A web application for Medasolution Healthcare Company customer service system

Hao Jia

Follow this and additional works at: http://scholarworks.lib.csusb.edu/etd-project

Part of the Software Engineering Commons

Recommended Citation


This Project is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.
A WEB APPLICATION FOR MEDASOLUTION HEALTHCARE COMPANY CUSTOMER SERVICES SYSTEM

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
in
Computer Science

by
Hao Jia
March 2005
A WEB APPLICATION FOR MEDASOLUTION HEALTHCARE COMPANY CUSTOMER SERVICES SYSTEM

A Project
Presented to the
Faculty of
California State University,
San Bernardino

by
Hao Jia
March 2005

Approved by:

Dr. David Turner, Chair, Computer Science

Dr. Richard John Botting

Dr. Yasha Karant
ABSTRACT

This project is a web application implemented using ASP.Net and SQL Server 2000. The purpose is to implement the communication between the Medasolution Health Care Company and its clients. Medasolution is a virtual company designed by the author to handle medicare insurance business, which has four categories of clients: members, employers, brokers and medicare providers. Each client can use the web interfaces as a tool to manage their data in the Medasolution database system. This project allows clients to enter the web pages based on their category level. Besides, Medasolution strictly follows the governments privacy rules and keeps its client information from being used outside the Medasolution.

This document not only describes the details of the project in both application mechanism and functionality, but also presents the source code and explanations.
ACKNOWLEDGEMENTS

I would first like to thank Dr. David Turner, my Project Advisor, for his patience by giving me the enough time to finish my project. I would like to appreciate Dr. Richard Botting and Dr. Yasha Karant. They gave me precious advice after I began to write my Software Requirements Specification, even when they were very busy. Their help made me believe that I have the ability to do my project. Although writing always seems like the hard part, the real work is done mostly because of the all help coming from these three professors.

I would like to thank my wife, Xueyuan Yu for giving me endless support and encouragement for my Project. Without her support I cannot imagine that I can finish this project. Besides, I would like to thank my friends, Yibin Jiang, Ray Yang, Carol Lau, Peng Tao, Lily Liu, Aileen Lo and Yang Yang for their help.

Last, and most important, without the support of my Mom and Dad and my sister Hai Jia, and brother Jiang Liang, I would never have been able to do this.
TABLE OF CONTENTS

ABSTRACT .................................. iii

ACKNOWLEDGEMENTS ........................ iv

LIST OF TABLES .............................. viii

LIST OF FIGURES ............................. ix

CHAPTER ONE: INTRODUCTION

Purpose of Project .......................... 1
Scope of Project ............................. 1
Privacy Rule ................................. 2

CHAPTER TWO: TECHNOLOGIES

.Net Framework ............................. 4
Visual Basic.Net ............................ 5
ADO.Net .................................... 6
JavaScript ................................... 8
ASP.Net ...................................... 8

CHAPTER THREE: PROJECT DESIGN

Overall Description .......................... 10
Background in Medicare Market ............ 10
Medasolution Introduction .................. 11
Product Perspective ......................... 12
Software Interface .......................... 13
Hardware Interface ....................... 14
Communication Interface .................. 14
Memory Constraints ....................... 15
Operations ............................... 15
Assumptions and Dependencies .......... 15
Project Architecture Design ............. 16
Medasolution System Design .............. 17
Use Case Diagram ........................ 17
Web Page Design .......................... 18
Graphical User Interfaces
and Description ......................... 19
Database Design .......................... 33

CHAPTER FOUR: PROJECT IMPLEMENTATION

Project Class Design ...................... 35
Member Functions Implementation ....... 36
Employer Functions Implementation ...... 39
Broker Functions Implementation ........ 41
Medicare Provider Functions
Implementation ............................ 44
User Characteristics ...................... 46
Software System Attributes .............. 47
Reliability ............................... 47
Security ................................. 47
Maintainability ........................... 47

APPENDIX A: VISUAL BASIC.NET FILE ................. 49

APPENDIX B: ASP.NET FILES .......................... 59

APPENDIX C: ACRONYMS AND ABBREVIATIONS........... 108

REFERENCES ............................................. 110
LIST OF TABLE

Table 1. Software Interfaces .......................... 14
LIST OF FIGURES

Figure 1. .Net Framework Infrastructure.............. 5
Figure 2. ADO.Net Architecture .......................... 7
Figure 3. ASP.Net Architecture ......................... 9
Figure 4. Medasolution Architecture Design .......... 17
Figure 5. Medasolution Use Case Diagram ............ 18
Figure 6. Home Page ..................................... 19
Figure 7. Member Home Page ............................. 20
Figure 8. Personal Information Page .................. 21
Figure 9. Dependent Information Page ................. 21
Figure 10. Provider Information Page ................. 22
Figure 11. Eligibility Page ................................ 22
Figure 12. Employer Home Page ......................... 23
Figure 13. Employer Information Page ................. 23
Figure 14. Medicare Plan Page .......................... 24
Figure 15. Health Maintenance Organization Plan Page ................................ 24
Figure 16. Preferred Provider Organization Plan Page ................................ 25
Figure 17. Broker Home Page ............................ 25
Figure 18. Broker Information Page ................. 26
Figure 19. Pre-Quote Page ................................. 26
Figure 20. Get A Quote Page .............................. 27
Figure 21. Calculate Commission Page ............... 27
Figure 22. Client Record Page ...................... 28
Figure 23. Insert New Employer Page ............... 29
Figure 24. Insert New Individual Client Page ...... 29
Figure 25. Modify Individual Client Page .......... 30
Figure 26. Modify Employer Client Page .......... 30
Figure 27. Medicare Provider Home Page .......... 31
Figure 28. Medicare Provider Information Page ......................................... 31
Figure 29. Review Patient Record Page .......... 32
Figure 30. Lookup DrgCode Page ................. 33
Figure 31. Medasolution Entity Relationship Diagram .................. 34
Figure 32. Medasolution Class Diagram ........... 36
Figure 33. Member Home Page Class ............ 37
Figure 34. Member Personal Information Page Class ......................................... 37
Figure 35. Member Dependent Information Page Class ........................................ 38
Figure 36. Member Provider Information Page Class ........................................ 38
Figure 37. Member Eligibility Page Class ......... 39
Figure 38. Employer Review Page Class ............ 39
Figure 39. Employee Information Page Class ....... 40
Figure 40. Preferred Provider Organization
Plan Page Class ........................... 40

Figure 41. Health Maintenance Organization
Plan Page Class ........................... 40

