

SALES FORCE AUTOMATION

PROJECT WORK DONE AT,
EON SOFT (INDIA) PRIVATE LIMITED,
BANGALORE.

*Submitted in partial fulfillment of
The Requirements for the award of the degree of
M.Sc Applied Science (Computer Technology)
Of Bharathiar university, Coimbatore.*



Submitted By,

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CERTIFICATE



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CERTIFICATE OF PROJECT APPROVAL

This is to certify that the project report titled

“SALES FORCE AUTOMATION”

PROJECT WORK DONE AT

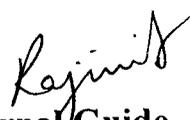
Eon Soft (India) Private Limited, Bangalore.

Is the approved record for the work done by

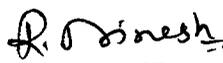
G.Ashok
(Register no: 0137Q0032)

Submitted in partial fulfillment of the requirements for the award of the degree of
M. Sc (Applied Science – Computer Technology) of
Bharathiar University.


Head of the Department


Internal Guide

Submitted to University Examination held on 10.5.2003


Internal Examiner


External Examiner

Project Completion Certificate

This is to certify that Mr. Mr.Ashok.G, Roll.No. 01MCT02, M.Sc 4th Semester has successfully completed the project work, covering the following modules:

1. Schedule
2. Schedule Fixing

Also he has completed the following reports assigned to him:

1. Reports on Doctor Calls
2. Missed Calls Reports
3. Report on Doctor cum Specialization

The entire project work was done in the following environment:

Software: Visual Basic 6.0, ASP, Crystal Reports
Platform: Windows NT
Database: MS-Access

He has good grip over the subjects and capacity to pick up new skills.

We wish him all success in his future endeavors.



Sampath M. R
Director,
Eon Soft (India) Pvt Limited,
Bangalore.

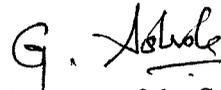
DECLARATION

DECLARATION

I here by declare that the project entitled

“SALES FORCE AUTOMATION”

submitted to **Bharathiar University** as the project work of **M.Sc Applied Science (Computer Technology)** Degree, is a record of original work done by me under the supervision and guidance of **Mr.R.Samath, Director, Eon Soft (India) Private Limited, Bangalore** and **Ms.S.Rajini, Senior Lecturer, Department of Computer Science and Engineering, Kumaraguru College of Technology, Coimbatore** and this project work has not found the basis for the award of any Degree / Diploma / Associate ship / Fellowship or similar title to any candidate of any university.



Signature of the Student.

Place: COIMBATORE

Date: 10.5.2003

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ACKNOWLEDGEMENT

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SYNOPSIS

SYNOPSIS

Sales Force Automation is a solution for the Pharmaceutical Company, as it maintains all the information about the company and also monitors the Medical representatives working in the company, Sales Force Automation is a service to the Pharmacy companies. This Project makes everything online in the company. Sales Force Automation reduces the works of the Medical Representative's in the company. Also help in faster information about the client, since the project is a web oriented service.

This project is proposed to automate a Pharmaceutical company that leads to a paperless office. This automation process is to be done with ACTIVE SERVER PAGES and MS-ACCESS as a back end. This project provides us the complete computerized management for the Pharmaceutical Company. The reports are done with Crystal Reports, third party software that enhances all applications.

Each and every Medical Representative maintains the information separately. A unique id is given to the Medical Representative, which is used to get the full details of information and data collected by him. Companies also have their unique id to access their company's data and information. The Authentication for the company is given by Eon Soft(India) Pvt Ltd and Medical Representatives authentications are given by the company administrator. Additionally the E-Mail facilities and online chat with their higher officials are also provided in this Project.

INTRODUCTION

1. INTRODUCTION:

1.1 Company Profile:

Eon Soft (India) Private Limited, a privately held company with three prominent members with 60 man years of experience in the software field, began operations in 2000. Eon Soft is positioned to leverage its core skills in Web developments and in ERP software's and large-scale Portal Publishing.

The fundamental mission of Eon Soft is to provide customers with cost-effective, advanced, easy-to-use, IT solutions and professional services that help them gain competitive advantage in the marketplace and making everything Online, achieve operational cost reductions and efficiencies, and improve revenue and customer satisfaction. Its first product Win Mark, pioneered in Enterprise Resource Management systems. Launched in the year 2000 in USA . Eon Soft quickly developed strategic relationships with market leaders such as WIPRO, Win Soft etc, who recognized it as a state-of-the-art system in their Web Portal Designing. WIPRO, Dominion Software Developers, and Win Soft have cited and gained employees in their esteemed concerns. In the mid-90s Directors of Eon Soft identified a need to improve Web Oriented Developments and Applications which made to establish Eon Soft in software city of India. The company then dedicated itself to providing service in Web Portal Developments and Applications that allow companies with large field work forces to save time and make everything online on Internet, enhancing customer service and by increasing the field force's productivity and efficiency.

In the late 1990's, businesses began placing an enterprise focus on improving customer service and relationships. Eon Soft seized the opportunity to leverage its deep knowledge of service processes and reengineered its product into an enterprise-scalable solution based on Internet technologies Win Mark, New SMS is enterprise software for managing support chain operations, and is being currently deployed in various high technology equipment service companies. Win Mark and New SMS can be customized to meet the specific need of the client both in architecture and functionality. Today, Eon Soft offers a complete solution for managing Support Chain operations from Customer Relations, through managing field service operations, to sales and marketing.

Mission:

The Mission is stated as

“To provide Online, Userfriendly, cost-effective, advanced, IT solutions and professional services that help our customers to gain competitive advantage in the marketplace, achieve operational cost reductions and efficiencies, improve revenue and customer satisfaction.”

Products of Eon Soft:

The Eon Soft (India) Private Limited has various products. The three products developed by them are

- Win Mark (ERP Software)
- New SMS (ERP Software)
- Sales Force Automation(Service Application)

The Win Mark is a comprehensive solution to organizing, maintaining, and intelligent retrieval of technical information that can be tailored to meet a wide variety of specific business needs. Whether a company has a single-user business system or a complex information network WIN MARK provides the appropriate level of support to Field Service Engineers. Learn more about WIN MARK.

WIN MARK key features:

- Enterprise Resource Maintenance Software.
- Organizing and distributing resources inside the Organization.
- Ability to add customized user interface and control over existing documents
- Incremental update of documents in the field electronically
- Powerful object oriented linking tools
- Ability to access related information from CD-ROM and other storage devices simultaneously

- Multi-user Authoring and Delivery support
- WIN MARK Scripts allow authors/programmers to customize WIN MARK and integrate it with other applications.
- Ability to create Internet-ready technical information automatically
- Ability to sequence any WIN MARK objects, including audio and video segments

The New SMS is ERP software that can manage your entire business, manufacturing, maintenance, service and track all the information in an integrated manner. It uses a portfolio of specialized Knowledge Management Technologies based on open standard Internet protocols and products. New SMS helps you to manage business challenges through remote access to corporate data from your client site through fully secure 64-bit encryption.

