        _____/
                         ↗              ↖
              Post Data / Request Data    Request Data
                       /                        ↘
      +------------------------+        +------------------------+
      | Client Machine         |        | Client Machine         |
      |                        |        |                        |
      |  +----------------+    |        |  +------------------+  |
      |  | Input Forms    |    |        |  | Report Forms     |  |
      |  +----------------+    |        |  | Reports          |  |
      +------------------------+        |  +------------------+  |
                 ↕                      +------------------------+
           _____                             ↕
          /           \                       _____
         ( End User    )                     /           \
          _____/                     ( End User    )
                                             _____/
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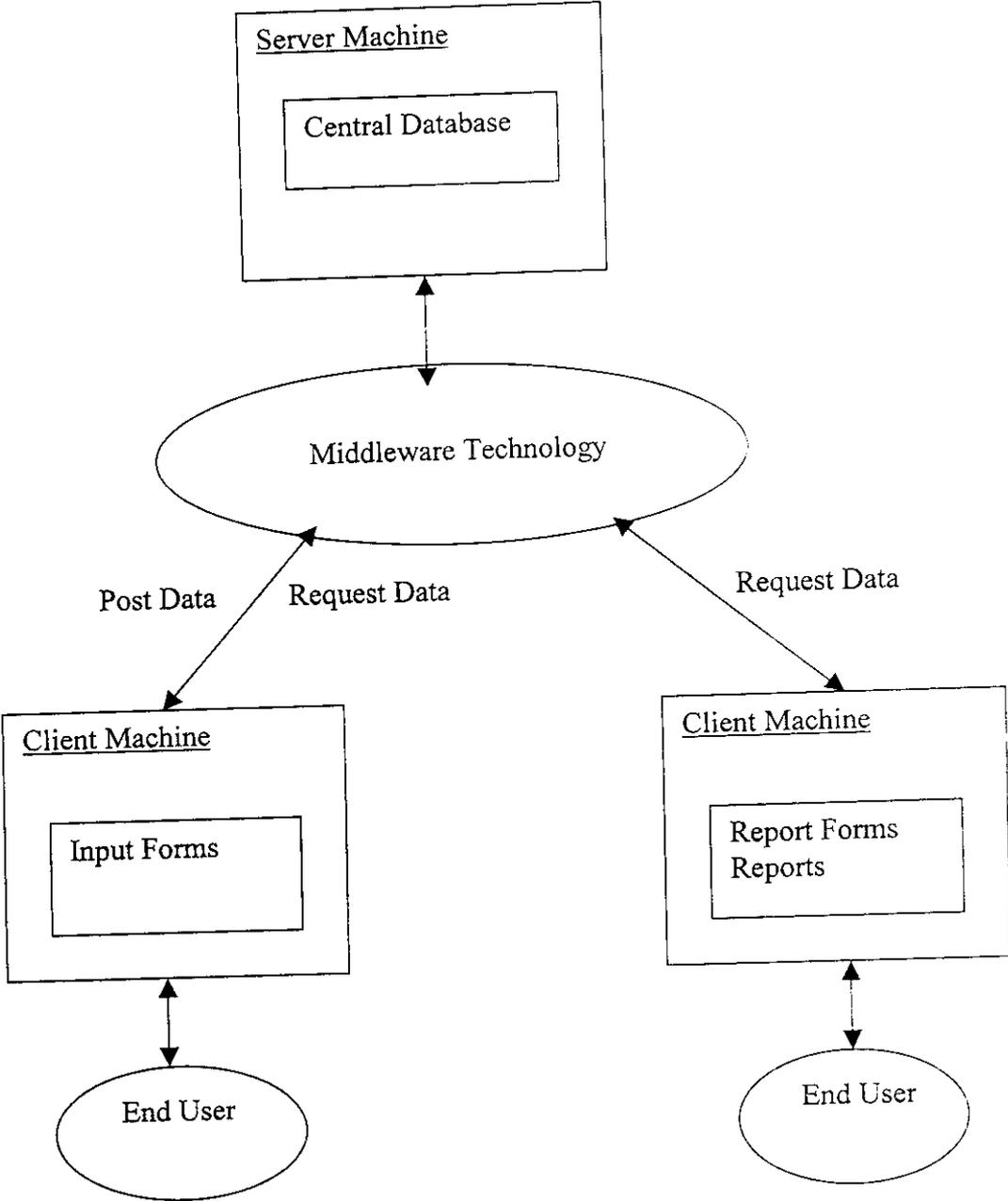
Processing Environment
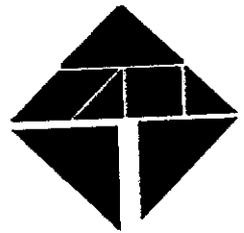
5.1 Visual Basic Overview