Figure 42. Broker Information Page Class .... 41

Figure 43. Broker Client Record Page Class .... 41

Figure 44. Broker Get A Quote Page Class ....... 42

Figure 45. Broker Individual Plan
Insert Page Class ........................... 42

Figure 46. Broker Individual Plan Edit
Page Class ................................. 43

Figure 47. Broker Employer Plan Insert
Page Class ................................. 43

Figure 48. Broker Employer Plan Edit
Page Class ................................. 44

Figure 49. Broker Calculate Commission
Page Class ................................. 44

Figure 50. Provider Information Page Class .... 45

Figure 51. Provider View Patient Page Class .... 45

Figure 52. Provider DrgCode Page Class ......... 46

Figure 53. Home Page Class .............................46
CHAPTER ONE

INTRODUCTION

Purpose of Project

The main purpose of this project is to provide friendly and simple web interfaces to Medasolution clients: members, employers, brokers and medicare providers. They can use web interfaces to communicate with Medasolution as well as fulfill their functionalities. This document not only gives a detailed look from the client perspective in order to achieve clarity for users, but also takes a look from the designer perspective.

Scope of Project

This project is a web application that integrates ASP.Net, Visual Basic.Net, and ADO.Net, and supported by the Internet Information Server 5.1 server engine. The web services depend on the ability of parties to communicate with each other, even if they use different system platforms or different data formats. In this Project a virtual publicly traded health care company -- Medasolution Health Care
Company -- is built up to implement this web services. This Project is designed for various clients: members, employer, brokers, and medical providers.

Privacy Rule

This project completely abides by the standards for Privacy of Individually Identifiable Health Information ("Privacy Rule") issued by The U.S. Department of Health and Human Services ("HHS"). The Privacy Rule implements the requirement of the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"). The major goal of the Privacy Rule is to assure that that individuals' health information is properly protected while allowing the flow of health information needed to provide and promote high quality health care and to protect the public's health and well being.

According to the Privacy Rule, all Medasolution information is protected. Whatever the information is held or transmitted in any form of media, whether electronic, paper or oral.

This project as a research, also abides by the National
Institute of Health ("NIH") regulation. All protected health information used in this project will be used or disclosed under the Privacy Rule.

For more information on exercising clients rights set out in this notice, look at Medasolution web page. The clients may also call the free toll phone number listed on the web and ask for Medasolution privacy official for this purpose.

If the clients believe that Medasolution has violated their privacy rights set out in this notice, they may file a complaint with the Medasolution at the following address:

Privacy Complaint

United States Office of Personal Management

P.O. Box 707

Washington, DC 20004 - 0707

Filing a complaint will not affect client benefits under the Medasolution program. The client also may file a complaint with the secretary of the United States Department of Health and Human Services.
A Web application is a dynamic extension of a Web server. There are two types of Web applications:

Presentation-oriented. A presentation-oriented Web application generates dynamic Web pages containing various types of markup language (HTML, XML, and so on) in response to requests.

Service-oriented. A service-oriented Web application implements the endpoint of a fine-grained Web service. Service-oriented Web applications are often invoked by presentation-oriented applications.

In this project we only use presentation-oriented type.

.Net Framework

The .Net Framework is a development and execution environment that allows different programming languages and libraries to work together seamlessly to create Windows-based applications that are easier to build, manage, deploy, and integrate with other networked systems.
The .Net Framework provides the basic infrastructure that Windows-based applications need to make Microsoft's .Net vision of connecting information, people, systems, and devices a reality. Figure 1 clearly shows the relationship between tiers.

Visual Basic.Net

Visual Basic.Net is one of the most popular programming languages in the world. Visual Basic .Net combines the power of the .Net Framework and the common language runtime with the productivity benefits that are the hallmark of Visual
Basic. Although the Visual Basic .Net language looks the same on the surface, the internal implementation of the language and the compiler has evolved significantly since Visual Basic 6.0.

Visual Basic.Net is not a language that stands in isolation—it is the latest offering in the Visual Basic product line. Visual Basic as a language and development tool has a strong history and a large following. Two major design goals for Visual Basic.Net were to preserve identical functionality for identical language keywords and to provide the same types of productivity enhancements that have made previous versions of Visual Basic so popular.

ADO.Net

In this project, we use Microsoft SQL Server 2000 as data source. ADO.Net not only provides consistent access to SQL Server, but also allows us to connect to these data sources and retrieve, manipulate and update data. ADO.Net includes .Net Framework data providers for connecting to a database, executing commands, and retrieving results. Those results are either processed directly, or placed in an ADO.Net dataset object.
The ADO.Net components have been designed to factor data access from data manipulation. There are two central components of ADO.Net that accomplish this: the DataSet, and the .Net Framework data provider, which is a set of components including the Connection, Command, DataReader, and DataAdapter object. Figure 2 shows the architecture. The ADO.Net DataSet is core component of disconnected architecture of ADO.Net. The DataSet contains a collection of one or more DataTable objects made up of rows and columns of data.
JavaScript

JavaScript is a script language which can be included within an HTML document, and are then executed by the Web browser when the document is loaded. A similar scripting language, known as VBScript, has been developed by Microsoft, however, it does not work in Netscape explorer. Therefore, we adopt Javascript to handle all client-side functionalities.

ASP.Net

ASP.Net is one of the most popular web development languages in the world; it provides a unified Web development model that includes the services necessary for developers to build enterprise-class Web applications. ASP.Net is built up based on the .Net Framework. Its architecture makes the ASP.Net to optimize the Windows operating system. As Figure 3 illustrates, all web clients communicate with ASP.Net applications through Microsoft Internet Information Services (IIS). It also provides a programming model and infrastructure for more scalable and stable applications that help provide greater protection.
ASP.Net is a compiled, .Net-based environment; it authors applications in any .Net compatible language, including Visual Basic.Net, C#, and JScript.Net. Additionally, the entire .Net Framework is available to any ASP.Net application.
CHAPTER THREE

PROJECT DESIGN

Overall Description

Background in Medicare Market

The healthcare program, created in 1965, provides health insurance to about one out of every seven Americans. In 1998, Medicare spent about $217 Billion for health care services, an average of about $5,500 per beneficiary. Over the past 30 years, medicare is playing more and more important roles in our life with the advance of industrial society.

There are several facts that illustrate the current situation in the medicare field. First, medicare is a federal health insurance program that provides 39 million elderly and disabled Americans access to high-quality health care. More than any other population group in this country, Medicare beneficiaries enjoy real health care security, because their coverage cannot be lost or taken way. Second, medicare has been a leader in cost containment. From the late 1960s, when Medicare was successfully implemented, to 1997, the most recent year for which data are available, the growth in
spending per beneficiary has been greater than in the private health insurance industry. Third, medical expending in the family has dramatically increased, especially for the beneficiaries age 65 and above who spend 19 percent of their income, on average, for health care and supplemental insurance policies to augment their medical care coverage.

