

K-3257



# DOCTOR CENTER HEALTHCARE SYSTEM

## PROJECT REPORT

*Submitted By*

**V. SATHIYA MOORTHY**

**Register No.: 0720300040**

*in partial fulfillment for the award of the degree*

*of*

**MASTER OF COMPUTER APPLICATIONS**

*in*

**COMPUTER APPLICATIONS**

**KUMARAGURU COLLEGE OF TECHNOLOGY**

**(An Autonomous Institution Affiliated to Anna University, Coimbatore)**

**May, 2010**

# KUMARAGURU COLLEGE OF TECHNOLOGY

(An Autonomous Institution Affiliated to Anna University, Coimbatore)

**COIMBATORE – 641 006.**

Department of Computer Applications

**PROJECT WORK**

**MAY 2010**

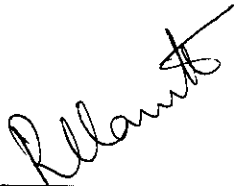
This is to certify that the project entitled  
**DOCTOR CENTER HEALTHCARE SYSTEM**

is the bonafide record of project work done by

**V. SATHIYA MOORTHY**

**Register No: 0720300040**

of MCA (Computer Applications) during the year 2009-2010.




Project Guide




Head of the Department

Submitted for the Project Viva-Voce examination held on 17-05-10




Internal Examiner



External Examiner

## DECLARATION

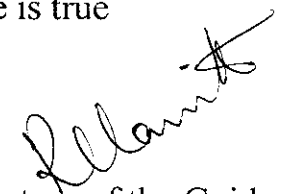
I affirm that the project work titled **DOCTOR CENTER HEALTHCARE SYSTEM** being submitted in partial fulfilment for the award of **MASTER OF COMPUTER APPLICATIONS** is the original work carried out by me. It has not formed the part of any other project work submitted for award of any degree or diploma, either in this or any other University.

  
(Signature of the Candidate)

SATHIYA MOORTHY. V

Register No: 0720300040

I certify that the declaration made above by the candidate is true

  
Signature of the Guide,  
Mrs. R. VANITHA.,  
Lecturer/MCA

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10 .05.2010

## TO WHOMSOEVER IT MAY CONCERN

This is to inform that **Mr.Sathiyamoorthy.V (Reg No:0720300040)** of **Kumaraguru College of Technology**, studying **Final year MCA** has successfully completed the assigned tasks in the project **“Doctor Center Healthcare System”** in **JAVA** as **Front End** and **Oracle 9i** as **Back End** for our **Majestic People InfoTech Pvt Ltd** from **December 2009 to May 2010**

During this tenure, he adhered to the professional code of conduct/ethics of **MAJESTIC PEOPLE**.

For Majestic People Infotech Pvt Ltd

  
VijayaKrishnan.S

HR Manager



## **ABSTRACT**

The purpose of this application is to have an online health care system to maintain complete record of patient details, which reduces the paper work and their offices in various locations can have accessibility to the records of patients.

## **PROJECT DESCRIPTION:**

The application Doctor Center Healthcare System has been developed with frontend as Java and backend Oracle 9i. Doctor Center Healthcare System is designed to process and maintain all the medical test details (taken in internal and in External labs like Lab one and LabCorp) of the patients (E-webdr clients employees). This application maintains the data of the patients who are client's employees not for the private patients. The modules included in Doctor Center Healthcare System are

- Admin module
- User module

## **ADMIN MODULE FUNCTIONALITIES:**

The administrator controls the entire application. When logged in as administrator, all the details of the patients can be viewed, edited, and deleted. The administrator can set permission for the level of access to the application depending on the user types created.

## **USER MODULE FUNCTIONALITIES:**

There are four user types in this application and the level of access to the application depends on the permissions given to them. The user logs into the application they can view and edit the patient's personal details depending on the permissions given to them. The users can view and edit Medical network provider details and also edit their details such as name, email and also can change the password for security reasons.

## ACKNOWLEDGEMENT

The Satisfaction that accompanies the successful completion of any task would be incomplete without mentioning the names of people who made it possible, whose constant guidance and encouragement crowns all efforts with success.

I wish to express my deep unfathomable feeling of gratitude and indebtedness to **Dr.S.Ramachandran**, Principal and **Dr.J.Shanmugam**, Director Kumaraguru College of Technology, Coimbatore for the successful completion of the project work.

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Finally, I owe a lot to my beloved parents and family members and to my friends and to my department staffs for their help and co-operation to complete this project successfully.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 ORGANIZATION PROFILE:

##### **Majestic People Infotech (P) Ltd.**

The Majestic people is one of the leading Information Technology consulting, services, and business process outsourcing organization that envisioned and pioneered the adoption of the flexible global business practices that today enable companies to operate more efficiently and produce more value.

MPI has a wide range of website design, development and programming services ranging from simple HTML based website design to complex AJAX based web development and programming, multimedia and secure e-commerce web applications.

The benefits with MPI are Access to new technology, Accelerate cost savings, Improved focus on core responsibilities, Flexibility, Rapid implementation , Reduced risk , Achieving the highest quality standards, Reduce operational expenses , Maximize return on existing e-procurement assets, Provide total spend visibility.

Corporations worldwide are looking towards high quality and reduced cost of IT services. Clients are,

Jacksonville aviation authority

Jaxport port authority

Inspection depot

Company services are,

Application outsourcing

Web application development

Share point solution

Web design services

## **1.2 PROJECT OBJECTIVES:**

The main objective of the application is to maintain the records of the patients and send recent reports to clients frequently.

The system will maintain the reports for the patients. The reports include medical, drug, physical, healthcare, scan report.

The admin will send notifications as email to the patients about the due to contact doctor.

All reports include bill sent to the patients or client through email to avoid them waiting for reports to get from the lab manually.

## CHAPTER 2

### SYSTEM ANALYSIS

#### 2.1 EXISTING SYSTEM

In existing system, the Patient details are maintained in paper documents. The data maintained as papers took more time to store the data after taken the test for patients. And they should come directly to the hospital to collect the reports and to get their test results. So, the reduction of paper work way faster the work process and data stored in a very efficient and safer way.

##### 2.1.1 Drawbacks of the existing system

- Unreliable and unsecured because organization's data and conversations can easily accessed by irrelevant persons.
- It is hard to find status of each patient in the existing system.
- Tedious job to maintain the records for the entire patients details.
- It needs system to maintain all the details manually, so it does not provide user friendliness.
- Patients should come to lab and take their reports manually.
- Reports are maintained in paper format.

#### 2.2 PROPOSED SYSTEM

The Health Care System is useful to maintain all patients' details and it's also helps to take backup of frequently used details.

##### 2.2.1 Benefits of Proposed System

- SSL is implemented and the database is fully encrypted so others will not access the data.
- Administrator can configure to send automatic emails at a particular time to particular clients. System is developed to send an automatic email to the clients when a record is added in their database.
- Data from "LabCorp" and "Lab one" are pulled from their database and integrated with e-webdr, at specific interval of time. It includes both the

current and the history modules which shows the current records downloaded from the labs and the searched the previously saved records of particular patient based on the search criteria such as patent name, client name etc.

- Users can be created with access limitations, and every function can be controlled with the user level.
- Bill reports are generated automatically for all the clients at the end of every month.

## CHAPTER 3

### 3. SYSTEM SPECIFICATION

#### 3.1 HARDWARE ENVIRONMENT

Processor	:	Intel Pentium IV
Speed	:	3.1 GHZ
Memory	:	1 GB RAM
Hard Disk Capacity	:	80 GB
Monitor	:	15" inch SVGA
Mouse	:	Logitech Mouse (Scroll)
Keyboard	:	108 Keys

#### 3.2 SOFTWARE ENVIRONMENT

Operating System	:	Windows XP
Designing Tool	:	HTML, CSS, JAVA SCRIPT, JAVA
Scripting Language	:	J2EE components
Web Server	:	Apache Tomcat Server
Back-end	:	Oracle 9i



## CHAPTER 4

### SOFTWARE DESCRIPTION

#### 4.1 FRONT END

##### Java

##### Movement to Server Side Java

Servlets are Sun Micro System's answer to CGI Scripts and Active Server Pages. Servlets are generic extensions to Java-enabled servers. It runs entirely inside the Java Virtual Machine and does not depend on browser compatibility. Servlets are Java classes that are dynamically loaded by a web server to handle requests and run on the server side. Just like any other Java class, servlets follow WORA (Write Once Run Anywhere).

The Servlet interface is at the head of the Servlet package. All servlets implement this interface, either directly or indirectly by extending from another class that implements this interface.

##### HTML

HTML is the abbreviation of Hyper Text Markup Language. Hyper is the opposite of linear. It is used to be means that computer programs had to move in a linear fashion. HTML does not hold to that pattern and allows the person viewing the World Wide Web page to go anywhere, any time they want. Text is what we use. Markup is what you will do you will writer in plain English and then made up what you wrote.

##### JSP

JavaServer<sup>(TM)</sup> Pages is a simple, yet powerful technology for creating and maintaining dynamic-content web pages. Based on the Java programming language, JavaServer Pages offers proven portability, open standards, and a mature re-usable component

The JavaServer Pages architecture enables the separation of content generation from content presentation. This separation not only eases maintenance headaches, it also allows webteam members to focus on their areas of expertise. Now, webpage designers can

concentrate on layout, and web application designers on programming, with minimal concern about impacting each other's work.

## **Java Script**

In the initial stages, the arrangement of information collection, storing in HTML format and its dissemination through Internet Browser worked fine. However it was found lacking in so many aspects. The web pages carried the static information and it did not update itself on the fly. HTML was restricted to create static Web pages with no element of interaction. An acute need for the interactive Web pages was felt, as it served a great purpose in information collection and on-line validation through Web pages. So a tool was required to make the Web pages interactive, which can update the information dynamically on the fly.

## **Tomcat**

Tomcat server: it is a web server. The IIS server is not a servlet container. It only serve static pages .so we need to integrate the tomcat and IIS server for access the main functionality of this web application. Tomcat is the servlet container is able to process the JSP request.