NEW SMS key features:

- Maximizes service quality
- Helps ensure quicker response time
- Reduces over all service costs
- Maximizes profitability of over all service operations
- Makes the service operations a precisely controlled process
- Provides Management with flexibility in pricing and service levels
- Helps in optimal allocation of resources and maximum utilization of resources
- Ensures no funds are locked due to excess inventory and storage
- Minimizes billing mistakes and avoids under billing
- Minimizes inventory losses by precision tracking of spare parts
- Search methods are available to assist the Help-Desk personnel
- Helps the management to assess the financial condition through Reports.
- Ensures data security.
- Manage Pre-sales activities
- Get sales projection reports and a variety of online decision support information
- Manage assets effectively

- Preventive maintenance for assets
- Complete manufacturing tracking
- Supports import/export datum from/to other software like SCALA, Peach tree and QuickBooks.
- Tied to WIN MARK - technical knowledge base

Clients:

The various Clients of Eon Soft solutions are

- Informatics, Bangalore.
- Win Soft, Bangalore.
- NumR Systems, Salem.
- Sofia Infoways, Hyderabad.
- Sree Srinivasa Technologies, Chennai.
- Infogana Soft, Coimbatore

Services:

The various services offered by Eon Soft Solutions

are

- Custom Software Development.
- On-line Programming Services and Application.
- Data Retrievals.
- Outsourced Call Center Software's.
- Technical service support.
- Helpdesk services.
- Information retrieval services.
- Customer follow-up.
- Scheduling.

1.2 Purpose:

The “Sales Force Automation” is an application developed for Pharmaceutical companies. This project helps employees (Medical Representatives) of the company in effective and faster information providing service. Even small job of the employees are made online, and they can just enter their data on the application “Sales Force Automation”, where they are provided with all needed information and helps in Net Sale. Each Medical Representative’s instead of making postages they can just enter their information on the Applications, which reduces the time and also the money spend for that data. Their requirements are just to visit an Internet Browsing Centre and do their work for an hour, instead of hand written copies, Postages and Couriers. The general version of Sales Force Automation is on Development which provides similar facilities for all companies and departments.

1.3 Scope Of The Project:

Project covers a module “Schedule” and “Schedule Fixing” which is a part of the overall Project named as “Sales Force Automation for Pharmaceutical Industry”. The module “Schedule” and “Schedule Fixing” handles the data of the ‘CALLS on Doctors’ entered by the Medical Representatives. Users of this module should be able to accomplish the following activities.

- (a) Able to view the data related to ‘CALLS’
- (b) Able to generate following reports
 - (i) List of Doctors – City cum Specialization
 - (ii) List of Doctors – For a selected M.R City wise
 - (iii) List of Missed Schedule – For a selected M.R

1.4 Definitions:

(a) **Schedule** – A list of dates with Doctor Name / Clinic name, Place of visit, Person to meet and Purpose.

(b) **CALLS** – A meeting of a Doctor to detail the medical products by a Medical Representative.

(c) **Specialization** – Doctor's field of specific area of service.

(d) **Sales Force Automation**–Application provides to the Pharmaceutical Companies for Online Data Transmission.

1.5 Overview:

The Sales Force Automation helps Pharmaceutical Companies in data or information passing to their respective higher officials. The module "Schedule" and "Schedule Fixing" refers to the main application "Sales Force Automation" which has other modules such as "Doctors", "Chemists", and "Calls Attended". The Schedule enables the Medical representatives to view their schedule for any selected period and be able to generate the identified reports. The Schedule Fixing enables the Medical representatives to create their schedule for any selected period and to generate the reports. The main function of the module is to display the 'Schedule' of the M.R and to generate the identified reports. User should be able to fix the schedule and be able to select the period of schedule as per his choice. In the case of reports, user should be able to identify the M.R and be able to generate the reports pertaining to that selected M.R. The users are Medical Representatives and their higher officials who supervise the work of M.Rs. Though they are well educated in the pharmaceutical line, their proficiency in usage of computers will be at a low level during the initial round of usage period. Over a period their skill level will improve and they will be use the application with much ease.

GENERAL DESCRIPTION

2. GENERAL DESCRIPTION:

2.1. Product Perspective

The module "Schedule" covers all the users "Schedule" information and how the Medical representatives attend such schedules. All the information's about the CALLS are shown in this Module which is referred by the higher officials and the particular employee in their concern. The module "Schedule Fixing" covers all the user "Schedule Fixed" information's and how the medical representatives enter their schedules and CALLS. All the information's about the CALLS and Schedule are entered by the particular Medical Representatives in the company.

2.2 Product Functions:

- **Schedule**

The main function of the module "Schedule" is to display the 'Schedule' of the M.R and to generate the identified reports. User should be able to select the period of schedule as per his choice. In the case of reports, user should be able to identify the M.R and be able to generate the reports pertaining to that selected M.R.

- **Schedule Fixing**

This is a module where the Schedules of a particular Doctor, Chemist, and Stockist are entered by a particular Medical Representatives. This can be later viewed by the Medical Representative by the module "Schedule".

- **List of Doctors – City cum Specialization**

The Reports on "List of Doctors – City cum Specialization" provides the information of the Doctor based on the City and Specialization category, where the report covers the Doctors in the particular city and classifies them based on their Specializations covered by the Medical representative throughout the particular city.

- **List of Doctors – For a selected M.R City wise**

The Report on “List of Doctors – For a selected M.R City wise” provides the information of Doctor for a Selected City, where the report covers the Doctor’s covered by a Medical Representatives in that particular city.

- **List of Missed Schedule – For a selected M.R**

The Report on “List of Missed Schedule – For a selected M.R” provides information’s about the Missed Schedules and CALLS by a particular employee; this report provides the information about the missed calls made by a particular Medical Representative.

2.3 User Characteristics:

The users are Medical Representatives and their higher officials who supervise the work of M.Rs. Though they are well educated in the pharmaceutical line, their proficiency in usage of computers will be at a low level during the initial round of usage period. Over a period their skill level will improve and they will be use the application with much ease. Now in day to days life mostly all are going for browsing for checking the mails they will have a minimal knowledge of Internet and how to browse on Internet as per to day the medical representatives have their own email ids in their company websites so looking towards this application this is similar to how a Medical Representative uses his mail id, the “Sales Force Automation” are user friendly and ease to understand by any individual who have ideas about Internet.

2.4 General Constraints:

The main constraint is that the availability of computers at the place of visit by the M.Rs. In such situations, M.R has been told that he can get assistance from the company. The application is on Internet so the M.Rs can Access them at any time, the application is 365 * 7 * 24 mode so there will be no interruption to the Medical Representatives to add their information in the site. Each medical

representative will have a higher official to moderate his performance he will look at Medical Representatives added information from his office.

2.5 Language Description:

Active Server Pages is the fastest and easiest way to create user interactive web applications. Whether you are an experienced professional or brand new to Web Oriented Application programming, Active Server Pages provides you with a complete set of tools to simplify rapid Web Oriented application development.

The Active Server Pages is a Web Technology from Microsoft that provides the web server with the capabilities of processing application Logics and the delivering standard HTML to the client browser. The results can be delivered to a variety of client side web technologies, such as standard HTML, ActiveX, Java, browser plug-ins and DHTML. ASP enables user to deliver HTML, client-side scripting, web controls and server-side processing and connectivity features.