To help pay for services not covered by medicare, most beneficiaries have some types of supplemental insurance. Most people either receive retiree coverage through a former employer or purchase a supplemental “medigap” policy. Under such circumstances, the medical insurance costs have greatly grown recently to satisfy the medicare beneficiaries’ requirements.

Medasolution Introduction

Medasolution, designed as a virtual publicly traded managed health care company, is located in Riverside County of California State. Its mission is to help people be healthy, secure and comfortable. As a respected health care company in California, Medasolution has an extensive network for more than 4000 physicians, and serves up to 200,000 members. In order to extend its customer service and be convenient for
its customers, the Board of the company makes a new strategy that provides online services for customers.

The main clients of Medasolution can be classified into four categories: i) members, who are the end users of Medasolution company, as well as the medical insurance beneficiaries. ii) Employer or Business Group, whose sizes can range from small business to mid-market employer, even to the large companies which have demand in medical insurance for its employees. iii) Broker, who is the media between Medasolution and its end users. One role of the broker is to help clients and employees choose the carrier so they are virtually guaranteed to find a doctor they want and the coverage they need. The other role is to report feedback from clients regarding services. iv) Medicare Provider, who is the provider for members.

Product Perspective

This project is web-based, and will be integrated with .Net Framework. The hardware interface requirement is that it must run on the existing web server or local host. The software interface requirement is that it must support
current versions of Internet Explorer or Netscape. The communication interface requirement is that it must support HTTP. The system will be opened 24 hours a day, 7 days per week. All actions are user initiated. No separate backup and recovery or maintenance functions are required as that is handled by system administration on the hosting server machine.

**Software Interface**

Medasolution system's Software interfaces are provided by Microsoft operating system, Internet Information Services 5.1 for Active Server Page.Net (ASP.Net), Visual Basic.Net compiler version 7.00.9951 for compiling Visual Basic file, .Net Framework version 1.00.3705.6018 for supporting ASP.Net pages. Besides, the Medasolution system user needs to access the system by using JavaScript compatible web browser such as Microsoft IE and Netscape.
Table 1. Software Interfaces

<table>
<thead>
<tr>
<th>Software</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Windows 2000 (professional, Server, and Advanced Server), and Windows Server 2003 Family for both client and server application</td>
</tr>
<tr>
<td>Web Browser</td>
<td>Microsoft IE 5.0 or above</td>
</tr>
<tr>
<td>Web Server</td>
<td>Netscape</td>
</tr>
<tr>
<td>VB Compiler</td>
<td>IIS 5.11</td>
</tr>
<tr>
<td>ASP.Net Platform</td>
<td>V1.00.3705.6018</td>
</tr>
<tr>
<td>Database System</td>
<td>Microsoft SQL Server 2000</td>
</tr>
<tr>
<td>JavaScript</td>
<td>JavaScript 1.3</td>
</tr>
</tbody>
</table>

Hardware Interface

Because the Windows operating system already handles the hardware interfaces for this project. Thus, there is no implementation related to hardware in this project. The Table 1 shows the summarization of software interfaces.

Communication Interface

The communication interfaces are HTTP for general information. Private information is encrypted using SSL protocols. Communication between application and database SQL Server 2000 is through ADO.net bound in the Visual Studio.Net software.
Memory Constraints

There is no specific memory requirement for the client computer. Although there is no explicit memory requirement for the web server and database server, enough memory is required to guarantee acceptable response time. 128 Mega bytes or higher are recommended.

Operations

Users should access Medasolution through the World Wide Web. The logon session can expire if the user is inactive for 40 minutes. It is set in the web server via configuration file.

Assumptions and Dependencies

In this project, there are following assumptions:

It is assumed that it has a medicare company named by Medasolution which has a web server running for its clients.

In the Medasolution databases, there are some data such as members, employers, brokers, and medicare providers.

It also supposed that the Medasolution allows its registered clients to modify their information stored in the Medasolution databases.
Project Architecture Design

Medasolution is a 3-Tier architecture. The entire process begins with a web browser making a request for an ASP.Net web page, and finishes with the HTTP handler generating the suitable response as output for the web requester. Figure 4 shows a typical 3-tier architecture scenario.

Data Tier. This tier is responsible for retrieving, storing and updating information, therefore this tier can be ideally implemented through a commercial database.

Logic Tier. This tier is the brain of application. It interacts with the business tier and data access tier. In this sub tier it contains classes to calculate aggregated values, such as total members per medicare provider, etc. This tier does not know about GUI controls and how to access database. Data access tier acts as an interface to the database. This tier knows how to retrieve and store information from the database.
Presentation Tier. This tier is responsible for communication with users and web service consumers, and it uses objects from the business tier to respond to GUI raised events.

Medasolution System Design

Use Case Diagram

The whole system is separated into four parts based on the four client categories. Figure 5 shows the use case
Diagram that graphically depicts the users and principal functions of the Medasolution system.

![Use Case Diagram](image)

Figure 5. Medasolution Use Case Diagram

**Web Page Design**

In this Project the banner of Medasolution is designed using Macromedia Firework MX 2004, which is a flexible and powerful graphical environment in which both bitmapped and vector images may be used to generate artwork for web pages. Macromedia Firework generates the animation to promote the
Medasolution’s name. The logo of Medasolution which is used in the banner is processed by Flash MX 2004. All Medasolution web pages are designed by Macromedia Dreamweaver MX 2004.

Graphical User Interfaces and Description

The user interfaces for Medasolution are designed as HTML pages. The contents are generated dynamically by ASP.Net or JavaScript in response to user’s request. The following features incorporated to produce a more descriptive representation of the interface.

Home Page. This Page not only shows hyperlinks for registered users, but also provides a login section for members, employers, brokers, and providers. If the username and password are incorrect, the system will generate error message to remind the user to input again. Figure 6 shows the home page.

Figure 6. Home Page
Member Home Page. Only registered member users can reach this page. It allows members four hyperlinks to view specific information. This is the home page for the member users. Figure 7 shows the member home page.

![Member Home Page](image)

**Figure 7. Member Home Page**

Member Personal Information Page. It contains two functions: one is to provide the full contents of the member’s information, so the member can view his/her information; the other is to allow the member to edit his/her information if needed and then save to the database. Figure 8 shows the member personal information page.