The software that has been used to develop this project is Visual Basic.It is a programming language which can be considered as an extension of the BASIC language.The control structures and some of the keywords used in VB are similar to that of BASIC.

It has a graphical or visual interface which enables the developer to write programs with less effort.

The salient features of this language can be listed down as:

It is very easy to learn and understand

Complex programs can be easily implemented as many utilities are provided

The user can make use of many inbuilt routines according to his needs

The language gives the user a lot of flexibility

It gives a variety of controls with associated methods which enable the user to write simple code for even complex programs

It gives a variety of data handling controls to enable the easy handling of data

As it has been used in the industry for a long time many professionals are proficient in it and hence future changes can be made easily by people who may be new to the project

It supports the usage of other applications through the OLE concept. As a result we can link or embed other applications in a VB project without any problem.

The usage of OLE lessens the effort in writing code and in a way implements code reusability

It also makes use of the ACTIVE-X concept which enables the users to use the same component across various applications

The above helps in the implementation of COM/DCOM where the same components are used across different applications

We can also upgrade the existing project without affecting the functionality of any of the controls since VB is a very flexible language

5.2 MS-Access Overview

The database that has been used for this project is MS-Access.This is a RDBMS which follows the relational model of database management.This is a Microsoft product.This has been in use for quite a long time now and hence a variety of applications is running with this as the RDBMS.

The salient features of this RDBMS can be listed down as:

The process of creating , modifying ,deleting and other table related activities can be easily performed

It provides a variety of data types which can be applied to a wide range of data values thus providing flexibility

The above ensures that real world information can be stored in the same manner without any modification

Many attributes can be set for a single data field from a wide range of options as per the project requirements

For each and every database table we can set the security and access rights thus ensuring the validity and integrity of data

We can set input masks for the various data fields thus specifying the format in which data should be entered

It provide various tools which help in designing a database.It helps us in specifying relations between tables through a visual editor where we can visually link tables

We can also set the various referential integrity rules for the database thus conforming to the RDBMS model

It also provides the facility of report generation.In case a report is needed in a short span of time then we can use the report creation tool to create reports easily

There is also a tool for the creation of forms.Using this we can create user interactive forms enabling the user to interact with the underlying database in a very simple manner

5.3 Crystal Reports Overview

Crystal Reports has been used as the report generation tool in this project. It is used in conjunction with VB. This also has been in use for a long time and hence many people will be familiar with it.

The salient features of this package can be listed down as:

It provides many utilities to generate interactive reports which are easily comprehensible

It gives a variety of design options using which we can generate good reports

It provides a record selection expert which enables the user to specify conditions based on which the record will be selected from the database and displayed on the report

There is a formula editor which enables the user to specify formulas from an existing list of operators and data fields along with the source data in order to get the required set of records

There are provisions for sorting and filtering the records based on a specific field or a combination of fields to speed up the job of retrieving data

It provides the user with a wide range of printing options such as the ability to specify the print date, the number of copies to be printed, the printer to be used and other related details

It also provides the user with a variety of mailing options. We can specify the number and destination of people to whom the reports should be mailed , the number of carbon copies to be sent and so on.