Active Server Pages Produces dynamic HTML depending on the clients request to access the existing systems, such as database, document retrieval service, mail servers, groupware servers and other COM based information servers. ASP acts as an HTML interpreter that was accessible only through native interfaces, such as Microsoft Exchange client, Lotus Notes Client or a customized Visual Basic Application. With a wide range of functionality, ASP and IIS acts as a medium for porting existing application to and build new application for the web.

Internet Information Server:

Microsoft Internet Information Server, or IIS, is the primary Web server for sites constructed on Microsoft Windows NT technology, and it represents a vast improvement over servers that simply use the Internet Server Application Programming Interface, or ISAPI, ISAPI application can be executed by IIS in a fashion similar to CGI, but they run in the same memory space as the web server. In fact, ISAPI application is constructed as dynamic-link libraries that can run

wenty times faster than equivalent CGI application. Microsoft Active Server Pages, or ASP, is an example of an ISAPI application.

How to Restrict Browse Access to a Web:

If you want to restrict access to a web, create a local Windows NT group for the web's end users, or use a group that is already on the Windows NT system. In the FrontPage Explorer, choose the Permissions command from the Tools menu. In the End Users tab of the Web Permissions dialog box, select "Registered users only." Then, remove all Windows NT groups that have the IIS anonymous logon user (IUSR_<machine_name>). Add the end user group you created and click OK. Then, to update who has browse access to the web, update the users and groups in the Windows NT user group, using the Windows NT User Manager.

How to allow anyone onto your web:

Adding the Anonymous user, or adding a group containing the Anonymous user, to the list of users on a web allows all users access to that web. NOTE: You must use the same password for the IUSR_<machine_name> account in the Windows NT User Manager, and in the Internet Service Manager's WWW Service Property page.

How to Give Access to Users from Other Domains:

To add administrators, authors, or end users (or groups of administrators, authors, or end users) from domains that are outside of the local host's domain, you must add the users or groups using the Windows NT User Manager, so that they have the "Log on locally" right. To do this, open the Windows NT User Manager. Select the local domain. Select User Rights from the Policies menu. From the Rights drop down text box select "Log on locally." Scroll down the Grant To field to see if your user or group you want to add is listed. If the group is not listed, add it using the Add button.

How to allow access to webs without requiring user names and passwords:

Check the Allow Anonymous box in the Internet Service Manager's WWW Service Properties dialog box. (See Security Issues, below.)Control Which List of Users is

displayed in the Tools Permissions Dialog You can control which users and groups can be added to the lists of authors and end-users in the FrontPage Explorer's Permissions dialog on the Tools menu. To do this, open the frontpg.ini file, and under the [Port N] section, where N is the port number for the IIS server, add the following variables to modify the contents of the list of users and groups.

GroupsOnly=1

List only groups (no users).

UsersOnly=1

List only users (no groups).

LocalComputerOnly=1

List only the users and/or groups from the local computer,

Instead of from the local computer and the primary domain.

ListDomains=DOMAIN1 DOMAIN2 DOMAIN3

List users and/or groups from domains listed here as well as from the local computer and the primary domain. The list of domains should be space-separated. Setting both GroupsOnly and UsersOnly to 1 defaults to listing only groups (no users).

Security Notes

WebBot Save Result Component Has Unprotected Output File:

Save Results bots produced by FrontPage wizards place their output files in the `_private` directory of the web. Because end users of a web on an Internet Information Server must have access to these files to write to them, they also have access to browse to them. Therefore, an end user who guesses the name of

the output file can have access to the results of your form. Note that the name of the output file is not listed anywhere that an end user can see, nor is it possible for an end user to list the files in the `_private` directory.

To work around this potential problem, change the location of the Save Results bot's output. Open the Form Properties dialog box. Click the Settings button. In the File for Results field of the Save Results Bot tab, change the output file or page. To keep the results within the web, use the root web's `_vti_log` directory. No one (including authors and administrators) can browse to this directory. To save the results to a file, supply the absolute filename of a file that is writeable by end users of the web.

No Access Control under FAT File System:

Under the FAT system, all access control is turned off. However, all FrontPage administrators are required to be Windows NT administrators. This level of access control is still enforced because FrontPage administrators update the server's configuration, which requires Windows NT Administrator privileges. If you try to do a FrontPage administrator operation and you are not a Windows NT Administrator, you will get a message that ends with "Error Code 5." When authoring a web under the FAT system, you should turn off the "Allow Anonymous" option in the Web Services Properties dialog box in the Internet Service Manager. This forces authors to log on to create and edit documents. When you have finished authoring the web, turn Allow Anonymous back on in the Web Services Properties dialog box in the Internet Service Manager. This enables users to browse the web without authorization. To protect your web from authoring while it is in this state, use the FrontPage Server Administrator to disable authoring. Open the FrontPage Server Administrator, click Authoring, click OK to disable it, and click Close to close the FrontPage Server Administrator.

About an Access project:

A Microsoft Access project (.adp) is an Access data file that provides efficient, native-mode access to a Microsoft SQL Server database through the OLE DB component architecture. Using an Access project, you can create a client/server application as easily as a file server application. This client/server

application can be a traditional solution based on forms and reports, or a Web-based solution based on data access pages, or a combination of both. You can connect the Access project to a remote SQL Server database, a local SQL Server database, or a local installation of SQL Server 2000 Desktop engine.

- Connects the Access project to the SQL Server database
- Database objects stored in the SQL Server database
- Database objects stored in the Access project

An Access project is called a project because it contains only code-based or HTML-based database objects: forms, reports, the name and location of data access pages, macros, and modules. These are the database objects that you use to create an application. Unlike a Microsoft Access database, an Access project does not contain any data or data definition based objects: tables, views, database diagrams, stored procedures, or user-defined functions. Instead, these database objects are stored in the SQL Server database.

To create your application and access the data, you connect the Access project to the SQL Server database by using the **New** command on the **File** menu to display the **Data Link Properties** dialog.

Working with an Access project is very similar to working with an Access database. The process of creating forms, reports, data access pages, macros, and modules is virtually the same as that used to create an Access database.

Once you connect to an SQL Server database, you can view, create, modify, and delete tables, views, stored procedures, user-defined functions, and database diagrams by using the Database Designer, Table Designer, Query Designer, Query Builder, and SQL Text Editor. Although the user interface for working with these database objects is different from the equivalent database objects in an Access database, it is just as user-friendly. An Access project also contains many of the same wizards as an Access database, such as the Form Wizard, the Report Wizard, the Page Wizard, and the Input Mask Wizard. These Wizards help

you to quickly create a prototype or simple application, and also make it easier to create an advanced application.

If your Access project is connected to an SQL Server 2000 database, you can use and take advantage of extended properties. Extended properties store additional attribute information about SQL Server database objects that are stored in the SQL Server database and provide added functionality for an Access project such as:

- Creating a lookup on a column.
- Displaying user-friendly validation text.
- Formatting data and Defining input masks.
- Using subdatasheets, saving sort order and filters, and saving datasheet appearance of tables, views, stored procedures, and inline user-defined functions.

Some extended properties are used by Access and are not visible through an Access project, such as a property which sets the column widths in a table datasheet. Other extended properties are available from the Database, Table, and Query Designers property sheets for views, single statement stored procedures (except column properties), and in-line functions. Because multistatement stored procedures, and table and scalar user-defined functions are edited in the SQL Text Editor, they don't support extended properties.