Member Dependent Information Page. It allows the member to view all his/her dependents or modify his/her dependents. Besides, the member can also add new dependent(s) into the database.
Medasolution database. Figure 9 shows the dependent information page.

![Figure 9. Dependent Information Page](image)

Member Provider Information Page. In this page it provides two functions: one is to show the current specialty doctor; the other is to provider the option of specialty category and speaking language for the member to select in the list. Figure 10 shows the two functions in the provider page.

![Figure 10. Provider Information Page](image)
Figure 10. Provider Information Page

Member Eligibility Page. It shows member's basic and his/her eligibility information of the benefit plan and history records. Figure 11 shows the member eligibility page.

Figure 11. Eligibility Page

Employer Home Page. Only registered employer users can
reach this page. It allows employers to view other related information stored in the database. Figure 12 shows the employer home page. It also provides five hyperlinks for the employer.

Figure 12. Employer Home Page

Employer Review Page. In this page it shows the employer information such primary contact such the employer can input new contact person. Figure 13 shows the detailed page.

Figure 13. Employer Information Page
Employer Medicare Plan Page. It provides all detailed medicare plan offered by Medasolution including premiums and plan contents. Figure 14 shows the medicare plan page.

Figure 14. Medicare Plan Page

Health Maintenance Organization Plan Page. In this page, it illustrates who can participate this plan. Figure 15 shows the detailed.

Figure 15. Health Maintenance Organization Plan Page
Preferred Provider Organization Plan Page. In this page, it illustrates that who can participate this plan. Figure 16 shows the detail page.

Figure 16. Preferred Provider Organization Plan Page

Broker Home Page. Only registered broker users can reach this page. It allows a broker to browse his/her information by clicking the links in the page. Figure 17 shows the broker home page.

Figure 17. Broker Home Page
Broker Information Page. In this page, a broker can view all its information. It also allows the broker to modify the information by clicking the edit button on the page. Figure 18 shows the broker information page.

Figure 18. Broker Information Page

Broker Pre-Quote Page. When the broker enters this page, it has two hyperlinks and a button. Two links are for the detailed benefit plans Figure 19 shows the detailed page.

Figure 19. Pre-Quote Page
Broker Get Quote Page. It shows a broker a page which allows the broker to quote premium based on the client’s requirement. The broker can input the client’s birthday and benefit plan type for narrow down the selection. Figure 20 shows the get quote page.

Figure 20. Get A Quote Page

Broker Calculate commission page. It shows the brokers how much commission he/she earns and earning source. Figure 21 shows the calculation page.

Figure 21. Calculate Commission Page
Broker Client Record Page. In this page it shows the broker all clients developed during a period of time. All clients are classified as individual and employer. Figure 22 shows the client record page.

Figure 22. Client Record Page

Broker Insert New Employer Record Page. In this page, it allows a broker to input a new employer after this employer participates Medasolution medicare plan. Figure 23 shows the broker insert new employer page. This page just provides the broker to input employer’s information. The information of employees who are working with this employer needs another page to enter.
Insert A New Employer Record

This page allows you to insert a new employer record. Click "Save" button to save this new employer record, click "Reset" button to reset the information, and click "Close" button to close the insert area. Click here if you want to go back to client record page.

Figure 23. Insert New Employer Page

Broker Insert New Individual Record Page. In this page, it allows the broker to enter a new individual information into the database via the page interface. Figure 24 shows the insert new individual client page.

Figure 24. Insert New Individual Client Page
Broker Modify Individual Client Page. In this page a broker can not only modify an individual client developed by this broker, but also delete an individual client record.

Figure 25 shows us the broker modify individual client page.

Broker Modify Individual Client Page

Broker Modify Employer Client Page. In this page it not only allows a broker to modify an employer, but also to inactivate an employer. Figure 26 shows the detailed.

Broker Modify Employer Client Page
Provider Home Page. Only registered medicare providers can reach this page. It allows providers to view other pages.

Figure 27. Medicare Provider Home Page

Provider View Patients Page. In this page it allows a medicare provider to modify his/her information stored in the Medisolution database. The provider can choose to cancel edit state by clicking the cancel button on the page. Figure 28 shows the detail.

Figure 28. Medicare Provider Information Page
Provider Review Patient Page. In this page, it provides three functions for a medicare a provider. i) enter a patient’s last name and search this patient’s history record; ii) search all of the patients treated by the provider before; iii) search a patient treatment history. Figure 29 shows us the provider view patient page.

Figure 29. Review Patient Record Page

Provider Lookup a Drgcode Page. In this page, it allows a medicare provider to look up all drgcode in the Medasolution database. Figure 30 shows us the provider look up drgCode page.
Database Design

We assume that Medasolution system must have at least four registered users represented four categories of users: member, employer, broker, and medicare provider. Also, each user must have a username and password in the user table in order to logon to database system. Besides, there are several other rules needed to be followed in the database:

i) An employer user must have at least one member;

ii) A broker user must have at least one individual user and one employer user;

iii) A medicare provider must have at least one patient user i.e. member user.

Figure 31 is the Medasolution ER diagram showing the
relations and the important attributes of the important entities.

Figure 31. Medasolution Entity Relationship Diagram
CHAPTER FOUR

PROJECT IMPLEMENTATION

Project Class Design

Since the last chapter described the design of this project, the implementation is to be the next step. The Unified Modeling Language (UML) class diagram is a well known and commonly used diagram to analysis and design the relationships and functionalities of each class and its functions. Figure 32 shows us the class diagram. And then I use pseudo codes to illustrate each function. As I mentioned before, the whole project can be separated into four parts based on the user categories. The home page is functioned as logon page, which has all links to the four user home pages. The only function of this page is to provide two text boxes for users to enter username and password. Figure 33 shows the home page function.
Member Functions Implementation

This section describes the logical algorithms used in this project and explanation for each method of member user.

To make the class easier to read, all classes is written in
plain English language.

Member home page class.

<table>
<thead>
<tr>
<th>Page: memHome.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>Super Class: clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>Page_load: retrieve session user from home page function.</td>
</tr>
<tr>
<td>Logout: logout the current user and clear all sessions.</td>
</tr>
</tbody>
</table>

Figure 33. Member Home Page Class

Member personal information page class.