## **Oracle 9i**

Oracle9i Database provides efficient, reliable, secure data management for high-end applications such as high-volume on-line transaction processing (OLTP) environments, query-intensive data warehouses, and demanding Internet applications. Oracle also offers several additional optional database products that enhance the capabilities of Oracle9i Database for specific application requirements.

## CHAPTER 5

### PROJECT DESCRIPTION

#### 5.1 PROBLEM DEFINITION

The purpose of this application is to have an online health care system to maintain complete record of patient details, which reduces the paper work and their offices in various locations can have accessibility to records of patients.

#### 5.2 OVERVIEW OF THE PROJECT

The application Doctor Center Healthcare System, which has been developed in Java. The main functionality of the system is to takes to the log in page of the application and add the patients records according to result. The system is designed to process and maintain all the medical test details (taken in DCHS and in External labs like Lab one and LabCorp) of the patients (E-webdr clients employees). This application maintains the data of the patients who are client's employees not for the private patients.

#### 5.3 MODULE DESCRIPTION

The System has two main modules such as,

- ✓ Admin module
- ✓ Client module

##### **Admin module:**

Admin Login form: It allows the various admin, users, to log on the application and perform some action.

##### **Patient details**

Admin add new patient's records or edit existing patient details. In drug screen page, it shows the previous drug screen result of selected patient and also provides option to add new reports of patient. In physical page, it shows all the previous physical reports of selected patient and also used to add new physical reports. In medical page, it shows existing medical

reports of patient and used to add new reports. By using audio, image page admin add new records.

### **Nurse list**

It takes to the page for nurse's entry of patient's records. Records of Medical and physical exam, DOT Physical exam of patients gets listed here for nurse's entry and verification. Whenever the records of physical, medical, DOT Physical in the Patient's View Details page gets saved to nurse list.

### **Medical network provider**

Medical network Providers are available for certain clients. It shows all the medical provider list which is given when the new client are added. To add a provider, particular client is chosen and then add medical network provider.

### **My profile**

It shows the profile of the user logged in the system. The page displays, logged in user's first name, last name, username, email etc. The logged in user can change his password by clicking on the tab Change Password and giving the current, new and confirm new passwords. The password will be changed successfully only if the correct current password is given.

### **Reports**

It takes to the clients and users Reports like Billing, Billing sum, Injury trend and Drugscreenstatistics. In billing, the client's name is chosen and then the needed fields (from date, to date, reason, services) are filled and the results can be generated in the order of Date, location, patient name, Result, SSN and service type. To view the injury trend report, the needed client name is chosen and From Date and To Date field are filled. If the results are available it will get displayed showing Diagnosis and time.

### **Maintenance**

The maintenance has four sub links-Clients Admin, User Admin, Site Admin and Message Admin. By using client admin, admin add new client details and also edit previously added client details. By using user admin, admin add new users of the application and also edit previously added user details. By using site admin page, admin add new lab, doctor,

services, tests and doctor status details. By using message admin page, admin send email to their clients and users and also see the email from users.

### Authorizations

It will shows the current authorizations of the selected client. Admin can modify or delete the authorizations of the clients.

### Client module:

Client module designed for to see the reports, medical bill summary, test reports, messages.

By using myprofile page clients edit their details.

In authorization page, clients see their authorization level.

## 5.4 DATAFLOW DIAGRAM

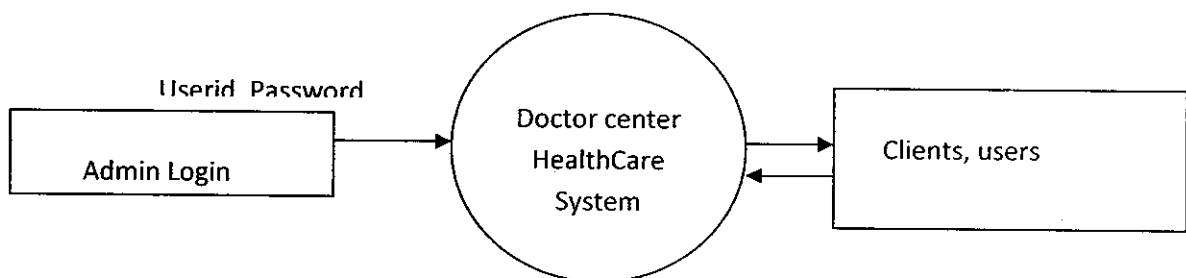
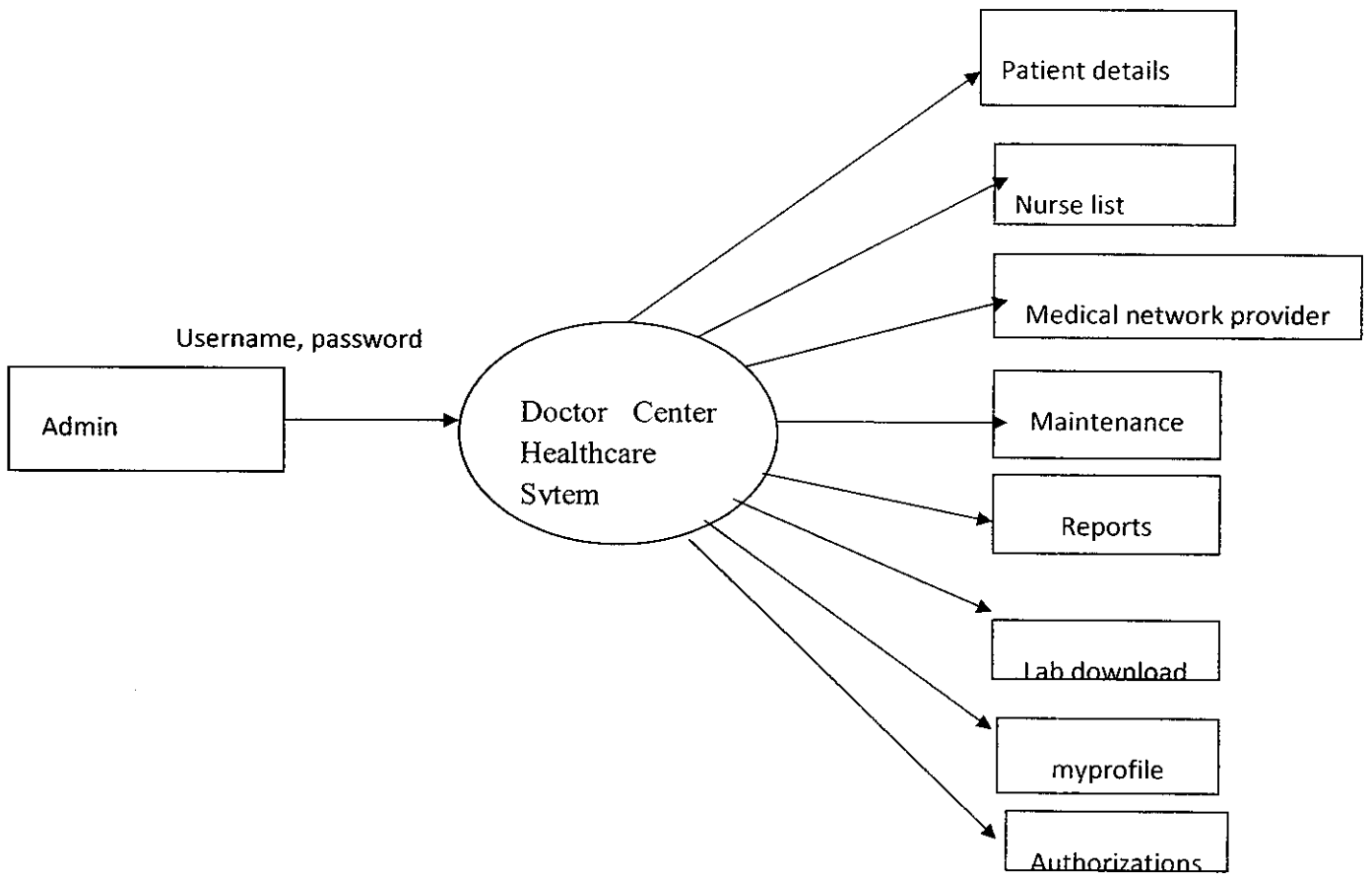