It provides a wizard template which contains a variety of report formats from which we can chose a particular format based on the project requirements

Future Enhancements
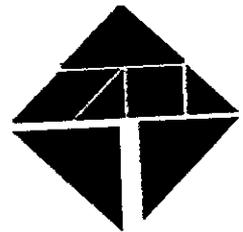
6.1 Conclusion

The main requirements of this system was met. The input forms were made more interactive. The system is now in a position to accommodate more than two users at a time. As the forms are user friendly even a person with very less computer knowledge will be able to comprehend them easily.

The database design has been done in such a way that all the data related issues such as integrity, validity, security, consistency etc have been ensured. All the normalization process has been performed and the data in the database has been handled in an efficient and effective manner.

All the reports generated are also highly interactive. As all the reports are based on the data stored in the database they present only accurate data. Based on the data the management take the necessary decisions. Hence the reports are very important.

The section regarding the security issues have also been looked into in this system. All unauthorized access to the database will be blocked. Moreover a special login prompt has been introduced to enable only valid uses to enter into the whole system.

This system can be further enhanced. All the details pertaining to those issues have been given in the following sections.

6.1 Present System

The present system is a single user system where the user interface and the database are present in the same machine. The implementation of this system is very easy. Under this system only a single user can use the system at a particular time.

This system is based upon the **Two-Tier Architecture.** As a result limitation based on the access of the system is present. In order to avoid this it can be further upgraded to allow the access of multiple users at a time.

6.2 Implement On The Intranet

As a scaled up version the system can be developed for a LAN where it will be implemented as a client/server system. The central server can hold the database and all the clients that are connected to the server can be loaded with the user interface.
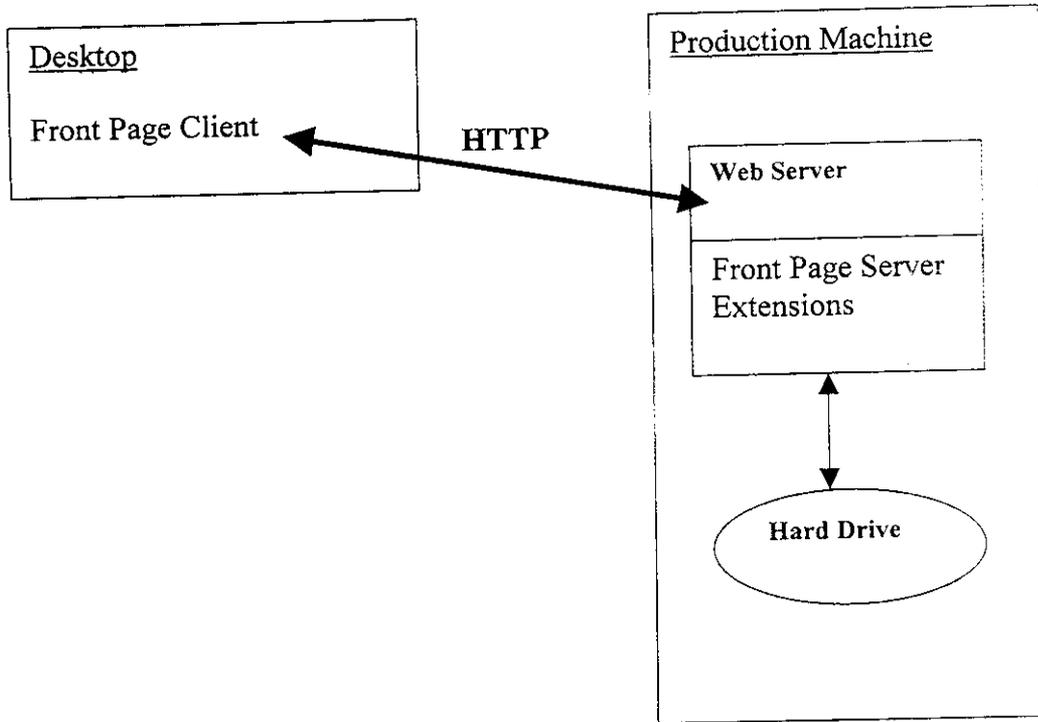
The client can interact with the server and perform all data manipulations. This system will be based upon the **Three-Tier Architecture.** Here we need the middleware to enable the interaction between the client and server machines.