<table>
<thead>
<tr>
<th>Page: memPersonalInfo.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>clsdb: clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>LoadLanguage: retrieve the language from database and load language name</td>
</tr>
<tr>
<td>LoadState: retrieve state from database and load state name</td>
</tr>
<tr>
<td>LoadMaritalStatus: retrieve maritalStatus from database and load maritalstatus status</td>
</tr>
<tr>
<td>Databind: binding data into the labels</td>
</tr>
</tbody>
</table>

Figure 34. Member Personal Information Page Class
Member dependent information page class

<table>
<thead>
<tr>
<th>Page: MemDependent.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>ds: dataset</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>LoadRelation: retrieve the relationship from database and load relationship name</td>
</tr>
<tr>
<td>Databind: Load data into the datagrid</td>
</tr>
<tr>
<td>getCharbit: change the Boolean value and return the char value</td>
</tr>
<tr>
<td>saveChangedInfo:</td>
</tr>
<tr>
<td>if edit state then edit dependents info</td>
</tr>
<tr>
<td>else insert a new dependent info</td>
</tr>
</tbody>
</table>

Figure 35. Member Dependent Information Page Class

Member provider information page class.

<table>
<thead>
<tr>
<th>Page: MemProvidInfo.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>ds: dataset</td>
</tr>
<tr>
<td>clsdb: clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>Databind: Load data into the datagrid</td>
</tr>
<tr>
<td>Search_Click: search the provider based on the input parameter. Return the result and output to datagrid</td>
</tr>
<tr>
<td>Dg_select: retrieve the provider record selected by the member</td>
</tr>
</tbody>
</table>

Figure 36. Member Provider Information Page Class
Member eligibility page class.

<table>
<thead>
<tr>
<th>Page: MemEligibility.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>strSessionuser: string</td>
</tr>
<tr>
<td>ds: dataset</td>
</tr>
<tr>
<td>clsdb: clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>Databind: Load eligibility data into the datagrid</td>
</tr>
</tbody>
</table>

Figure 37. Member Eligibility Page Class

Employer Functions Implementation

This section describes the logical algorithms used in this project and explanation for each method of employer user.

To make the class easier to read, all classes is written in plain English language.

Employer review page class.

<table>
<thead>
<tr>
<th>Page: EmployReview.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>clsdb: clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>DataFiller: Load data into the datagrid</td>
</tr>
<tr>
<td>Save_Click: save data into the group table in the database</td>
</tr>
<tr>
<td>Cancel_Click: cancel all info in the textbox</td>
</tr>
<tr>
<td>ControlReadonlystate: interchange the readonly state</td>
</tr>
</tbody>
</table>

Figure 38. Employer Review Page Class
Employee information page class.

<table>
<thead>
<tr>
<th>Page: MememployeeInfo.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>strErrormsg: string</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>DataFiller: Load employer data into the datagrid</td>
</tr>
<tr>
<td>Save_Click: save the edited data into database</td>
</tr>
<tr>
<td>Cancel_Click: cancel the data input</td>
</tr>
</tbody>
</table>

Figure 39. Employee Information Page Class

Preferred Provider Organization plan page class.

<table>
<thead>
<tr>
<th>Page: PPO.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>PPO5_click: load ppo5 benefit plan</td>
</tr>
<tr>
<td>PPO25_click: load ppo25 benefit plan</td>
</tr>
<tr>
<td>PPO30_click: load ppo30 benefit plan</td>
</tr>
<tr>
<td>PPO40_click: load ppo40 benefit plan</td>
</tr>
<tr>
<td>PPO50_click: load ppo50 benefit plan</td>
</tr>
</tbody>
</table>

Figure 40. Preferred Provider Organization Plan Page Class

Health Maintenance Organization plan page class.

<table>
<thead>
<tr>
<th>Page: hmo.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>HMO15_click: load ppo5 benefit plan</td>
</tr>
<tr>
<td>HMO40_click: load ppo25 benefit plan</td>
</tr>
</tbody>
</table>

Figure 41. Health Maintenance Organization Plan Page Class
Broker Functions Implementation

This section describes the logical algorithms used in this project and explanation for each method of broker user. To make the class easier to read, all classes is written in plain English language.

Broker information page class.

<table>
<thead>
<tr>
<th>Page: brokInfo.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>clsdb: clsMedasolution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Methods:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DataFiller: load broker data into datagrid</td>
</tr>
<tr>
<td>Save_Click: save the edited data into database</td>
</tr>
<tr>
<td>Cancel_Click: cancel the data input in the textbox</td>
</tr>
<tr>
<td>Loadstate: load the state name into the dropdownlist</td>
</tr>
</tbody>
</table>

Figure 42: Broker Information Page Class

Broker client record page class.

<table>
<thead>
<tr>
<th>Page: brokerClientRecord.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>clsdb: clsMedasolution</td>
</tr>
<tr>
<td>strSessionuser: string</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Methods:</th>
</tr>
</thead>
<tbody>
<tr>
<td>loadIndvidualRecord: load individual client record from database</td>
</tr>
<tr>
<td>loadEmployerRecord: load employer client record from database</td>
</tr>
</tbody>
</table>

Figure 43. Broker Client Record Page Class
Broker get a quote page class.

<table>
<thead>
<tr>
<th>Page: getAQuote.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attributes:</strong></td>
</tr>
<tr>
<td>clsdb:clsMedasolution</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
</tr>
<tr>
<td>loadDateMonthYear:</td>
</tr>
<tr>
<td>checkLeapYear:</td>
</tr>
<tr>
<td>getAQuote:</td>
</tr>
<tr>
<td>BindDay:</td>
</tr>
</tbody>
</table>

- loadDateMonthYear: load the month, day, and year
- checkLeapYear: check the year whether it is leap year or not
- getAQuote: get a quote of benefit plan.
- BindDay: bind the day based on the month and year.

Figure 44. Broker Get A Quote Page Class

Broker individual plan insert page class.

<table>
<thead>
<tr>
<th>Page: brokIndividualPlanInsert</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Attributes:</strong></td>
</tr>
<tr>
<td>Clsdb:clsMedasolution</td>
</tr>
<tr>
<td><strong>Methods:</strong></td>
</tr>
<tr>
<td>loadBenefitplans:</td>
</tr>
<tr>
<td>loadMaritalStatus:</td>
</tr>
<tr>
<td>loadEmploymentStatus:</td>
</tr>
<tr>
<td>save_click:</td>
</tr>
<tr>
<td>reset_click:</td>
</tr>
<tr>
<td>close_click:</td>
</tr>
<tr>
<td>clearTextbox:</td>
</tr>
</tbody>
</table>

- loadBenefitplans: load the benefitplan from database
- loadMaritalStatus: load maritalStatus from database
- loadEmploymentStatus: load employmentstatus from database
- save_click: save the input data into the database
- reset_click: reset the data in the textbox
- close_click: close the insert table panel
- clearTextbox: clear the input in the text box area

Figure 45. Broker Individual Plan Insert Page Class
Broker individual plan edit page class.