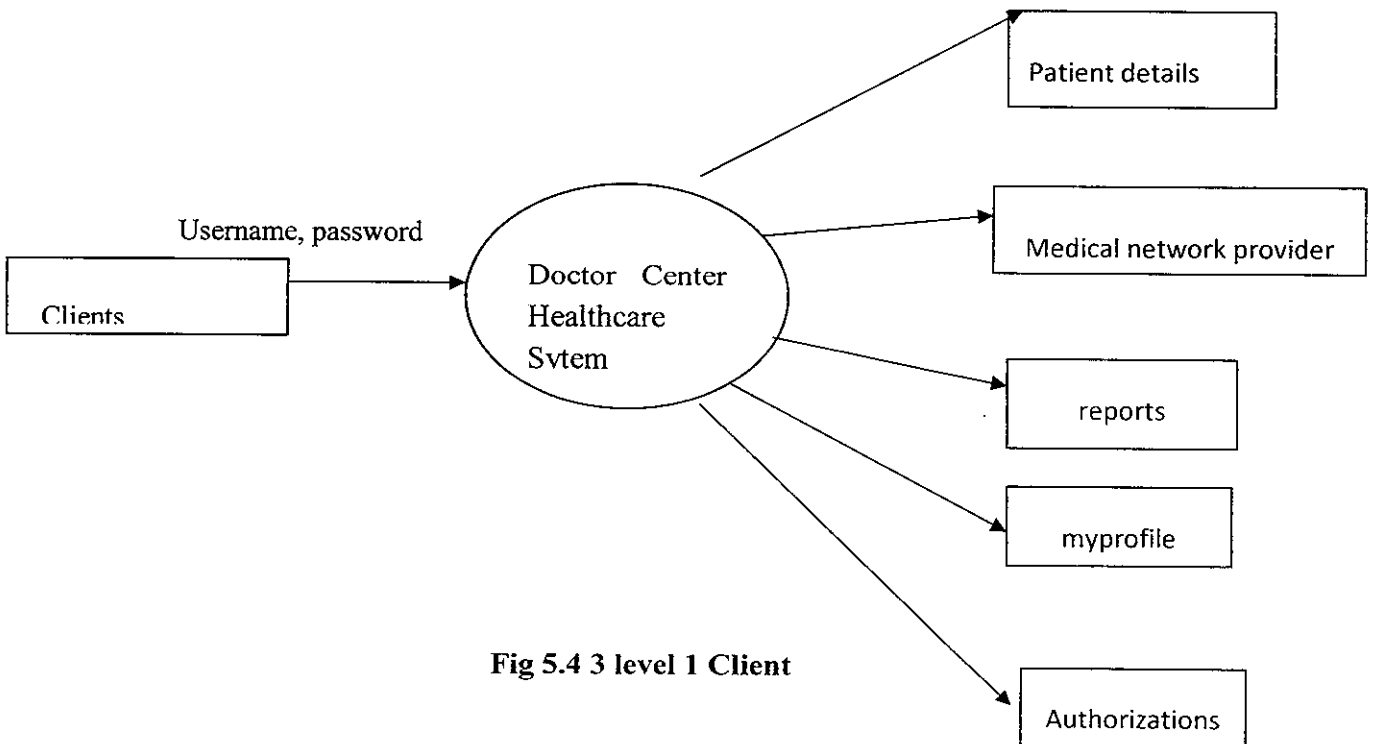
Fig. 5.4.1 Level 0



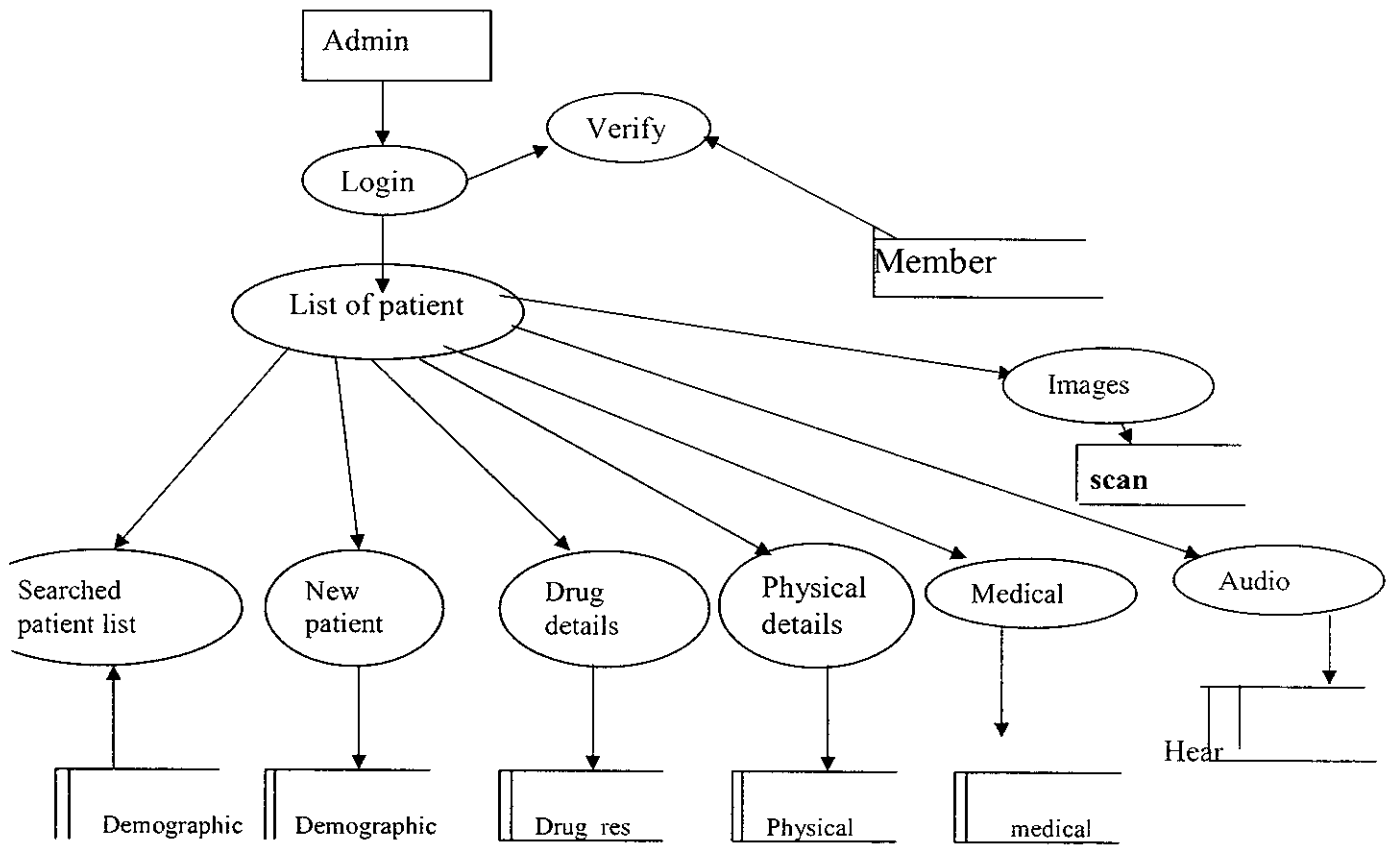
P- 3257



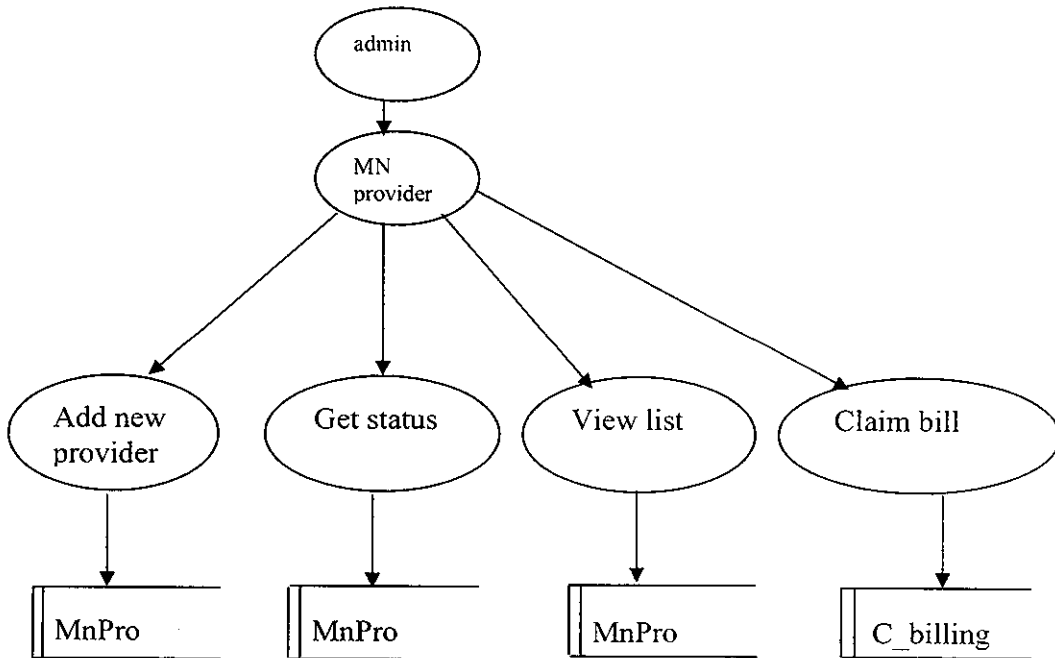
**Fig. 5.4.2 level 1:Admin process**



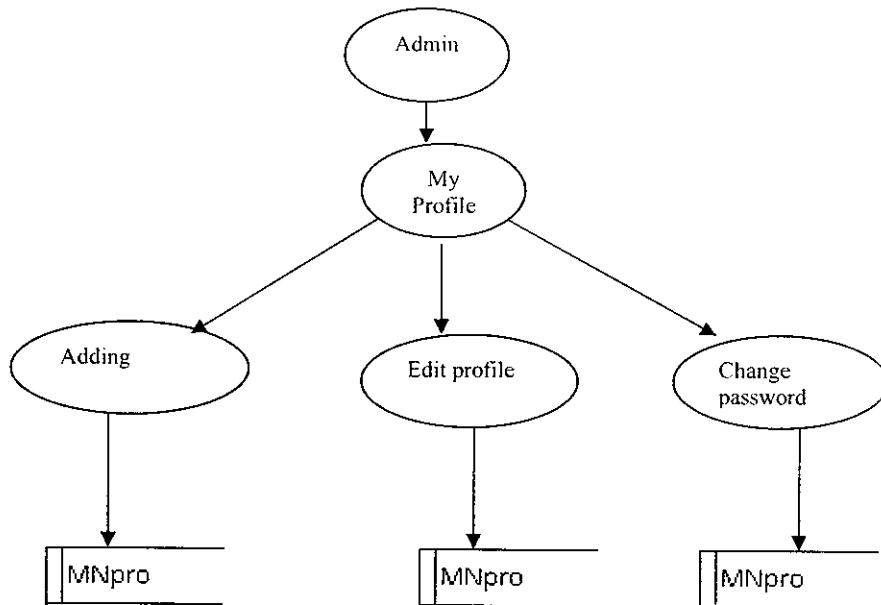
**Fig 5.4 3 level 1 Client**



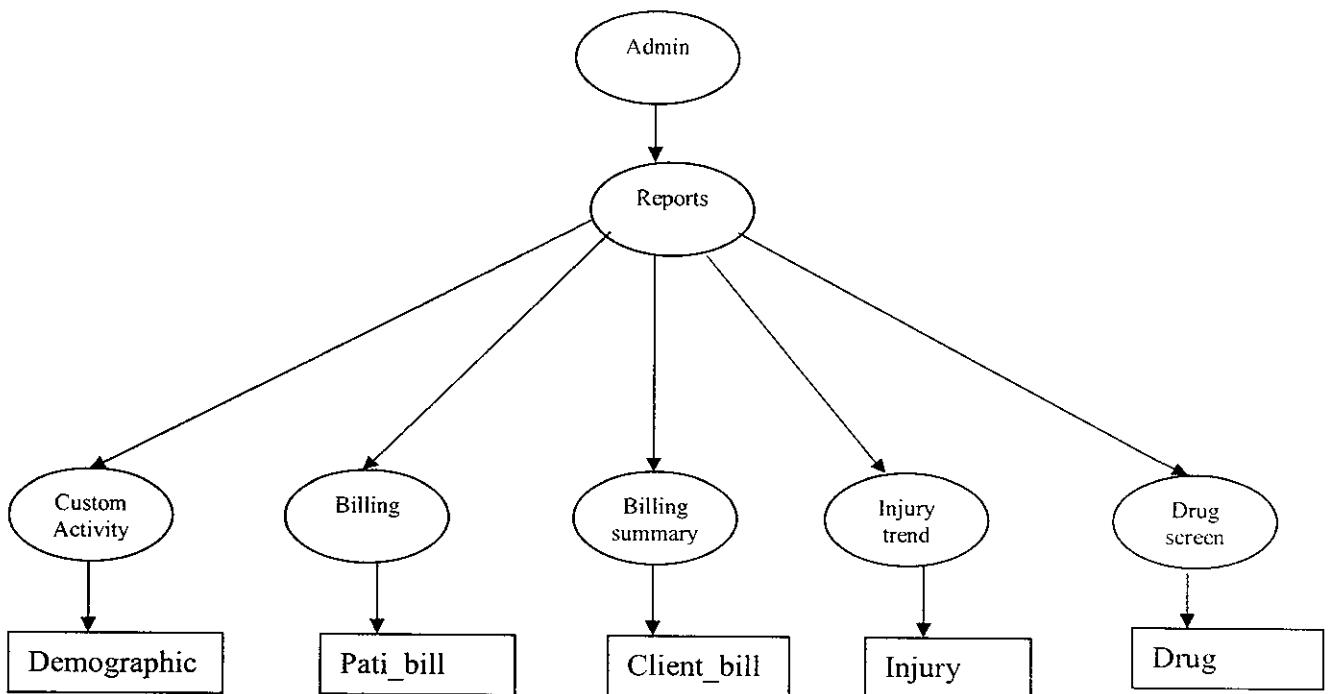
#### 5.4.4 Patients details



#### 5.4.5 Medical network provider



**5.4.6 Profile diagram**



**5.4.7 report diagram**



## 5.5 DATABASE DESIGN

A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. During database design analyst studies the data to determine which data will require store on external storage device. Here, the analyst is responsible for designing a control system to prevent tampering with the data stored by the computer.

The details about the relevant data for the system are first identified. According to their relationship, tables are designed through following method.

- The data type for each data item is decided.
- The tables are then normalized by third normalized method.
- Some duplicate data are added so that use third normalized form.

### Table structure

SSN	Varchar2(15)	Primary Key	Social security number
Name	Varchar2(30)	Not Null	Patient name
Dob	Date	Not Null	Date of birth
Age	Varchar2(10)	Not Null	Patient age
Gender	Varchar2(7)	Not Null	Gender of patient
noDep	Varchar2(20)	Not Null	Number of Dependencies
Phone	Number	Not Null	Phone number

Address	Varchar2(40)	Not Null	Patient address
Dri_lic	Varchar2(20)	Not Null	Driver license number
C_name	Varchar2(25)	Not Null	Company name

### 5.5.1 Table name: member

Per_name	Varchar2(15)	Primary Key	Person name
P_no	Number	Not Null	Phone numbere
Relation	Varchar2(35)	Not Null	Relationship
P_ins	Varchar2(10)	Not Null	Primary insurance name
Ins_no	Number	Not Null	Insurance company number
Ins_id	Varchar2(20)	Not Null	Insurance ID
Sec_Com	Varchar2(40)	Not Null	Secondary Insurance number
Sec_pnp	Number	Not null	Secondary phone number

Name	Varchar2(20)	Not Null	Name of the person
ID	Varchar2(20)	Not Null	Patient id

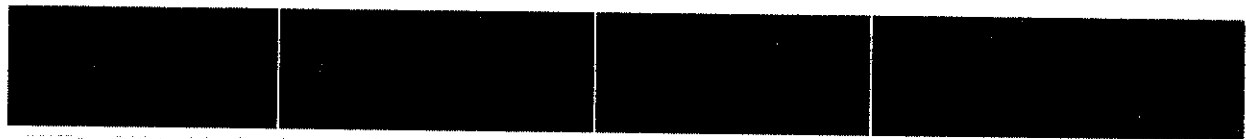
### 5.5.2 Table name:Emergency

D_exam	Date	Not null	Date of exam
SSN	Varchar2(30)	Foreign key	Social security number
S_type	Varchar2(35)	Not Null	Service type
Name	Varchar2(20)	Not null	Name of the patient
Dob	Date	Not Null	Date of birth
P_me_re	Varchar2(30)	Not Null	Previous medical report
F_me_re	Varchar2(30)	Not Null	Family medical report
S_me_re	Varchar2(30)	Not null	Social medical report
Vision	Varchar2(20)	Not Null	Visualations

### 5.5.3 Table name: Physical

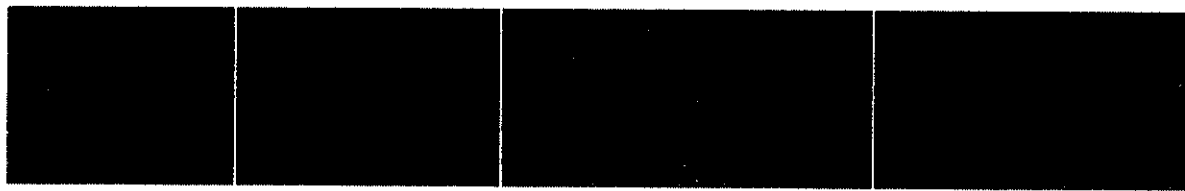