By default, SQL Server does not support extended property inheritance. A column in a view does not automatically have the same properties as the column in the base table. However, an Access project does support inheritance by copying the extended properties from table columns to view and function columns on creation, and by copying extended properties from table columns to form and report control properties. Note: Changes to the extended properties of tables, views, stored procedures, and in-line functions are seen by all users of the database, because extended properties are stored in the SQL Server database. This means, for example, that if you change the format of a table datasheet, you are changing it for everyone who subsequently opens the table datasheet.

You can connect to one of the following SQL Server

databases:

- Microsoft SQL Server 2000 on Microsoft Windows 2000 and Microsoft Windows 98 or later
- Microsoft SQL Server 2000 Desktop Engine on Windows 2000 and Windows 98 or later
- Microsoft SQL Server 7.0 on Microsoft Windows NT 4.0 or later (with Microsoft Windows NT Service Pack 4 or later) and Microsoft Windows 95 or later)
- Microsoft Data Engine (MSDE) on Windows NT 4.0 or later and Windows 95 or later
- Microsoft SQL Server 6.5 on Windows NT 4.0 or later (with SQL Server Service Pack 5 or later)

SPECIFIC REQUIREMENTS

3. SPECIFIC REQUIREMENTS:

3.1 Functional Requirements:

3.1.1 Introduction

User to be provided necessary option in the screen to initiate the enquiry on his Schedule. Also user should have options to generate the identified reports. Users are the Medical Representatives they just have to enter the respected data's in the respective option provided on the "Schedule Fixing" screen, were all the options are easier and day to day used fields are provided to them for the information entry on the site.

Reports for the city-wise doctors can be easily generated as the Medical Representative selects a particular city for which the reports are generated. Report for Medical Representative-wise doctors as a respective head of a particular region can select a particular Medical Representatives to view the doctors covered by that particular Medical Representatives. Report for the Missed CALLS is generated similarly like selecting a particular Medical Representative to view the missed CALLS made by him for a selected period.

3.1.2 List of Inputs

- **Medical Representatives** – Information about his Staff Number, Office working at, To whom he reports and City where he works are some inputs.
- **Doctors** – Information about Name, Specialization, Qualification, Clinic Address and Hospital Working at are some of the inputs.
- **Clinics** – Information about Name of the clinic, Address, Phone Number, Visiting Hours and Area are some inputs.
- **Chemists** – Information about Name of the Chemist, Owner Name, Address, Phone, Contact Person, Visit Once in and City are some inputs.
- **Information on Calls** – Information about Actual call Date, Call made date, Person met, Orders and Amount received.

3.1.3 Information Processing Required

- **Schedule**

On accepting the user's selection of the period of schedule, the module should process the information about Calls and display the Schedule.

- **Schedule Fixing**

On entering the Information collected by the user the schedule for a particular person or doctor is fixed on a particular day and regarding the schedule information is also store in the Database.

- **List of Doctors – City cum Specialization**

On accepting the user's selection of the City and the Specialization, the module should process the information about Doctor's covered in that particular City with that Specialization and display the Doctor's list.

- **List of Doctors – For a selected M.R City wise**

On accepting the user's selection of the Medical Representatives Number, the module should process the information about Doctor's covered by that Medical Representative and display the Doctor's list.

- **List of Missed Schedule – For a selected M.R**

On accepting the user's selection of the Medical Representatives Number and a particular period, the module should process the information about Missed Calls of that particular Medical Representatives between those periods, Date to be visited, Number of Missed Calls made for a selected period and displays the Date to be Visited list.

3.2 Performance Requirements:

3.2.1 Security

Only authorized users will be able to access the module "Schedule" and "Schedule Fixing", and be able to access the data pertaining to the

Staff working under the users. At the first step of security the company id of Medical Representative is to be entered and after, his own staff number and allocated password is to be entered to pertaining data in database. Each Head in a particular region gives rights for each Medical Representative with respect to their category, only based on his rights he can pertain data's from the database.

Initially IIS provides security for the login details and Linux firewall server provides higher amount of security to the site hence data stealing and data hacking is impossible to any system. So any information stored is highly secured and confidential to that particular company or Medical Representatives.

3.2.2 Availability

Since the application is of Internet based service providing nature, the users will expect to use the application at various Internet cafes situated at various places, hence the application should be available by 24X7X365 mode. Only exceptions are the maintenance period. Since the application is for the concern that work throughout the India the application is available on all days in a year and round the clock as the Medical Representatives can use this at any time.

In today's life even a small villages in India has a browsing centers, so the Medical Representative don't have to waste their time in making hard copy of their information and then post to their head's instead they can enter the collected information in the options available in the site pages. So the information can be easier and quickly can be retrieved by his higher officials and can check up each Medical Representatives performance and work.

3.2.3 Capacity

The application should be able to cater to the needs of all M.Rs of any Pharmaceutical Company, where the staff strength will vary from 10 to 100 or more. And there may be more than 50 to 100 companies. Each company has its own id which fetches the information about and by that particular company, so there may not be any confusion or data changes for a company, in such case the response will be accurate and faster. In case of Medical Representatives each of them have their own staff number which provide them the authentication for entering, so here also there will be no data miss match and changes, so the data required will be easily and quickly fetched with a good response time.

3.2.4 Response Time

The entire application gives very good response, which is expected around less than 3 seconds in the case of screen interfaces and less than 10 seconds in the case of report generation. Since it is a Web Oriented application the response time also depends on the client machine and also the type of internet provider used. In case of using high configuration system the response time will be faster than the time mentioned above. The type of Processor and RAM plays a major role in the response time. It is recommended to use a faster providers and good configuration systems for a quicker response time.

3.3 Design Constraints:

3.3.1 Standards Compliance

As per the company's standards with respect to Program Naming, Variables naming and Software Coding and Documentation. The authentication is also provided based on the company's requirement and the staff identities are also provide as by companies requirement. The option provided to them is also based on their required information and it can also be altered as per the company's need and requirement. The administrator rights are provided to a person in

the company who acts as a moderator in adding rights to his co-employees of the company.

3.3.2 Hardware Requirements

The minimum hardware requirements required for the project are

Processor	-	Pentium IV at 1.7 GHz
Memory	-	256 MB
Hard drive	-	A minimum of 120 GB
Proxy Server	-	Linux Proxy Server
Server	-	Internet Information Server 4.0

Other requirements include floppy drive, CD-ROM drive and a cable Modem with 24 hours Internet connection.

3.3.3 Software Requirements

The software requirements needed for the project are as follows. The Access is needed only for the login purpose.

Front End	-	Active Server Pages6.0.
Back End	-	MS-Access.
Report Designer	-	Crystal Reports

3.3.4. Hardware Limitations

Web Server having static I.P address with Cable Modem having uninterrupted Internet connection.

3.3.5. External Interface Requirements

Internet Cloud with goods providers for faster access on the application.