<table>
<thead>
<tr>
<th>Page: brokIndividualPlanEdit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>strSessionuser: string</td>
</tr>
<tr>
<td>clsdb:clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>loadBenefitplans: load the benefitplan from database</td>
</tr>
<tr>
<td>loadMaritalStatus: load maritalStatus from database</td>
</tr>
<tr>
<td>loadEmploymentStatus: load employmentstatus from database</td>
</tr>
<tr>
<td>Editthissrow:</td>
</tr>
<tr>
<td>if editstate then edit</td>
</tr>
<tr>
<td>else delete this row</td>
</tr>
<tr>
<td>save_click: save the input data into the database</td>
</tr>
<tr>
<td>reset_click: reset the data in the textbox</td>
</tr>
<tr>
<td>close_click: close the insert table panel</td>
</tr>
<tr>
<td>clearTextbox: clear the input in the text area</td>
</tr>
</tbody>
</table>

Figure 46. Broker Individual Plan Edit Page Class

Broker employer plan insert page class.

<table>
<thead>
<tr>
<th>Page: brokEmployPlanInsert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>clsdb:clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>loadBenefitplans: load the benefitplan from database</td>
</tr>
<tr>
<td>loadMaritalStatus: load maritalStatus from database</td>
</tr>
<tr>
<td>loadEmploymentStatus: load employmentstatus from database</td>
</tr>
<tr>
<td>save_click: save the input data into the insured and eligibility table</td>
</tr>
<tr>
<td>reset_click: reset the data in the textbox</td>
</tr>
<tr>
<td>close_click: close the insert table panel</td>
</tr>
</tbody>
</table>

Figure 47. Broker Employer Plan Insert Page Class
provider user. To make the class easier to read, all classes is written in plain English language.

Provider information page class.

<table>
<thead>
<tr>
<th>Page: providerInfo.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>clsdb:clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>Datafiller: load data into the page</td>
</tr>
<tr>
<td>Save_click: save the edit information into the database</td>
</tr>
</tbody>
</table>

Figure 50. Provider Information Page Class

Provider view patient page class.

<table>
<thead>
<tr>
<th>Page: providViewall.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>clsdb:clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>Databind: load data into thedatagrid of the page</td>
</tr>
<tr>
<td>Loaddiagnosiscode: load diagnosiscode into the page</td>
</tr>
<tr>
<td>searchByPatient_click: search a patient by patient lastname</td>
</tr>
<tr>
<td>searchByProvider_click: search patient list who is treated by the provider</td>
</tr>
<tr>
<td>save_click: save all edited textbox information</td>
</tr>
</tbody>
</table>

Figure 51. Provider View Patient Page Class
Provider lookup drgCode page class.

<table>
<thead>
<tr>
<th>Page: brokerdrgcode.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>clsdb: clsMedasolution</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>Viewall: load all drgCode list</td>
</tr>
<tr>
<td>Search_click: search a specific drgCode</td>
</tr>
</tbody>
</table>

Figure 52. Provider DrgCode Page Class

Home page class.

<table>
<thead>
<tr>
<th>Page: home.aspx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attributes:</td>
</tr>
<tr>
<td>clsdb: clsMedasolution</td>
</tr>
<tr>
<td>strQuery: string</td>
</tr>
<tr>
<td>strError: string</td>
</tr>
<tr>
<td>Methods:</td>
</tr>
<tr>
<td>Submit_click: submit the username and password into database to test authentication of user</td>
</tr>
</tbody>
</table>

Figure 53. Home Page Class

User Characteristics

Users in Medasolution Customer System include member, employer, broker, provider and visitors. All the users are assumed to know how to use web browser and speak English. They should also be able to follow manual written in plain English text.
Software System Attributes

Reliability

All contents and logs shall be generated automatically so no human effort is needed. The server shall be up twenty-four hours a day and seven days a week, with exception that periodical system maintenance needs to be conducted depending on the reliability of the web server. The system should be handle network packet loss smoothly. The system should not save inconsistent data or incomplete data into the database.

Security

The web server used to execute the Medasolution package will eventually be SSL-enabled for the authentication of users and submission of confidential information such as a personal profile.

Maintainability

The Medasolution consists of ASPX pages, VB class code, web configuration file and style sheets. They are put under different directories with a hierarchy. Other files including ASP source code and documents will be put in separate directories as well. ASPX files are organized using
packages. This structure will aid in maintaining all modules, and therefore maximizes ease of maintenance.
APPENDIX A

VISUAL BASIC.NET FILE
Imports Microsoft.VisualBasic
Imports System
Imports System.Data
Imports System.Data.SqlClient
Imports System.Reflection
Imports System.Windows.Forms

Namespace nsMedasolution
Public Class clsMedasolution
    'Declare a connection string to database
    Private _strConn As String = "Persist Security Info=false;Data Source=(local);" & 
        _ "Initial Catalog=medasolution;User ID=phillip;Password="
    'Declare a dataset, connection and adapter
    private ds As DataSet
    'Declare database variables
    private myConn as SqlConnection
    private myCmd as SqlCommand
    private myDataAdapter As SqlDataAdapter
    private myDataReader as SqlDataReader
    private strQuery As String
    Public Sub New()
        MyBase.new()
    End Sub
    'Declare a constructure with an argument
    Public Sub New(ByVal strConn As String)
        MyBase.new()
        _strConn = strConn
    End Sub
    'Declare a property
    Public Property connectionString As String
        Get
            Return _strConn
        End Get
        Set(ByVal Value As String)
            _strConn = Value
        End Set
    End Property
    Public sub showMsgbox(strMsg as string)
        messagebox.show(strMsg, "Alert test", MessageBoxButtons.OK,
MessageBoxIcon.Exclamation, MessageBoxDefaultButton.Button1,
MessageBoxOptions.ServiceNotification)
end sub

public Function doLogon(byval strQuery as string, byRef intClassID as integer,
byRef strUsername as string) as boolean
myConn = new sqlConnection(_strConn)
myCmd = new sqlCommand(strQuery, myConn)
Dim blnContinue as boolean
try
 Connect()
 myDataReader = myCmd.ExecuteReader
 if myDataReader.read
   blnContinue = true
   doLogon = true
 else
   blnContinue = false
   doLogon = false
 end if
 if blnContinue then
   intClassID = myDataReader("classID")
   strUsername = myDataReader("username")
 end if
 catch ex as sqlexception
 exit function
 finally
 myDataReader.close
 Disconnect()
 end try
end Function