Client_id	Varchar2(15)	Primary Key	Client Identification
Ser_type	Varchar2(30)	Not Null	Service Type
Name	Varchar2(35)	Not Null	Name
SSN	Varchar2(20)	Foreign key	Social security number
Donar_pno	Number	Not Null	Donor phone number
S_date	Date	Not Null	Sample date
E_date	Date	Not Null	Entry date
C_loc	Varchar2(30)	Not null	Company location
Lab_cause	Varchar2(20)	Not Null	Lab cause
Comments	Varchar2(20)	Not Null	Comments
T_res	Varchar2(30)	Not null	Test results

#### 5.5.4 Table name: Drug



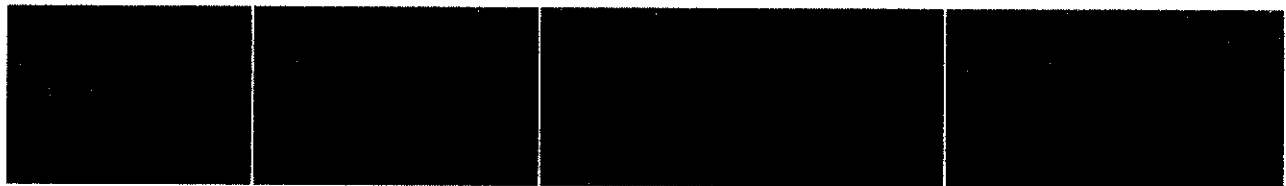
Client_id	Varchar2(15)	Primary Key	Client Identification
C_name	Varchar2(30)	Not Null	Client name
C_com	Varchar2(35)	Not Null	Client comments
MNP	Varchar2(20)	Not null	Medical network provider
Location	Varchar2(20)	Not Null	Location
Address	Varchar2(20)	Not Null	Address
City	Varchar2(20)	Not Null	City
State	Varchar2(30)	Not null	State
Zip	Number	Not Null	Postal code
Phone	Number	Not Null	Phone number

### 5.5.6 Table name: Client



SSN	Varchar2(15)	Primary Key	Social security number
Name	Varchar2(30)	Not Null	User name
Suffix	Varchar2(35)	Not Null	Suffix
Email	Varchar2(20)	Not null	Email
Password	Varchar2(20)	Not Null	Password
C_pass	Varchar2(20)	Not Null	Confirm password
Location	Varchar2(20)	Not Null	Location
State	Varchar2(30)	Not null	State
Zip	Number	Not Null	Postal code
Phone	Number	Not Null	Phone number

**5.5.8 Table name: User**



Client_id	Varchar2(15)	Primary Key	Client Identification
Medi_pro	Varchar2(30)	Not Null	Medical network provider
Location	Varchar2(20)	Not Null	Location
Address	Varchar2(35)	Not null	Address
City	Varchar2(20)	Not Null	Ciy
State	Varchar2(20)	Not Null	Medical provider state
Zip	Number	Not Null	Postal code
Contact	Varchar2(30)	Not null	Contact address
Comments	Varchar2(20)	Not Null	Comments

**5.5.9 Table name: Medi\_net\_pro**

SSN	Varchar2(15)	Primary Key	Social security number
Name	Varchar2(30)	Not Null	Patient name
Location	Varchar2(20)	Not Null	Location
C_name	Varchar2(35)	Not null	Company name
Categ	Varchar2(20)	Not Null	Category
Type	Varchar2(20)	Not Null	Type of documents
Tumb	Varchar2(20)	Not Null	Tumb nail
S_date	Varchar2(30)	Not null	Test date
Comments	Varchar2(20)	Not Null	Comments

### 5.5.10 Table name:Scan



--	--	--	--

Type	Varchar2(15)	Not null	Service type
Name	Varchar2(30)	Not Null	Service name
Amount	number	Not Null	Fee amount
Desc	Varchar2(35)	Not null	Description

**5.5.11 Table name: services**

--	--	--	--

Name	Varchar2(15)	Not null	Test name
Screen	Varchar2(30)	Not Null	Type of test
Confirm	Number	Not Null	Minimum value
Unit	Number	Not null	No of unit