3.3.6. User Interface, Screen Formats

- User Interface:
- a) Through Sub Module – “Schedule”
 - b) Through Sub Module – “Schedule Fixing”
 - c) Through Sub Module – “Reports”
- Screen Formats:
- a) Screen Header - Option Name
 - b) Screen Body - User interface for selection of data
 - c) Screen footer – Buttons and Message display

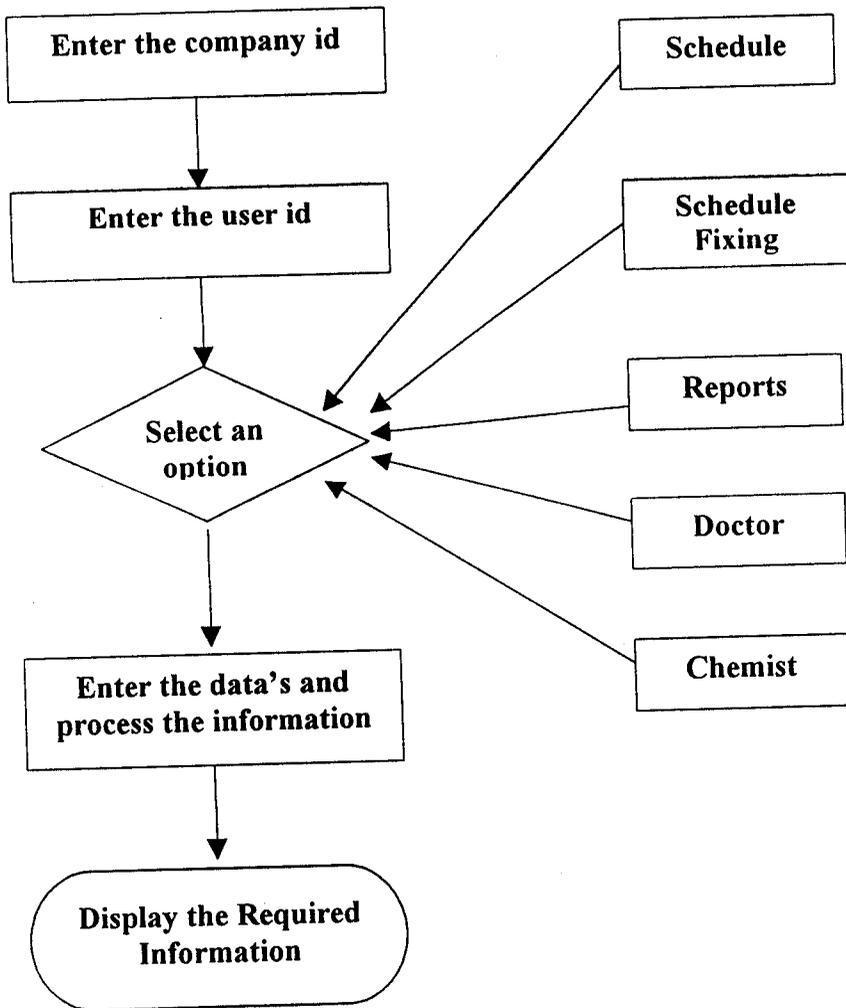
3.3.7. Hardware Interface and Software Interface with other Systems

The Sales Force Automation requires certain hardware and software Interfaces with other systems.

Hardware Interface: a) Web Server and clients on Internet cloud.

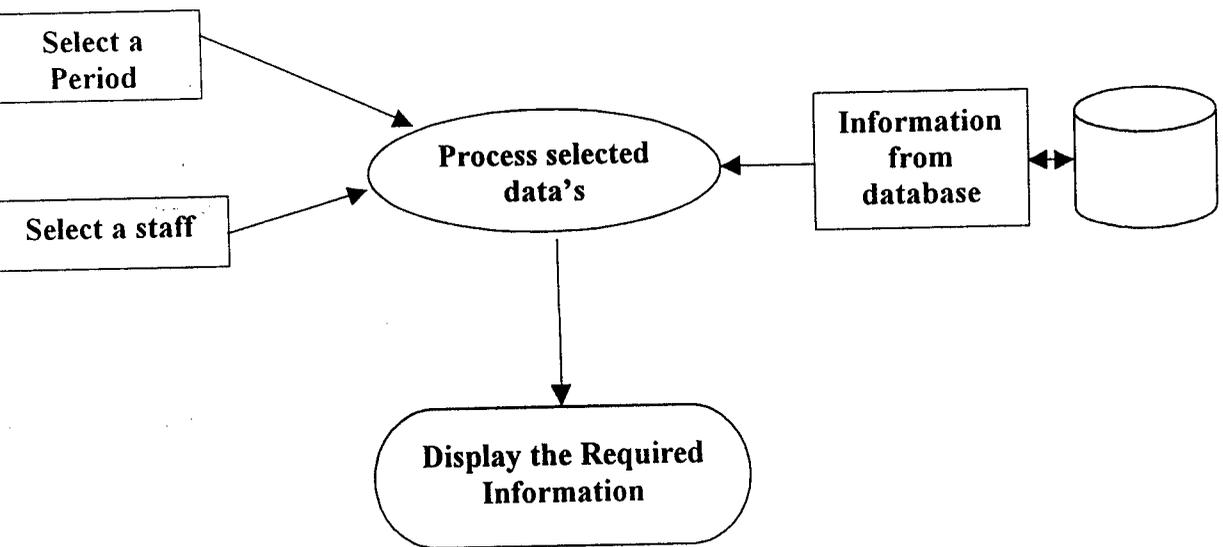
Software Interface: a) Visual Interdev, IIS, Browser Software.