Public Function getReader(byval strQuery as string, byref dr as SqlDataReader,
 byref strErrorMsg as string) as boolean
Dim dbReader as SqlDataReader
myConn = new sqlConnection(_strConn)
myCmd = new sqlCommand(strQuery, myConn)
myCmd.commandType = CommandType.Text
myCmd.CommandText = strQuery
Try
 Connect()
 dbReader = myCmd.ExecuteReader()
 dr = dbReader
catch ex as exception
    getReader = false
    strErrorMsg = "Error in reader function<br>" & ex.tostring()
    exit function
end try
'disconnect()
getReader = true
end Function

public Function FillDataset(byval strQuery as string, byref ds as dataset, byval tablename as string) as boolean
if (ds is nothing ) then
    FillDataset = nothing
    exit function
end if
myConn = new sqlConnection(_strConn)
try
    Connect()
    myDataAdapter = new SqlDataAdapter(strQuery, myConn)
    myDataAdapter.fill(ds, tablename)
catch ex as exception
    FillDataset= false
    exit Function
end try
FillDataset = true
Disconnect()
end function

Public Function ExecScalar(byval strSQL as string, byRef strmsg as string) as integer
Dim intReturnResult as integer
try
    Connect()
    myCmd = new SqlCommand(strSQL, myConn)
    intReturnResult = myCmd.ExecuteScalar()
catch e as Exception
    ExecScalar = -1
    strmsg = e.stackTrace.ToString()
    exit Function
end try
ExecScalar = intReturnResult
Disconnect()
Public function checkForNull(byval value as object) as string
    if Not IsDBNull(value) then
        checkForNull = value.toStringO
    else
        checkForNull = ""
    end if
end function

Public Function getMemberInfo(byval username as string) As DataRow
    Dim intGetGroup as integer = getGroupID(username)
    strQuery = "select i.last_name, i.first_name, i.middle_name, " & _
        "i.street1, i.street2, i.city, i.state, i.zipcode, i.phone, " & _
        "i.phone2, i.phone_ext, i.phone2_ext, i.email, " & _
        "i.dob, i.ssn, i.gender, lg.language, lo.location_name, " & _
        "g.group_name, (select p.last_name + ', ' + p.first_name " & _
        "as Provider_Name from [user] u, insured i, provider p, " & _
        "pcp.pcp where u.username = " & username & ""
        "and i.fk_usertable = u.pk_user and i.pk_insured = " & _
        "pcp.pcp_insured and pcp.pk_provider = p.pk_provider " & _
        "and pcp.most_current = 1) as Provider_name, " & _
        "ms.maritalstatus from Insured i, [user] u, eligibility e," & _
        "[group] g, location lo, language lg, maritalstatus ms " & _
        "where u.username = " & username & ""
        "and u.pk_user = i.fk_usertable and i.pk_insured = " & _
        "e.fk_insured and g.pk_group = " & intGetGroup & "" and " & _
        "lo.pk_location = g.pk_location " & _
        "and e.fk_group = g.pk_group and lg.pk_language = " & _
        "i.fk_language and i.fk_maritalstatus = ms.pk_maritalstatus " & _
        "and e.pk_eligibility in (select e.pk_eligibility from " & _
        "eligibility e where e.most_current=1)"
    try
        Connect()
        myDataAdapter = New SqlDataAdapter(strQuery, myConn)
        ds = New DataSetO
        myDataAdapter.Fill(ds, "Insured")
        catch ex as exception
            showMsgbox("error in this function in class")
        end try
    Return ds.Tables(0).rows(0)
    Disconnect()
End Function

Public Function getGroupID(byval username as string) as integer
'get medical group name based on username
'Dim strQuery as string
strQuery = "select g.pk_group " & _
   " from [group] g, insured i, eligibility e, [user] u " & _
   " where u.username = " & username & "," & _
   " and i.fk_usertable = u.pk_user and e.fk_group = g.pk_group " & _
   " and e.pk_eligibility in " & _
   "(select pk_eligibility from [user] u, insured i, eligibility e " & _
   " where u.username = " & username & "," & _
   " and i.fk_usertable = u.pk_user and fk_insured = i.pkinsured " & _
   " and e.most_current =1 ) "
try
  'myConn = new SqlConnection(_strConn)
  Connect()
  myCmd = new SqlCommand(strQuery, myConn)
  Dim strResult as string
  'myConn.open()
  myDataReader = myCmd.ExecuteReader()
  while myDataReader.read()
    strResult = myDataReader.item("pk_group")
  end while
  Dim intResult as integer
  if strResult <> "" then
    if IsNumeric(strResult) then
      getGroupID = cint(strResult)
    end if
  else
    getGroupID = -1
  end if
  catch ex as exception
    exit function
  finally
    myDataReader.close
    'myConn.close()
    Disconnect()
  end try
end Function

public Function getRelation() as DataTable
strQuery = "select pk_relation, relationship from relation where " & _
    "relationship <> 'INSURED'"
Dim ds as new Dataset
try
    Connect()
    myDataAdapter = new SqlDataAdapter(strQuery, myConn)
    myDataAdapter.Fill(ds, "relation")
    catch ex as sqlexception
        exit function
    end try
    return ds.tables("relation")
    Disconnect()
end Function

public Function getDiagnosiscode() as dataset
strQuery = "select pk_diagnosiscode, diagnosiscode_name from " & _
    "diagnosiscode order by diagnosiscode_name"
Dim ds as new Dataset
try
    connect()
    myDataAdapter = new SqlDataAdapter(strQuery, myConn)
    myDataAdapter.Fill(ds, "Diagnosiscode")
    catch ex as sqlexception
        exit function
    end try
    return ds
    Disconnect()
end function

public Function getLanguage() as Dataset
strQuery = "select pk_language, language from language order by " & _
    "pk_language asc"
myConn = new SqlConnection(_strConn)
myDataAdapter = new SqlDataAdapter(strQuery, myConn)
Dim ds as new Dataset()
myDataAdapter.Fill(ds, "language")
return ds
end Function

public Function getMaritalStatus() as DataSet
strQuery = "select * from maritalstatus order by pk_maritalstatus asc"
myConn = new SqlConnection(_strConn)
myDataAdapter = new SqlDataAdapter(strQuery, myConn)
Dim ds as new DataSet()
myDataAdapter.Fill(ds, "MaritalStatus")
return ds
end Function

public Function getState() as DataSet
    strQuery = "select * from state order by abbreviation asc"
    myConn = new SqlConnection(_strConn)
    myDataAdapter = new SqlDataAdapter(strQuery, myConn)
    Dim ds as new Dataset()
    myDataAdapter.Fill(ds, "State")
    return ds
end Function