**5.5.12 Table name: Test**

--	--	--	--

Doc_id	Varchar2(15)	Primary Key	Doctor identification number
Name	Varchar2(30)	Not Null	Doctor name
Date	date	Not Null	Current date
Intime	Varchar2(10)	Not null	Doctor intime
Outtime	Varchar2(20)	Not Null	Doctor out time
State	Varchar2(20)	Not Null	Current status
Phone	Number	Not Null	Contact no

**5.5.13 Table name: doctor**

--	--	--	--

Labname	Varchar2(15)	Primary Key	Testing lab name
Address	Varchar2(30)	Not Null	Lab address
Location	Varchar2(20)	Not Null	Location

City	Varchar2(35)	Not null	lab city
Phone	Number	Not Null	Contact no
Email	Varchar2(20)	Not Null	Email id

#### 5.5.14 Table name: lab

Date	Date	not null	Date of the message
Message to	Varchar2(30)	Not Null	Receiver name
Message from	Varchar2(20)	Not Null	Sender name
Message	Varchar2(35)	Not null	Message content

#### 5.5.15 Table name: message

Date	Date	Not null	Current date
Clientid	Varchar2(30)	Foreign key	Client name
Physical	Varchar2(10)	Not Null	Allow physical test

Nonphysical	Varchar2(10)	Not null	Status of nonphysical
Scan	Varchar2(10)	Not Null	Scan report
Medical	Varchar2(10)	Not Null	Medical test

#### 5.5.16 Table name: authorization

### 5.6 INPUT DESIGN

Input design is a process of converting the user-originated inputs into the computer-based format. The goal of designing input data is to make the automation as easy and free from errors as possible. The requirements of input design such as user friendliness, consistent format and interactive dialogues for giving the right message and help for the user at right time are also considered for the development of the project.

The inputs forms used in this system are:

**a. User login page:**

It allows the existing users to log on the application and also provide option to get password by forget password.

**b. Medical network provider page:**

This will show the current user medical provider list and option for editing details about providers.

**c. My profile Page:**

It will display the current user details and provide option for editing.

**d. Report page:**

It contains four tabs that's custom activity that shows reports of particular clients of all reports or selected reports and billing that shows billing reports of selected client and injury trend that shows reports about injury details and finally drug screen statistics that shows drug reports.

**e. Maintenance page:**

It allows the admin to create new clients and users. There are four type of users here that client admin used to create client administrator login and user admin used to create new users of the application and message admin that used to create message administrator who control all the message send and receive from client and users and finally site admin who control of the site which provide option to add new doctors, lab details, drug details.

**f. Authorization page:**

This page used to authorize services to the client and users.

## **5.7 OUTPUT DESIGN**

The Output is mainly used to communicate with the user, processing the input data given by the user. It is documented in each stage of the project to ensure error free output. The output screens are designed in a very simple and easy to understand format. All user options are presented in well-formatted forms. The user friendliness of the output screen makes it very easy to use. The quality refers to the way by which the output is presented to the user.

The output design of the reports is the screens that display the skill gap based on the user chat details and mails between all users.

## **CHAPTER 6**

### **SYSTEM TESTING**

#### **6.1 UNIT TESTING**

In unit testing, we have to test the program making up the system. Unit testing focuses first on the modules independently of one another, to locate errors. This enables within that module alone.

In this project, each page was tested separately as a unit. The flow of control and data through that page was tested. Each page is tested with the previously prepared test cases to find cases to find errors in the page. After rectifying the errors, once again it was tested to ensure whether there was no error.

#### **6.2 INTEGRATION TESTING**

Data can be lost across any interfaces. Once module can have an adverse effect on another, sub functions when combined, may not produce the desired major functions. Integrations testing for conducting tests to uncover errors associated within the interface. The objective is to take unit-tested module and build a program structure. The entire module are combined and tested as whole.

In Doctor Center Healthcare System, top down integration testing was followed. In this system, for example, first the user should give the name of valid username. If the user name is not valid this will show the label as “This username not available”. This process is continued from the page level to module level and finally the whole system is tested.

#### **6.3 SECURITY TESTING**

For security purpose SSL is implemented and the database is fully encrypted. Java Authorization and Authentication Service are implemented. By using MD5 algorithm username and password are encrypted before saving to database.

Once the users are created by admin the username and password are sent to users and provide option to change password option which is used for security purpose.

## 6.4 TEST CASES

Test Case ID	Test Case Name	Description	Expected Result	Actual Result	Test Script status
T01	password	String length is less than 5 char in "password" text box	"Password can not to be less than 5 char. Should display message to user.	Error Message "please Enter password."	Pass
T02	SSN	String length is zero in "SSN" text box	SSN can not to be empty. Should display message to user.	Error Message "please enter SSN"	Pass
T03	Client name	String length is zero in "client name" text box	client name can not to be empty. Should display message to user	Error Message "please Enter clientName".	Pass
T04	Phone no	Check Maximum number of digits allowed in "phone no" Text Box.	Should allow 10 characters in "phone no".	Should allow 10 characters in "phone no".	Pass
T05	MN name	String length is zero in MN name textbox.	"MN name" can not to be empty. should display a message	Error Message "please enter MN name".	Pass

## CHAPTER 7

### SYSTEM IMPLEMENTATION

#### 5.1 VERIFICATION

Verification testing checks whether the product development is moving towards the actual product needed by the customer requirements and specification.

Verification is done in a step by step process.

In the Doctor Centre Health Care System, verification was done during the development itself. Each database bindings are verified after binding to test whether the control is bound to the right data field.

In Doctor Centre Healthcare System, after adding new clients that shows in choosing clients from adding new patients.

After adding new doctor in the site admin page that shows in the selection doctor list box. If any new test is added that test will be visible to the patient test list.

#### 5.2 VALIDATION

Validation testing is done to ensure whether the work steps and deliverables during the project are acceptable. It verifies whether right data is being accessed and performs the functions properly.

In the Doctor Centre Healthcare System, if the user click the login button without enters username and password error message should be displayed.

Email id is checked whether it's correct format or not when the users enter their email id in patient details page.

In patient search page, the system check all the field if any one field have value it continue the further process otherwise error message are displayed.

It determines the correctness of the final software product by a development project with respect to the user needs requirements.



## **CHAPTER 8**

### **CONCLUSION AND FUTURE ENHANCEMENT**

#### **8.1 CONCLUSION**

The application designed and developed in such a way that any further enhancements can be done with ease. The system has the capability for easy integration with other systems. New modules can be added to this system with less effort.

The system has been found to work effectively and will be implemented in short period of time. Proper documentation is provided. The end user can easily understand how the whole system is implemented by going through the documentation. The module developed would be friendly and does demand a little computer knowledge to work.

The system has been keeping in mind all the given possible conditions and found to work efficiently and effectively.

#### **8.2 FUTURE ENHANCEMENT**

“Doctor Centre Health Care System” will be enhanced further with the following features:

- By developing chatting users can communicate with doctor through this system.
- By developing video conference, users and clients can get idea about their problem and solution.

## CHAPTER 9

### APPENDICES

#### 9.1 SOURCE CODE

##### 9.1.1 Index page

```
<%@page contentType="text/html"%>
<jsp:useBean      id="webRoot"      class="com.tpi.util.HTMLUtilBean"
scope="application" />
<jsp:setProperty  name="webRoot"    property="propertyFileName"
value="ewebdr" />
<jsp:useBean id="User" class="com.ewebdr.beans.UserBean" scope="session"
/>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>

<head>
  <link rel="stylesheet" href="<jsp:getProperty name="webRoot"
property="webRoot" />/includes/ewebdr.css.jsp">
  <title>e-WebDR.com </title>
  <script language="javascript" src="<jsp:getProperty name="webRoot"
property="webRoot" />/includes/client.js"> </script>
</head>

<body align="center">
<%! String theTitle = "Login"; %>
<%@include file="private/includes/top.inc" %>
<% if (request.getParameter("error") != null) {%>
<table class="formcontent" cellpadding="0" cellspacing="0" border="0"
width="500">
  <tr>
    <td width="24">/images/formtopleftflat.gif"></td>
```

```

        <td width="552" background="<jsp:getProperty name="webRoot"
property="webRoot" />/images/formtop.gif">/images/spacer.gif"></td>
        <td width="24">/images/formtoprightangle.gif"></td>
    </tr>
    <tr>
        <td width="24" background="<jsp:getProperty name="webRoot"
property="webRoot" />/images/formleft.gif">/images/spacer.gif"></td>
        <td width="552" bgcolor="#FFFFFF">
            <font color="red">Unable to log on to e-WebDr.com. Please try
again</font>
        </td>
        <td width="24" background="<jsp:getProperty name="webRoot"
property="webRoot" />/images/formright.gif">/images/spacer.gif"></td>
    </tr>
    <tr>
        <td width="24">/images/formbottomleftangle.gif"></td>
        <td width="552" background="<jsp:getProperty name="webRoot"
property="webRoot" />/images/formbottom.gif">/images/spacer.gif"></td>
        <td width="24">/images/formbottomrightflat.gif"></td>
    </tr>
</table>
<% } %>