In case if ASP is used to develop the user interface and if Microsoft FrontPage is used to run the ASP then we must have the Personal Web Server which will be loaded on the server machine to interact with the ASP that have been developed on the client machines.
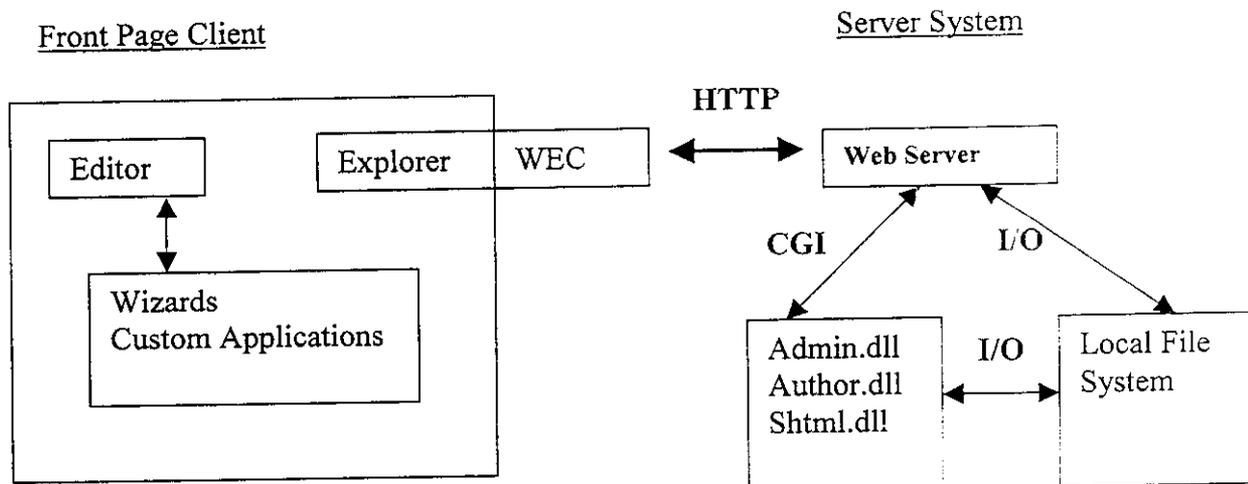
The PWS will interact with the ASP and with the help of FrontPage Server Extensions it will try to compile the ASP and perform the required operations.

The protocol followed for communication between the PWS and the ASP will be HTTP. The PWS in turn will interact with the Server Extensions and perform the required actions.

Publishing Web Pages On The Intranet

Desktop

Front Page Client ←———— HTTP ————→ Production Machine

Web Server

Front Page Server
Extensions

↕

Hard Drive

Front Page Product Architecture

Front Page Client

Server System

| Editor | | Explorer | WEC |

HTTP ←——→ Web Server

Wizards
Custom Applications

CGI / I/O

Admin.dll
Author.dll
Shtml.dll

I/O

Local File
System

Publishing Web Pages On The Internet

Desktop		Production Machine

Desktop

```
Front Page Client

    ↕ HTTP

Personal Web
Server
─────────────
Front Page Server
Extensions

    ↕

( Hard
  Drive )
```