3.3.8 SYSTEM FLOW DIAGRAM

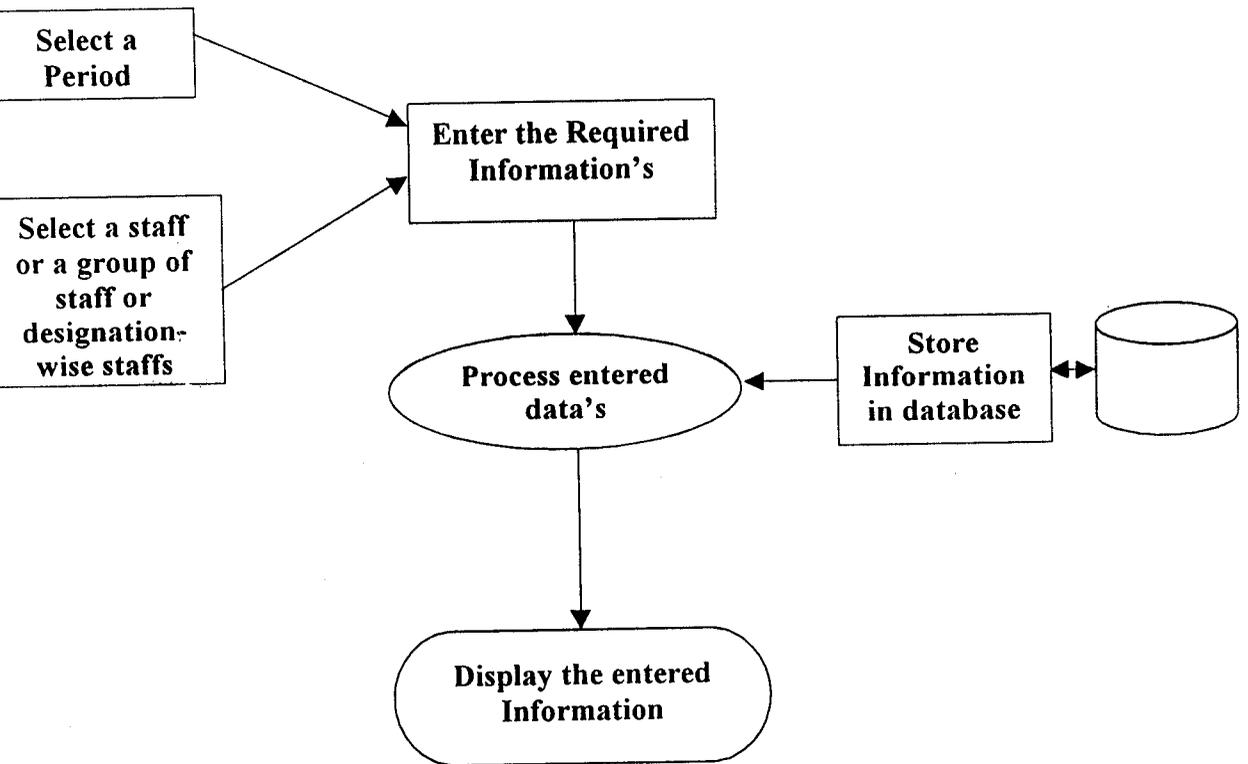


3.3.9 DATA FLOW DIAGRAM

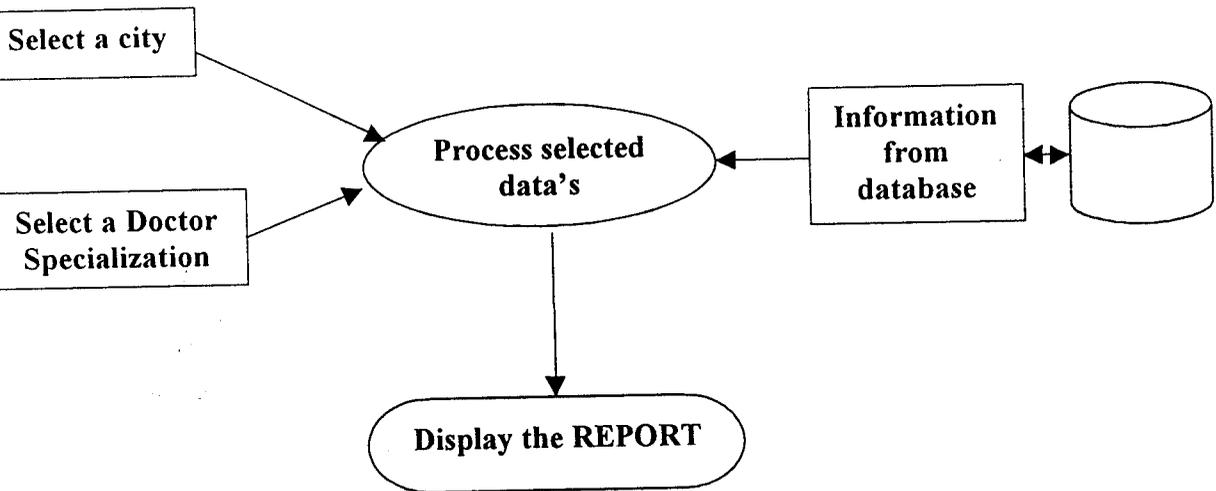
❖ SCHEDULE



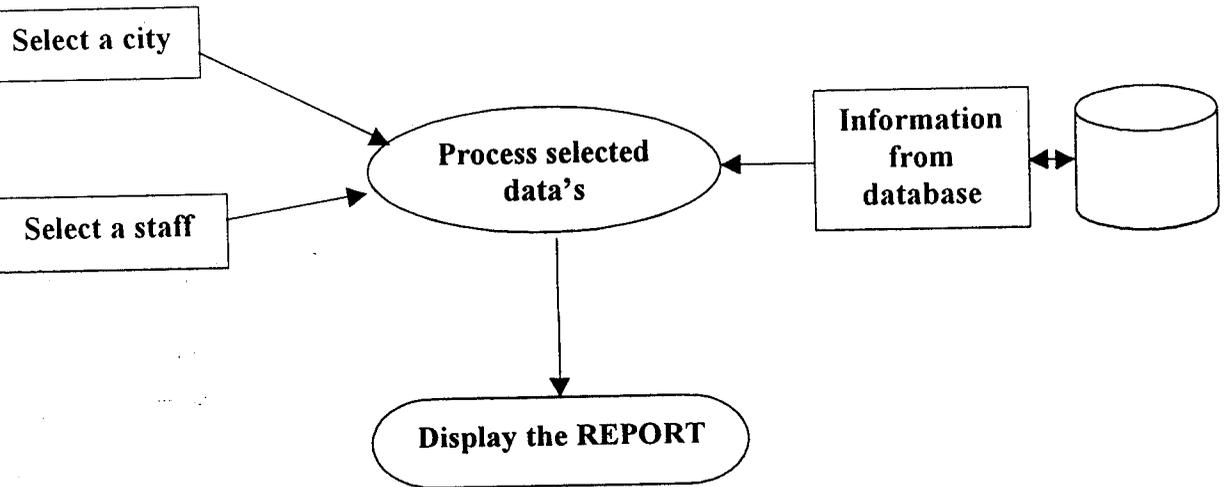
❖ SCHEDULE FIXING



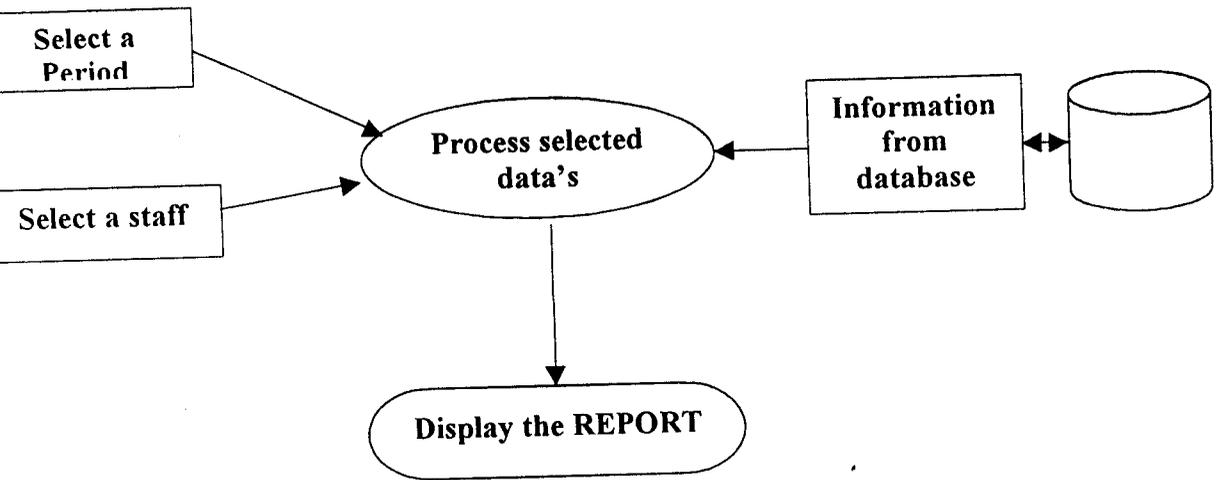
❖ **Report For City Wise Doctor Schedules**



❖ Report For Selected M.R City wise



❖ Report For Missed Schedule M.R wise



OTHER REQUIREMENTS

4 Other Requirements:

4.1 Operations Required by the User

- a) User to furnish the date range through “Schedule” module for which the Schedule to be displayed.
- b) User to enter the furnished data through “Schedule Fixing” module for which the Schedule to be fixed are displayed.
- c) User to exercise the option through “Reports” module to generate the required Report.