```

```

<table class="formcontent" cellpadding="0" cellspacing="0" border="0"
width="500">
    <tr>
        <td width="24">/images/formtopleft.gif"></td>

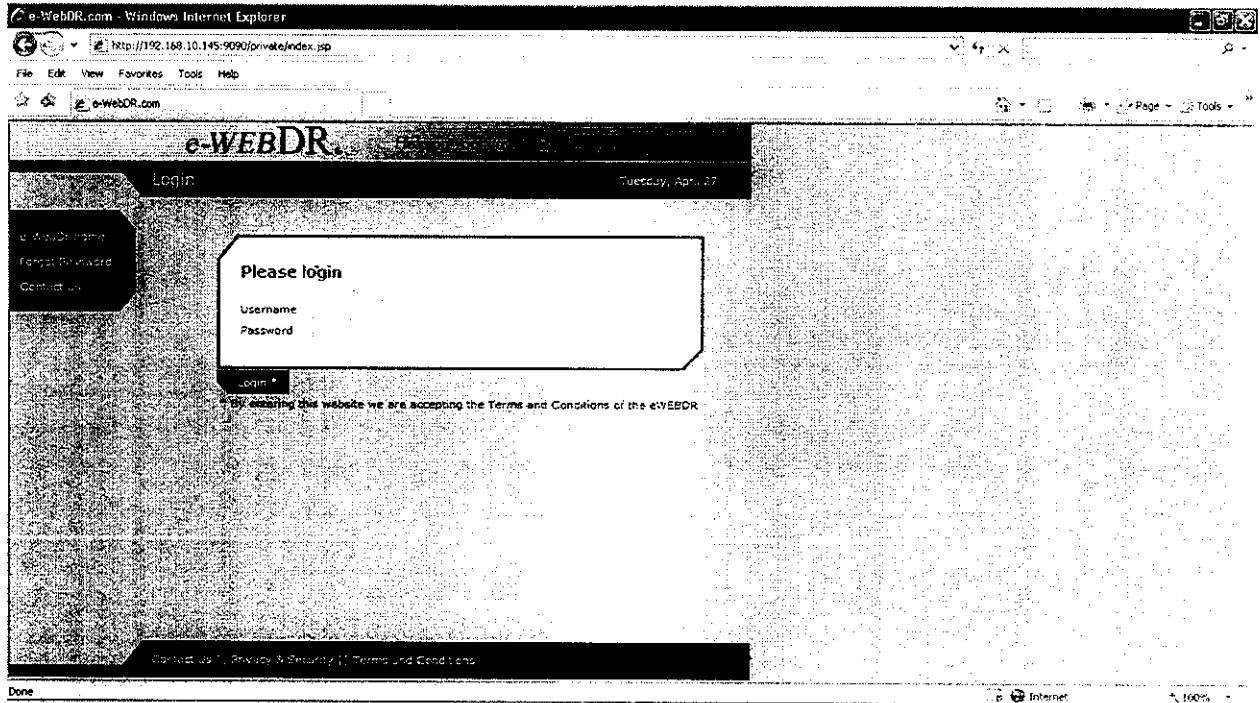
```



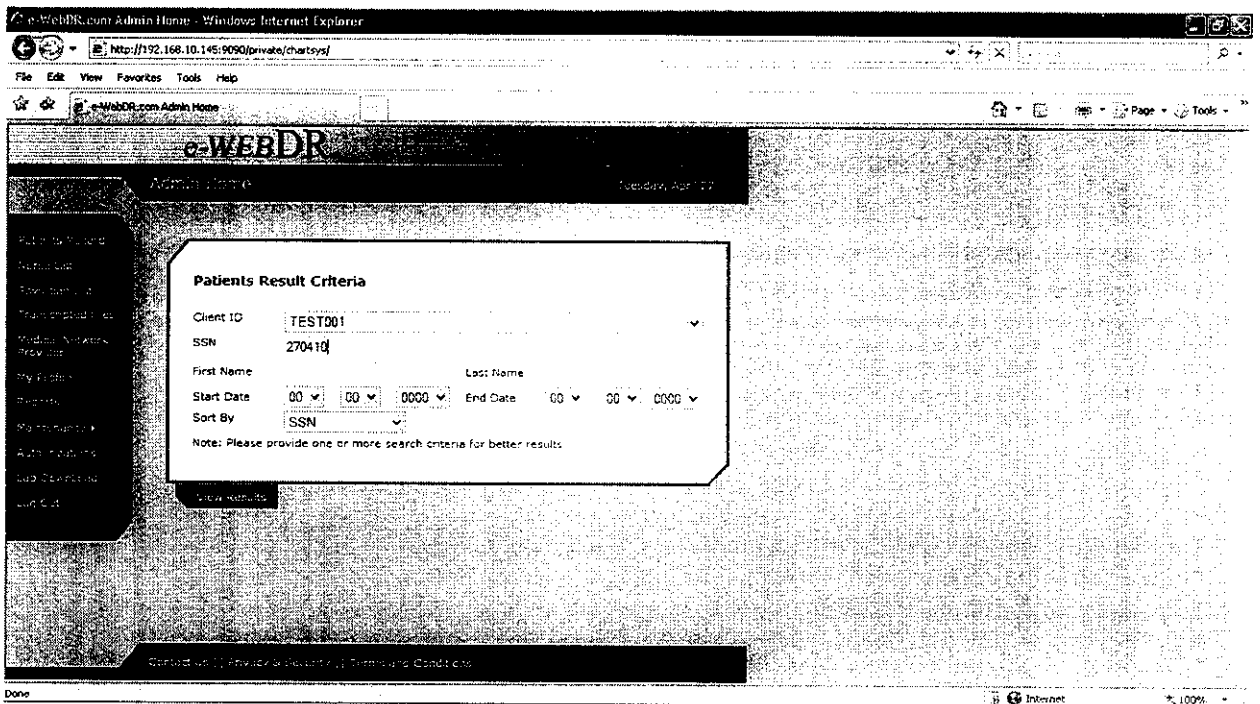


## 9.2 SCREEN SHOT

### 9.2.1 Login page



### 9.2.2 Patients search



## 9.2.3 search results

Search Results

SSN	Patient Name	DOB
270410	test001 test001	12/12/1985

Page: 1 of 1 Refresh

## 9.2.4 patients details

View Details

Demography DrugScreen DOTPhysical Physical Medical Audio Respiratory Images

SSN	2704101	Company Name	TEST001
First Name	test0011		
Middle Name		IN CASE OF EMERGENCY PLEASE NOTIFY	
Last Name	test0011	Person's Name	
Date of Birth	12/12/1985	Phone Number	
Age	24	Relationship	
Gender	M		
No. of Dependency	1	Primary Insurance Company Name	LIC
Home Phone#	578-46	Phone Number	
Work Phone#	258-545-2	Insured's Name	
Patient Address		Insured's Id Number	
Driver License#	243785	Secondary Insurance Company Name	
State		Phone Number	
Referred By		Insured's Name	
Date		Insured's Id Number	

## 9.2.5 Add new patients

e-WebDR.com - Windows Internet Explorer  
 http://192.168.10.145:9090/private/chartsyst/addDemogr.jsp

File Edit View Favorites Tools Help

e-WebDR.com

**e-WEBDR.** Help

Add Details Tuesday, Apr 17

Patients Record  
 Nurse List  
 Physician List  
 Transmitted Files  
 Medical Network  
 Provider  
 My Profile  
 Reports  
 My Insurance  
 Authorizations  
 Lab Download  
 Log Out

**Demography**

SSN*	2704101	Company Name*	TEST001
First Name*	sahiya	IN CASE OF EMERGENCY PLEASE NOTIFY	
Middle Name		Person's Name	
Last Name*	moodhy	Phone Number	
Date of Birth*	12 / 12 / 1985 (mm/dd/yyyy)	Relationship	
Age*	24	Primary Insurance Co. Name*	LIC
Gender	<input checked="" type="radio"/> Male <input type="radio"/> Female	Phone Number	
No. of Dependency	1	Insured's Name	
Home Phone#	57846	Insured's Id Number	
Work Phone#	2585452	Secondary Insurance Co. Name	
Patient Address		Phone Number	
Driver License#	245765		
State	Tamil nadu		

Internet 100%

## 9.2.6 Drug Screen page

e-WebDR.com - Windows Internet Explorer  
 http://192.168.10.145:9090/private/chartsyst/DrugTestDetail.jsp

File Edit View Favorites Tools Help

e-WebDR.com

**e-WEBDR.** Help

View Details Tuesday, Apr 17

Patients Record  
 Nurse List  
 Physician List  
 Transmitted Files  
 Medical Network  
 Provider  
 My Profile  
 Reports  
 My Insurance  
 Authorizations  
 Lab Download  
 Log Out

Demography DrugScreen COTPhysical Physical Medical Audio Respiratory Images

No Previous Records found  
 Refresh

Add

Default view | Privacy & Security | Terms and Conditions

Done Internet 100%



## 9.2.7 Adding Drug screen

e-WebDR.com Patient List - Windows Internet Explorer  
 http://192.168.10.145:9090/private/chartsys/NewAddDrugTestChart.jsp?ssn=2704101&clientid=4167&serviceid=66

Service Type: DOT Drug Screen  
 15 Panel

First Name: test0011      Last Name: test0011  
 SSN: 2704101  
 Donor Phone:  
 Collection Date:      Example: mm/dd/yyyy  
 Specimen ID:  
 Form Number:  
 Company Location: -- Choose --      Lab: -- Choose --      Cause: -- Choose --      Post Accident: -- Choose --

Type	Screen	Confirm	Unit	Result
AMPHETAMINES	1000	500	ng/mL	Negative
MARIJUANA METABOLITES	30	15	ng/mL	Negative
COCAINE METABOLITES	300	150	ng/mL	Negative
OPIATES	2000	2000	ng/mL	Negative
PHENCYCLIDINE	25	25	ng/mL	Negative

Comments:

Save    Reset    Close

Done      Internet      100%

## 9.2.8 DotPhysical page

e-WebDR.com - Windows Internet Explorer  
 http://192.168.10.145:9090/private/chartsys/DOTPhysicalDetails.jsp

File    Edit    View    Favorites    Tools    Help

SR    e-WebDR.com

**e-WEBDR.**    Help

View Details    Loading: 0%

[Patients Record](#)  
[New Patient](#)  
[Physician List](#)  
[Transcribed Plus](#)  
[Medical Network Provider](#)  
[My Profile](#)  
[Registry](#)  
[Main History](#)  
[Administration](#)  
[Lab Download](#)  
[Log Out](#)

Demography    DrugScreen    **DOTPhysical**    Physical    Medical    Audio    Respiratory    Images

No Previous Records found  
 Refresh

ADD

[Contact Us](#)    [Privacy & Security](#)    [Terms and Conditions](#)

Done      Internet      100%

## 9.2.9 Physical screen

e-WebDR.com - Windows Internet Explorer

http://192.168.10.145:9090/private/chartsys/PhysicalDetails.jsp

File Edit View Favorites Tools Help

e-WebDR.com

**e-WebDR**

View Details Tuesday, Nov 17

[Patient's Record](#)  
[Nurse List](#)  
[Physician List](#)  
[Transcribed Find](#)  
[Medical Network Provider](#)  
[My Profile](#)  
[Reports](#)  
[Master Lists](#)  
[Authorizations](#)  
[Lab Download](#)  
[Log Out](#)