HTTP

Production Machine

```
Web Server
─────────────
Front Page
Server
Extensions

    ↕

( Hard
  Drive )
```
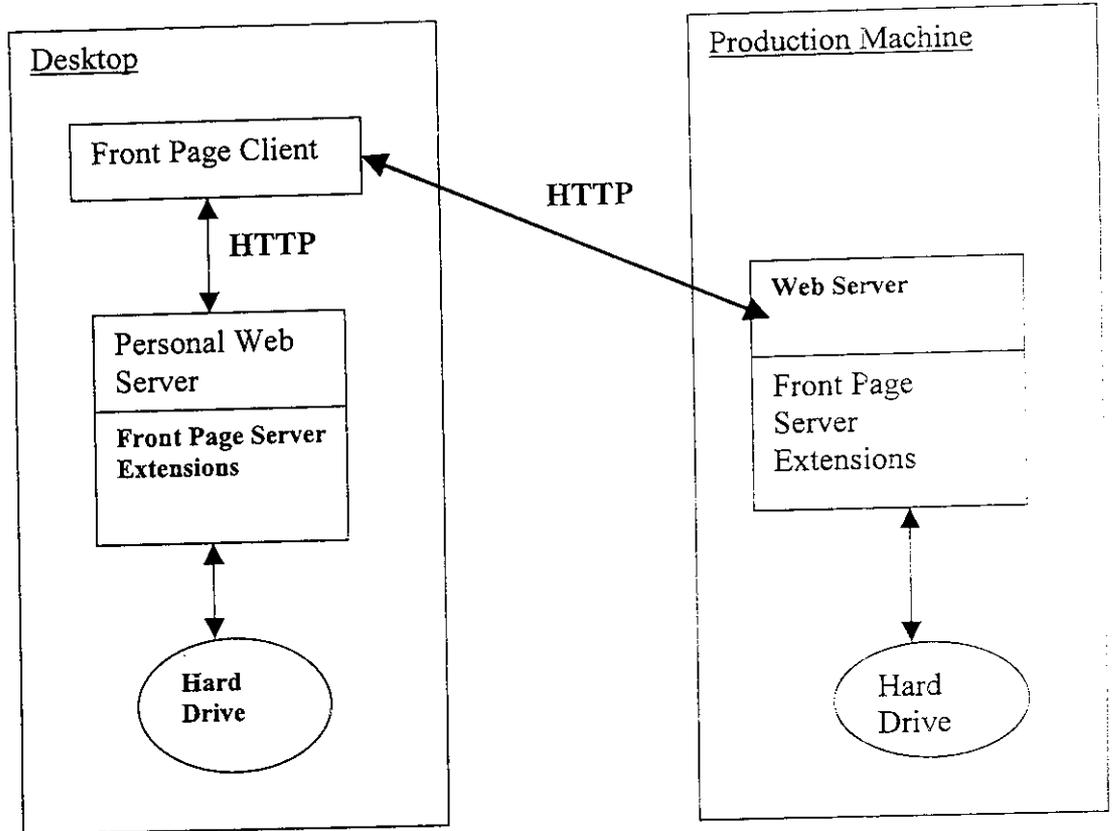
Testing
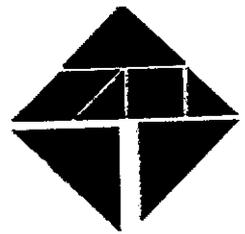
7.2.1 Input Form Test

Call Form and Contact Form

Test Item	Test Setup	Valid Input	Expected Behavior	Corrective Action
Add Button	Standard	Button Click	Add a new record	Display error message box
Edit Button	Standard	Button Click	Edit an existing record	Display error message box
View Button	Standard	Button Click	To view specific record	Display error message box
Delete Button	Standard	Button Click	To delete a record	Display error message box
Close Button	Standard	Button Click	To close the form	Display error message box
First Button	Standard	Button Click	To go to first record	Display error message box
Next Button	Standard	Button Click	To go to next record	Display error message box
Last Button	Standard	Button Click	To go to last record	Display error message box
Previous Button	Standard	Button Click	To go to previous record	Display error message box