The user should know how to open the homepage from the Internet Browsing centre from the remote system. Besides this he should know to access the homepage and how to enter into his login. He also can perform the following functions; some of the functions such as enter the company id, enter his username and password. The change in the password can be done only by an administrator.

- Add a User Rights.
- Change Passwords with user request.
- Add a New User.
- Delete a User.
- Edit User Attributes.

OPERATIONS BY A USER:

To Access “Schedule”:

1. Click on the “Schedule” on the welcome screen of the user.
2. If you are a head or chief select a Medical Representative’s (user’s) staff number or name in the option given there , then select the period from which a schedule to be viewed for that Medical Representative.

3. If you are a Medical Representative and you have to view the Schedule of yours for a particular period select , then select the period from which a schedule to be viewed .

To Access “Schedule Fixing”:

1. Click on the “Schedule Fixing” on the welcome screen of the user.
2. If you are a Medical Representative and you have to add the information on Schedule’s follow the steps down.
 - a. You have to select a one option from the three shown on the schedule fixing screen.
 - For a single staff – Here Schedule Fixing for a single staff is done by selection the staff name or staff number.
 - For a group of staff - Here Schedule Fixing for a group of staff is done by selection the staff’s name or staff’s number.
 - Designation-wise Schedule Fixing – Here Schedule Fixing are done based on the staff designation.
 - b. Enter the respective details in the option provided there, which displays the schedule fixed.
 - c. Select the options provided in the Schedule fixing screen-c, that is
 - Alone – To view only schedule for a particular client nature in a particular area in a particular city.
 - View Calls – Display all schedule fixed for a particular selected options.
 - d. The clients name is displayed for adding them in the schedule of those Medical representatives.

CONCLUSION

5. CONCLUSION:

The Sales Force Automation overcomes the difficulties in the existing system followed in the pharmaceutical companies. In the case of existing systems the data transferred are not secure and fast, and also there is no chance of looking after all the Medical Representative's from one place. Since the system is online each and every Medical Representative's day to day work can be monitored as he enters the information in the respective fields. The Security is the main aim of this system as it provides full featured firewall server in securing the database. Next accuracy comes to play where each and every information entered are stored and displayed in a few micro seconds. Sales Force Automation is highly authenticated system as each company is provided with separated ids and each medical representative are provided with respective staff numbers and password to enter the system.

The Sales force automation also provides the respective reports as per the users pertained information, the reports may be to view the work and data added by the Medical Representative's in a selected state, city, area, client nature, medical representative's calls and the period of their works.

FUTURE ENHANCEMENT

6. FUTURE ENHANCEMENTS:

The Sales Force Automation provides the Medical Representative's faster information providing and pertaining system with various new features. Though it is known for its security and accuracy there is some area for improvement in the project. We can classify the area of improvement as

- Administrator's Rights
- User's Rights
- Sharing Of data
- User's Options
- Entry Access

The general version of the Sales force Automation is under development. This general system may help many of the customers and companies in making faster collection of data and information retrieval from one end to other end of the world which would be getting a trade mark name for it as it is developed.

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7. BIBLIOGRAPHY:

Books:

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- John W. Franckowiak, "*Active Server Pages Database Programming*", Hungry Minds, Incorporated Publications, 1998.
- Rob Thayer, "*Active Server Pages Unleashed*", Sams Publisher, 1998.
- "*Database Programming with Visual InterDev 6*" by Mr. Robert Crouch and Michael Amundsen.

Web Sites:

- a) www.microsoft.com/downloads/asp
- b) www.microsoft.com/downloads/iis5

APPENDICES

Appendix A

**SOFTWARE REQUIREMENT SPECIFICATION
IEEE 830 1985**

1. Introduction

1.1. Project Purpose

This project covers a module “Schedule” which is a part of the overall Project named as “Sales Force Automation for Pharmaceutical Industry”. Users of this module will be Medical Representatives of a Pharmaceutical Company. This module “Schedule” handles the data of the ‘CALLS on Doctors’ entered by the Medical Representatives.

1.2. Project Scope

Users of this module should be able to accomplish the following activities.

- (a) Able to view the data related to ‘CALLS’
- (b) Able to generate following reports
 - (i) List of Doctors – City cum Specialization
 - (ii) List of Doctors – For a selected M.R City wise
 - (iii) List of Missed Schedule – For a selected M.R

1.3. Project Definitions, Acronyms and Abbreviations

Definitions:

- (a) Schedule – A list of dates with Doctor name / Clinic name, Place of visit, Person to meet and Purpose.
- (b) CALLS – A meeting of a Doctor to detail the medical products by a Medical Representative
- (c) Specialization – Doctor’s field of specific area of service

Abbreviations:

- (a) M.R – Medical representative

1.4. Project References

This module "Schedule" refers to the main application "Sales Force Automation" which has other modules such as "Doctors", "Chemists", and "Calls Attended".

1.5. Project Overview

This module enables the Medical representatives to view their schedule for any selected period and be able to generate the identified reports.

2. General Description

2.1. Product Perspective

The module "Schedule" covers all the users "Schedule" information and how the Medical representatives attend such schedules.

2.2. Product Function

The main function of this module is to display the 'Schedule' of the M.R and to generate the identified reports. User should be able to select the period of schedule as per his choice. In the case of reports, user should be able to identify the M.R and be able to generate the reports pertaining to that selected M.R.

2.3. User Characteristics

The users are Medical Representatives and their higher officials who supervise the work of M.Rs. Though they are well educated in the pharmaceutical line, their proficiency in usage of computers will be at a low level during the initial round of usage period. Over a period their skill level will improve and they will be use the application with much ease.

2.4. General Constraints

The main constraint is that the availability of computers at the place of visit by the M.Rs. In such situations, M.R has been told that he can get assistance from the company.

3. Specific Requirements

3.1. Functional Requirements

3.1.1. Introduction

User to be provided necessary option in the screen to initiate the enquiry on his Schedule. Also user should have options to generate the identified reports.

3.1.2. List of Inputs

Information about Medical representatives, Doctors, Clinics, Chemists and Information on Calls.

3.1.3. Information Processing Required

On accepting the user's selection of the period of schedule, the module should process the information about Calls and display the Schedule. In the case of reports the module should get the Doctors information, City information, Specialization information, Schedule information and generate the requested reports.

3.2. Performance Requirements

3.2.1. Security

Only authorized users will be able to access the module "Schedule" and be able to access the data pertaining to the Staff working under the users.