Demography DrugScreen DOTPhysical Physical Medical Audio Respiratory Images

Date Tested	SSN	Client	Location
04/27/2010	270410	TEST001	test001

Check All Refresh Page: 1

Add Print Delete

Done Internet 100%

## 9.2.10 adding new physical treatment

ADD PHYSICAL - Windows Internet Explorer

http://192.168.10.145:9090/private/chartsys/newAddPhysicalChart.jsp?ssn=270410&centerid=1167&serviceid=69

The Doctor Center  
PHYSICAL TREATMENT FOR TEST001

**Patient Information**

Date of Exam	Company Location	SSN	Date of Birth	Patient's Name - First	Last	Middle
04 / 27 / 2010	-- Choose --	270410	12/12/1983	test001	test001	

Allergies Last Tetanus Last Physical

**Medical History**

Previous Medical History Family Medical History Social History Diagnosis Code:  Diagnosis

Alcohol  
Nicotine  
Tobacco  
Single  
Married  
Others

Review of System --Select--

**Vision Testing**

Corrected R: [v] [d] [l] [Both] [Horizontal/Vertical/Fields] Color Vision: Red Yellow Green  
Uncorrected R: [v] [d] [l] [Both] [Horizontal/Vertical/Fields] Color Vision: Red Yellow Green

**Vital Signs**

S.P. R.A. Temp Pulse Ht unchgd Wt lbs

**Urinalysis**

CRU Bili Ketone Blood ALB Urob Bilirubin Leuk SG PRC PH

**Physical Findings**

Nutrition	N	Rectal	N
Development	N	Palp	N
Skin	N	Testicles	N
Eyes	N	Spine	N
Head	N	Extremities/Joints	N

Done Internet 100%



## 9.2.13 Audio page

The screenshot shows a web browser window displaying the e-WebDR website. The address bar shows the URL: http://192.168.10.145:9090/private/chartsys/AudiometricDetails.jsp. The page title is "View Details" and the date is "Tuesday, Apr 22". The navigation menu on the left includes: Patients Record, Nurse List, Physician List, Transcribed Files, Medical Network Provider, My Profile, Reports, Master Index, Authentication, Lab Dashboard, and Log Out. The main content area has tabs for Demography, DrugScreen, DOTPhysical, Physical, Medical, Audio, Respiratory, and Images. The central area displays "No Previous Records found" with a "Refresh" button. The footer contains "Contact Us", "Privacy & Security", and "Terms and Conditions".

## 9.2.14 new audio report adding

The screenshot shows a web browser window displaying the "Audiometric Record" form. The address bar shows the URL: http://192.168.10.145:9090/private/chartsys/newAddAudioChart.jsp?srvc=270410&dentid=1678&servicid=72. The form includes the following fields and sections:

- Full Name:** test001 test001
- Birth Date:** 12/12/1985
- Company Location:** Choose -
- Reason:** Post Accident
- Employ. Date:**
- Dept.:**
- Shift:**
- Emp. No.:** 270410

The hearing test results are displayed in a table:

Date	Time	Right					Left						
		S	I	2	3	4	5	S	I	2	3	4	5
		0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0

The **Case History** section includes the following questions:

- Rate Your Hearing: Good  Fair  Poor  Members of Family w/ Hearing Loss? \_\_\_\_\_
- Previous Hearing Test? \_\_\_\_\_
- Ear Infections? Yes  No
- Illnesses? \_\_\_\_\_
- Tinnitus? Yes  No
- Vertigo? Yes  No
- Military Service? \_\_\_\_\_
- Second Jobs? \_\_\_\_\_
- Medications? \_\_\_\_\_
- Former Jobs? \_\_\_\_\_
- Hobbies? \_\_\_\_\_

## 9.2.23 Drug screen statistics report

The screenshot displays a web browser window with the URL `http://122.183.231.106:9090/private/admin/reports/drugscreenstat`. The page title is "Drugscreen Statistics Results Report - Windows Internet Explorer". The browser's address bar shows the URL, and the page content is displayed below.

On the left side, there is a navigation menu with the following items: Patients Record, Name List, Physician List, Transcription Files, Medical History, Provider, My Profile, Reports, Maintenance, Action Item, Lab Download, and Log Out.

The main content area is titled "Drug Screen Statistics for TEST001". It includes a form for selecting the client (TEST001) and the from date (01/01/2010). Below the form, there are sections for "Please select the Reason" and "Please select the Service".

The "Drug Test Statistics" section shows the following data:

Total Results :	1
Total Positive Results :	0
Positive Percentage (Test) :	0%

The "Number of Verified Positive Result Occurrence" section shows the following data:

Drug Name	No. of Time(s)
Pre-Employment	1

The "Number of Reason Occurrence" section shows the following data:

Reason	No. of Time(s)
Pre-Employment	1

The bottom of the page shows the Windows taskbar with the Start button, several open applications (Sent Items - Microsoft..., Dot netrosiv (Task..., Documents - Microsof...), and the browser window. The system tray shows the Internet icon and a 100% zoom level.

## CHAPTER 10

### REFERENCES

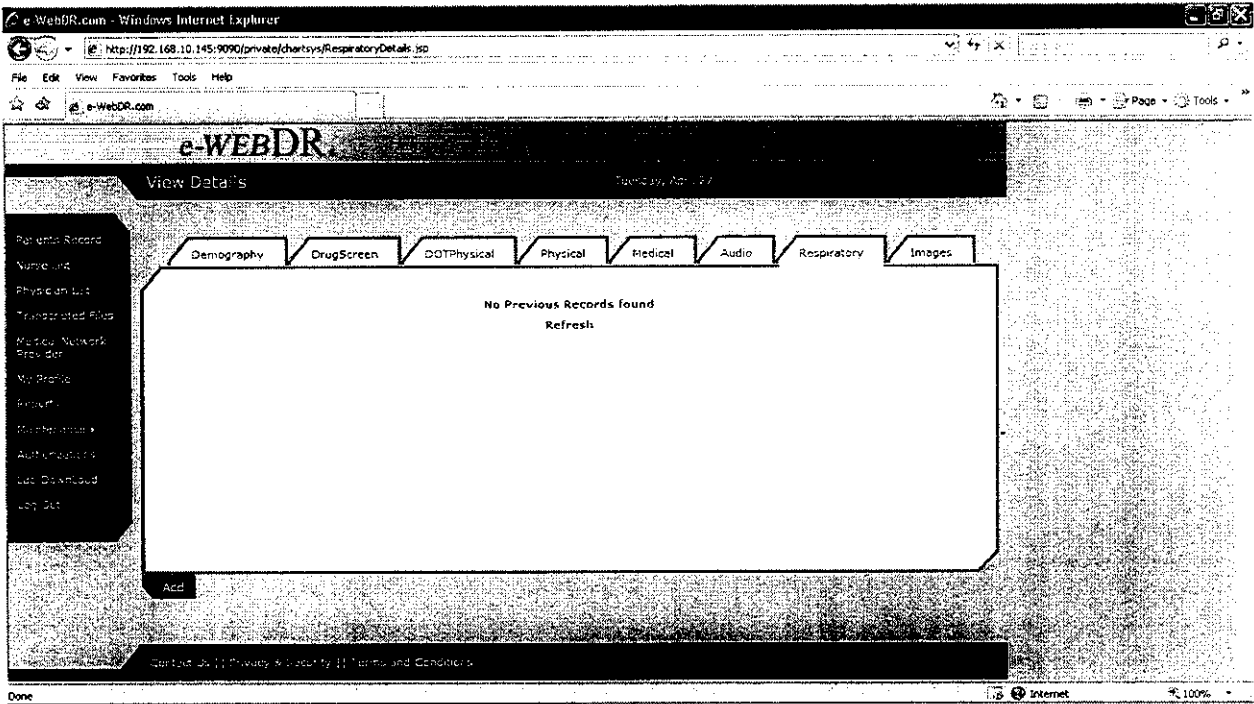
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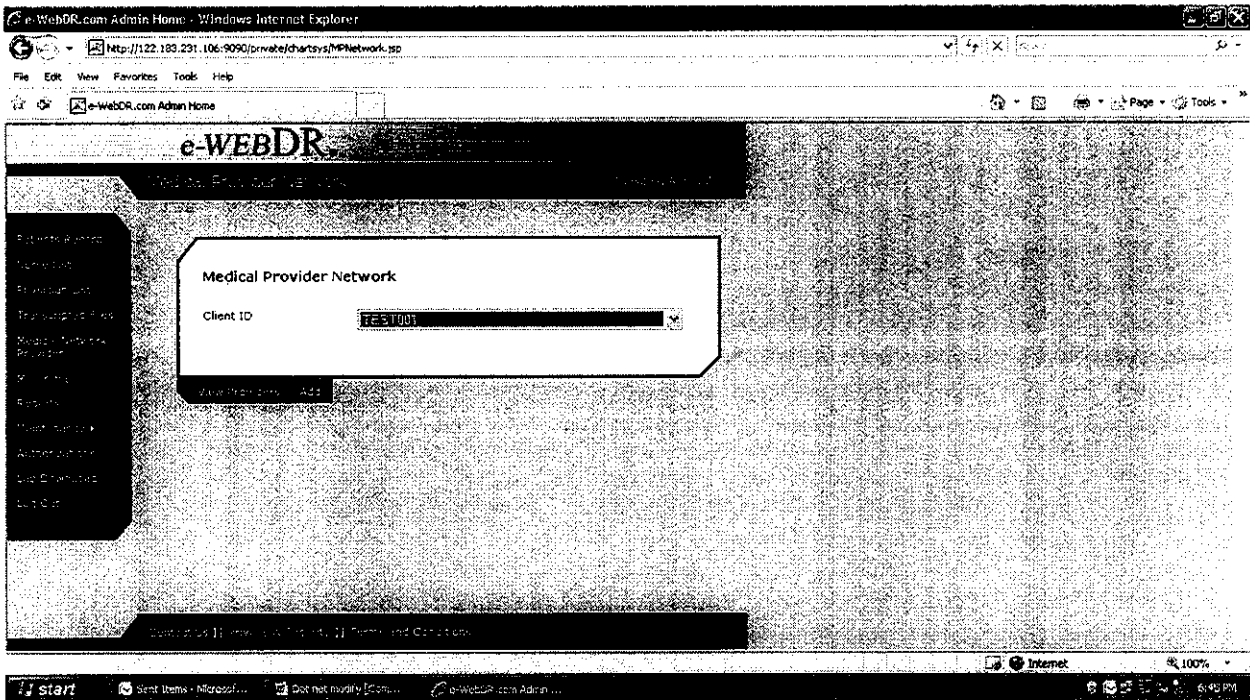
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2. <http://www.oreillynet.com/cs/catalog/view/au/327?x-t=book.view>