7.2.3 Login Form Test

Login Form

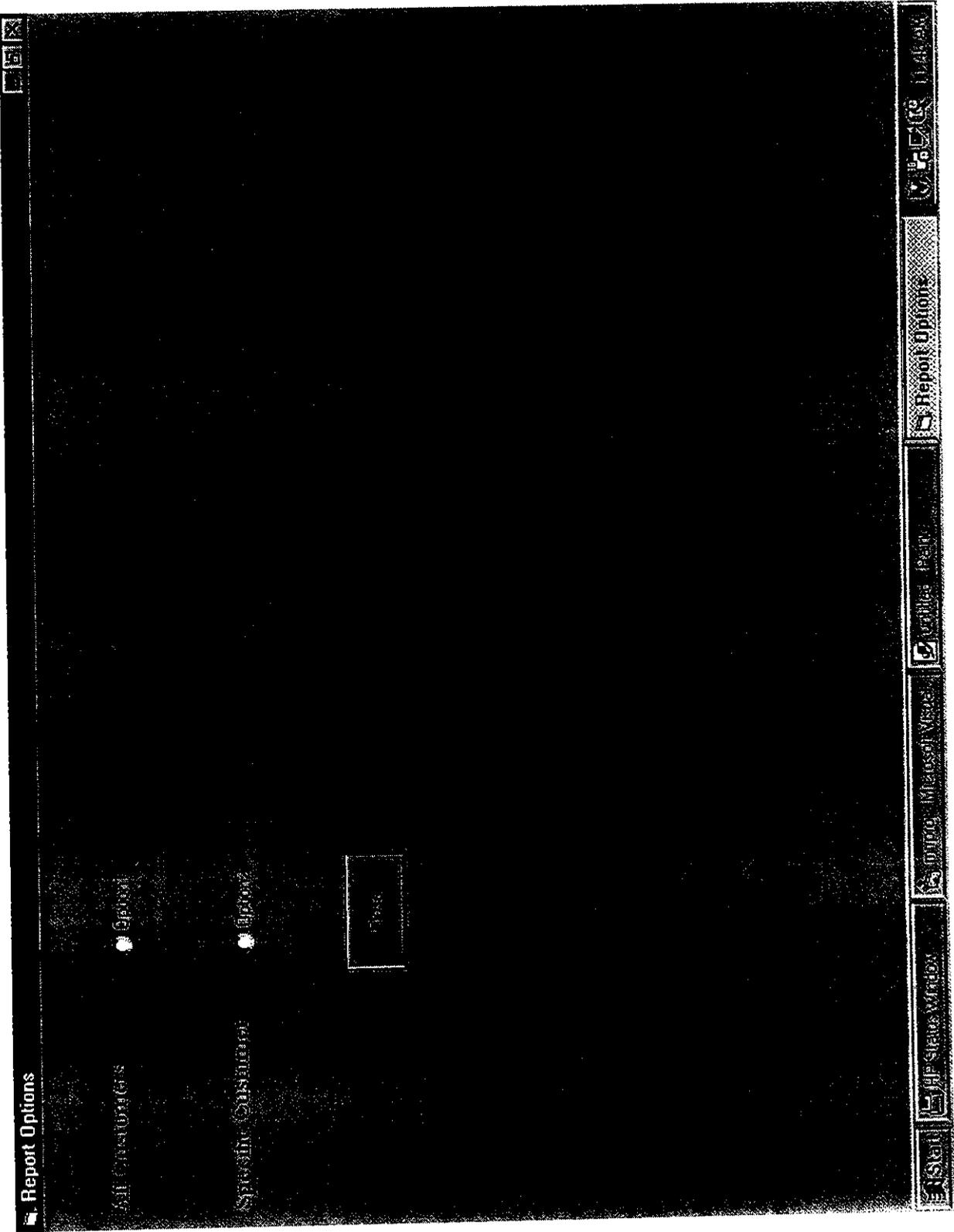| Test Item	Test Setup	Valid Input	Expected Behavior	Corrective Action
OK Button	Standard	Button Click	Check for user login and password and provide access	Display error message box
Cancel Button	Standard	Button Click	Come out of the form	Display error message box