- Screen Formats:
- a) Screen Header - Option Name
 - b) Screen Body - User interface for selection of data
 - c) Screen footer – Buttons and Message display

3.3.5. Hardware Interface and Software Interface with other Systems

Hardware Interface: a) Web Server and clients on Internet cloud

Software Interface: a) Visual Interdev, IIS

4. Other Requirements

4.1. Operations Required by the User

- a) User to furnish the date range through “Schedule” module for which the Schedule to be displayed;
- b) User to exercise the option through “Reports” module to generate the required Report

5. References

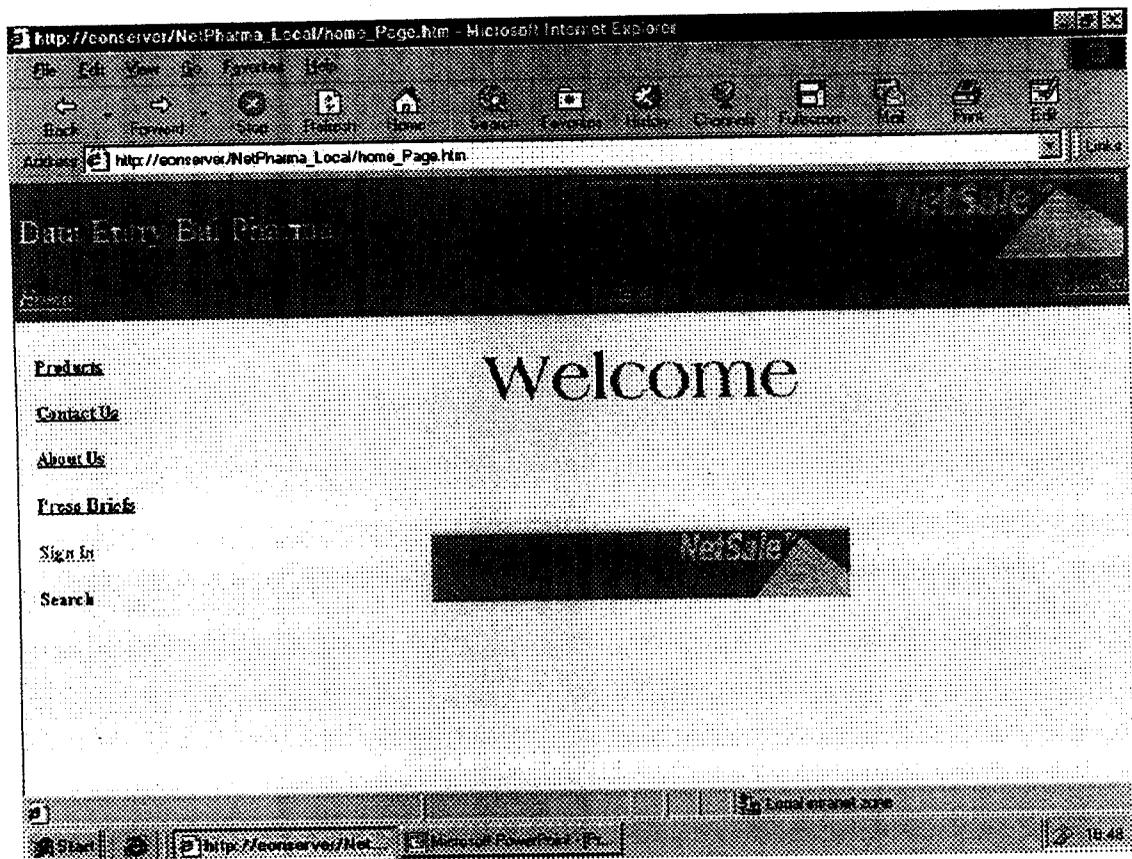
5.1. For Reference books

- a) Database Programming with Visual InterDev 6 by Mr. Robert Crouch and Michael Amundsen

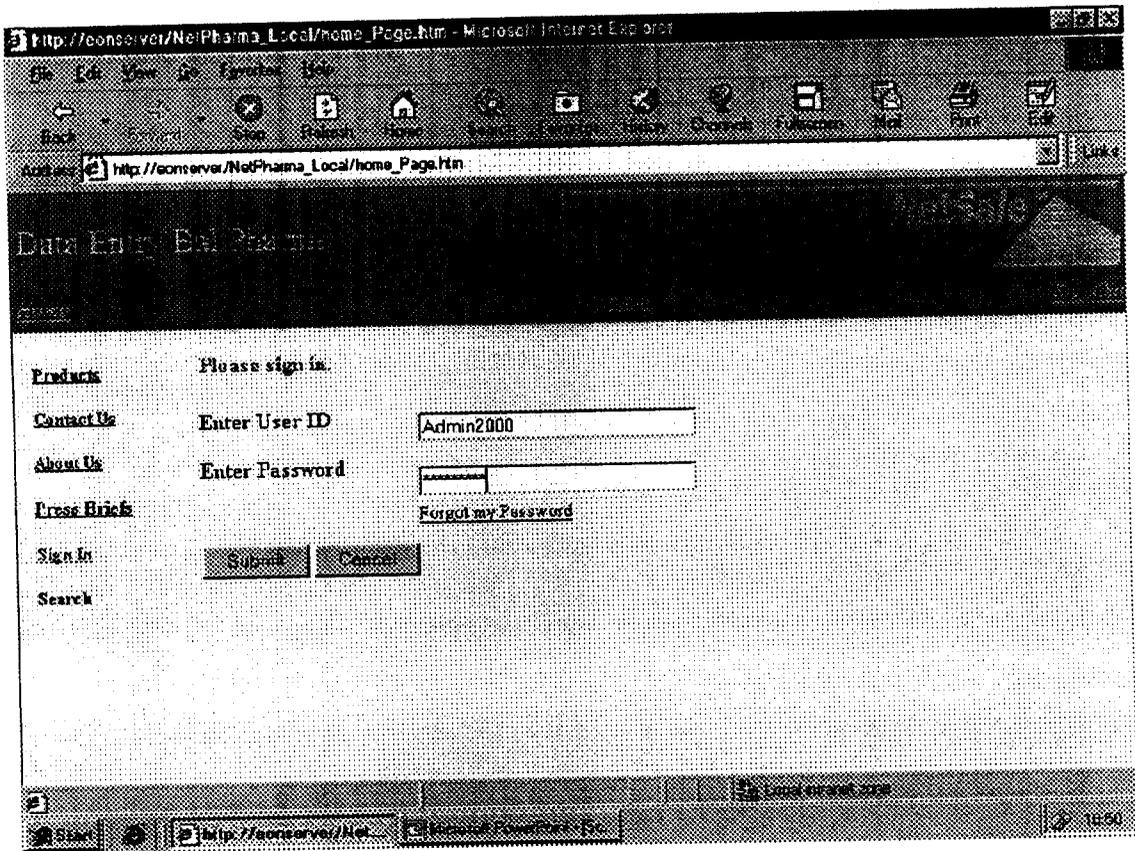
5.2. For Web Sites

- a) www.microsoft.com/downloads/asp
 - b) www.microsoft.com/downloads/iis5
-

WELCOME SCREEN FOR A COMPANY:



STAFF AUTHENTICATION SCREEN:



WELCOME SCREEN FOR AN INDIVIDUAL STAFF:

http://eonserver/NetPharma_Local/home_Page.htm - Microsoft Internet Explorer

Back Forward Stop Home Refresh Print View Source View Images View All Links

Address http://eonserver/NetPharma_Local/home_Page.htm

Data Entry Bal Phs rna NetSale

Welcome Venkat

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[Doctors](#)
[Chemists](#)
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