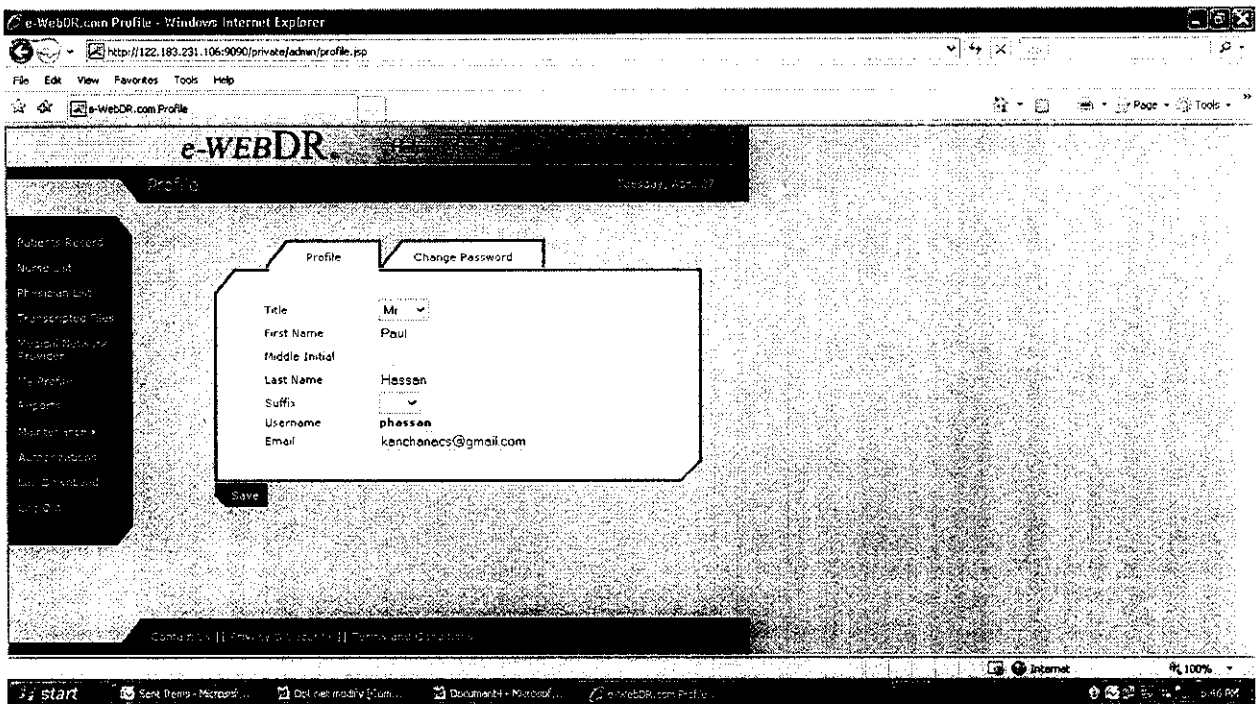
## 9.2.15 Reprography page



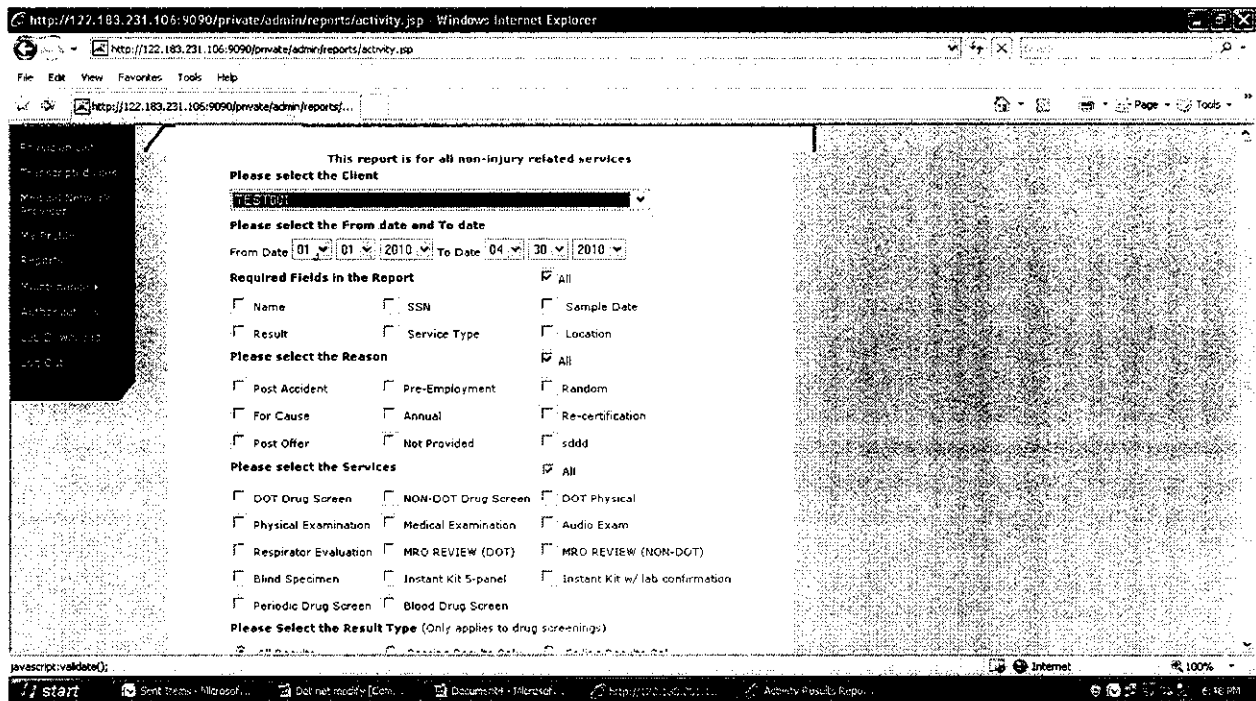
## 9.2.16 Medical network provider page



## 9.2.17 Profile change page



## 9.2.18 Reports selection





## 9.2.19 Client report

Activity Results Report - Windows Internet Explorer

http://122.183.231.106:9090/private/admin/reports/activityresults.jsp

Client Activity for TEST001

Patient Name	SSN	Date	Result	Service Type	Location
test001 test001	270410	2010-04-25	NEGATIVE	DOT Drug Screen	test001

Total No of Result = 1  
Total No of Persons = 1

Print this form      Email this form

Page 2 of 2    Words: 0

start    Sent Items - Microsoft...    DOT net mostly [Com...    Document4 - Microsoft...    http://122.183.231.1...    Activity Results Repo...    6:48 PM

## 9.2.20 Billing report selection

http://122.183.231.106:9090/private/admin/reports/billing.jsp - Windows Internet Explorer

http://122.183.231.106:9090/private/admin/reports/billing.jsp

File Edit View Favorites Tools Help

http://122.183.231.106:9090/private/admin/reports/...

Private Report  
Custom Activity    Billing    Billing Sum    Injury Trend    DrugScreenStatistics

Please select the Client  
TEST001

Please select the From date and To date  
From Date: 01/01/2010 To Date: 04/30/2010

Please select the Reason

<input type="checkbox"/> Post Accident	<input type="checkbox"/> Pre-Employment	<input type="checkbox"/> Random
<input type="checkbox"/> For Cause	<input type="checkbox"/> Annual	<input type="checkbox"/> Re-certification
<input type="checkbox"/> Post Offer	<input type="checkbox"/> Not Provided	<input type="checkbox"/> sddd

Please select the Services

<input type="checkbox"/> DOT Drug Screen	<input type="checkbox"/> NON-DOT Drug Screen	<input checked="" type="checkbox"/> All
<input type="checkbox"/> Physical Examination	<input type="checkbox"/> Medical Examination	<input type="checkbox"/> DOT Physical
<input type="checkbox"/> Respirator Evaluation	<input type="checkbox"/> MRO REVIEW (DOT)	<input type="checkbox"/> Audio Exam
<input type="checkbox"/> Blind Specimen	<input type="checkbox"/> Instant Kit 5-panel	<input type="checkbox"/> MRO REVIEW (NON-DOT)
<input type="checkbox"/> Periodic Drug Screen	<input type="checkbox"/> Blood Drug Screen	<input type="checkbox"/> Instant Kit w/ lab confirmation

Sort By: Date

Done    Internet    100%

start    Sent Items - Microsoft...    DOT net mostly [Com...    Document4 - Microsoft...    http://122.183.231.1...    6:49 PM

## 9.2.21 Client bill report

**Billing Results Report - Windows Internet Explorer**

http://122.183.231.106:9090/private/admin/reports/billing.jsp

**Billing Summary for TEST001**

Date	Patient Name	SSN	Service Type	Location	Fee
04/25/2010	test001 test001	270410	DOT Drug Screen	test001	35.0
04/27/2010	test001 test001	270410	Physical Examination	test001	0.0

Total No of Result = 2      Total Amount = 35.0

Print this form      Email this form

## 9.2.22 Client Injury report

**Injury Trend Analysis - Windows Internet Explorer**

http://122.183.231.106:9090/private/admin/reports/injurytrend.jsp

**Injury Trend Analysis for TEST001**  
From : 01/JAN/2010 To : 30/APR/2010

Diagnosis	Time(s)
No Records Found	

Print this form      Email this form