References

Call Form

Id		Call Time
Customer First Name		Subject
Customer Second Name		Call Name
Call Date		

Add Delete View Ref. Last

Add Delete Next Back Last

Report Options

All Customers ◉ Option1

Specific Customers ◉ Option2

Print

Specific Customer Details

First Name	Last Name	Company Name	Call Date	Subject	Call Notes
Satish	Chavali	CA Computer Associates In	11/ 3/99	svp and ak visit ca office at indira na	partnering arrangemen explained by their busi development manager director.sample cd of tl product was given to fi for study.ak feels that could become their par and get more opening customising the ca pro for web applns
Satish	Chavali	CA Computer Associates In	12/29/99	an,ak,svp meet satish chavali	we met satish chavali a briefed on strengths of and interest in partneri with ca.ca will visit sd give demo of jasmine a e-secure
Satish	Chavali	CA Computer Associates In	1/ 4/00	ca visited sdc and gave presentation	satish chavali,swati ser presented to fusion cor team.ca gave a detailec presentation of their products.

Weekly Report

First Name	Last Name	Company Name	Call Date	Subject	Call Notes
Satish	Chavali	CA Computer Associates In	12/29/99	an,ak,svp meet satish chaval	we met satish chavali and briefed on strengths of fusion and interest in partnering with ca.ca will visit sdc and give demo of jasmine and e-secure
Ashok	Waran	Hewlett Packard (I) ISO	12/28/99	ashok and padma visit sdc.	they visited sdc and spent a lot of time seeing the demo's .they will interact with us in the future.
Ashok	Waran	Hewlett Packard (I) ISO	12/22/99	an,mg meet ashok	an briefed e-commerce focus of ramsoft/fusion and also explained some of our projects.ashok is keen to go with ramsoft.
Padma	Ravichander	Hewlett Packard(I) ISO	12/28/99	padma visits sdc.	visited sdc and spent time on demos .will interact with us for future marketing and development.

Code For Displaying All Customer Details

```
Private Sub cclo_Click()
Unload Me
End Sub

Private Sub cshow_Click()
Dim s As String
s = "select mid,cfname as First_Name,csname as Last_Name,dcall as Call_Date,
callno as Call_Notes
from mcalls where dcall between"
s = s & "#" & DateValue(tfrom.Text) & "#" & " and "
s = s & "#" & DateValue(tto.Text) & "#"
s = s & " order by dcall asc"
Data1.RecordSource = s
Data1.Refresh
CrystalReport1.SectionFont(0) = "header;garamond;18;t;t;t;f"
CrystalReport1.SectionFont(1) = "detail;garamond;13;f;f;f;f"
CrystalReport1.BoundReportHeading = "All Customer Details"
CrystalReport1.Action = 1
End Sub
```

```vb
Private Sub cdel_Click()
With dcall.Recordset
.Delete
.MoveNext
If .EOF Then .MoveLast
End With
End Sub

Private Sub cedit_Click()
tid.Locked = False
tcfn.Locked = False
tcsn.Locked = False
tcdate.Locked = False
tctime.Locked = False
tsub.Locked = False
tcnote.Locked = False
dcall.Recordset.Edit
End Sub

Private Sub cfir_Click()
tid.Locked = True
tcfn.Locked = True
tcsn.Locked = True
tcdate.Locked = True
tctime.Locked = True
tsub.Locked = True
tcnote.Locked = True
dcall.Recordset.MoveFirst
End Sub

Private Sub clas_Click()
tid.Locked = True
tcfn.Locked = True
tcsn.Locked = True
tcdate.Locked = True
tctime.Locked = True
tsub.Locked = True
tcnote.Locked = True
dcall.Recordset.MoveLast
End Sub
```