public Function getSpecialty() as DataSet
    strQuery = "select pk_specialty, specialty_name from specialty order by "
        "specialty_name asc"
    myConn = new SqlConnection(_strConn)
    myDataAdapter = new SqlDataAdapter(strQuery, myConn)
    Dim ds as new Dataset()
    myDataAdapter.Fill(ds, "specialty")
    return ds
end Function

public Function getEmploymentStatus() as dataset
    strQuery = "select pk_employmentstatus, status_name from employmentstatus order by "
        "employmentstatus order by status_name"
    myConn = new SqlConnection(_strConn)
    myDataAdapter = new SqlDataAdapter(strQuery, myConn)
    Dim ds as new Dataset()
    myDataAdapter.Fill(ds, "employmentStatus")
    return ds
end Function

public Function getBenefitPlans() as DataSet
    strQuery = "select pk_benefitplans, benefitplan_name from benefitplans "
        "order by benefitplan_name"
    myConn = new SqlConnection(_strConn)
    myDataAdapter = new SqlDataAdapter(strQuery, myConn)
    Dim ds as new Dataset()
    myDataAdapter.Fill(ds, "benefitplans")
return ds
end Function

public Function savePersonalInfoChanged(firstname, lastname, middlename, _
    street, street2, city, state, zipcode, homephone, homephoneext, _
    cellphone, cellphoneext, email, dob, ssn, language, sex, ms, username) _
    as integer

Dim intResult as integer
strQuery = "update Insured set first_name=" & firstname & ", last_name=" & 
    lastname & ", middle_name=" & middlename & ",street1=" & _
    "street & ",street2=" & street2 & ",city=" & city & ",state=" & state1 & 
    ",zipcode=" & zipcode & ",phone=" & homephone & ",homephoneext & _
    "phone2=" & cellphone & ",homephoneext & " & _
    "phone2_ext=" & cellphoneext & ",email=" & email & ",dob=" & convert.todatetime(dob) & 
    ",ssn=" & ssn & ",gender=" & sex & _
    "fk_language=" & cint(language) & ",fk_maritalstatus=" & cint(ms) & ",date_modified=" & datetime.now & _
    " from insured i, [user] u 
" where i.fk_usertable = u.pk_user and u.username=" & 
"
dim str as string
str = "update Insured set phone_ext=" & homephoneext & 
" from insured i, [user] u 
" where i.fk_usertable = u.pk_user and u.username=" & 
"
try
    connect()
    myCmd = new SqlCommand(str, myConn)
    intResult = myCmd.ExecuteNonQuery()
catch ex as exception
    savePersonalInfoChanged = -1
    exit function
end try
Disconnect()
savePersonalInfoChanged = intResult
end Function

public Function ExecSQL(byval strQuery as string, byVal blnsp as 
    boolean, byRef strErrorMsg as string) as integer
Dim intReturnValue as integer
myConn = new sqlConnection(_strConn)
myCmd = new sqlCommand(strQuery, myConn)
if blnsp then
    myCmd.commandType = CommandType.storedProcedure
else
    myCmd.CommandType = CommandType.text
end if
myCmd.CommandText = strQuery
try
    myConn.open()
    intReturnValue = myCmd.ExecuteNonQuery()
catch ex as sqlException
    ExecSQL = -1
    strErrorMsg = ex.stackTrace.toString()
    exit function
Finally
    myConn.close
    ExecSQL = intReturnValue
end try
end function

public sub Connect()
    if myConn is Nothing then
        myConn = new SqlConnection(_strConn)
    end if
    if myConn.state = ConnectionState.closed then
        myConn.open()
    end if
end sub

public sub Disconnect()
    if Not (myConn.state = ConnectionState.closed) then
        myConn.close()
    end if
    myConn.close()
end sub
End Class
End Namespace
APPENDIX B

ASP.NET FILES
Home.aspx

<script language="vb" runat="server">
public myConn as new sqlConnection()
public clsdb as new clsMedasolution
public strError as string
sub submit_click(a as object, e as eventargs)
    try
        Dim strQuery as string = "select classID, username from [user] where 
username=" & txtuser.text & " and password=" & txtpass.text & ""
        dim intClassID as integer
        Dim strSessionuser as string
        Dim blnUserAuthenticate as boolean = clsdb.doLogon _
            (strQuery, intClassID, strSessionuser)
        if blnUserAuthenticate = true then
            FormsAuthentication.redirectFromLoginPage(txtuser.text, false)
            session("classID") = intClassID
            session("username") = strSessionuser
            select case session("classID")
            case 1:
                response.redirect("memHome.aspx?username=" & txtuser.text)
            case 2:
                response.redirect("employHome.aspx")
            case 3:
                response.redirect("brokHome.aspx")
            case 4:
                response.redirect("providHome.aspx")
            case 99:
                response.redirect("webmaster.aspx")
            end select
        else
            output.visible=true
            output.text="**Invalid Login"
        end if
        catch ex as sqlexception
            strError = "Error in data connection to database" & ex.tostring()
            response.Write(strError)
        finally
            end try
        end sub
    </script>
MemPersonalInfo.aspx

<script language="VB" runat="server">
'Initialize class clsMedasolution
Dim clsdb as new clsMedasolution
Dim strSessionUser as string
Dim i as integer
'Declare query string
Dim strQuery as string
Dim strError as string
Dim myCmd as SqlCommand
Dim myDataAdapter as SqlDataAdapter
Dim ds as DataSet

sub Page_load(a as object, e as EventArgs)
    lblTop.text = "Welcome, " & strSessionUser & " !"
    if not Page.IsPostback then
        DataBinding()
    end if
end sub

sub cellphoneTextbox_changed(a as object, e as EventArgs)
    'set cellphoneext textbox to be fillable only when cellphone textbox is ok
    p2txtcellphoneext.readonly = "false"
end sub

sub Load_Language(byVal strLanguageName as string)
    ds = clsdb.getLanguage()
    ddlLanguage.datasource = ds
    ddlLanguage.datasource = ds.tables("language")
    ddlLanguage.databindField = "language"
    ddlLanguage.dataValueField = "pk_language"
    ddlLanguage.databind()

    for i = 0 to ddlLanguage.items.count - 1
        if ddlLanguage.Items(i).ToString = strLanguageName then
           ddlLanguage.selectedIndex = i
        end if
    next
End sub

sub Load_MaritalStatus(byVal strMS as string)

61
ds = clsdb.getMaritalStatus()
ddlms.datasource = ds
ddlms.datasource = ds.tables("MaritalStatus")
ddlms.dataTextField = "maritalstatus"
ddlms.dataValueField = "pk_maritalstatus"
ddlms.DataBind()

For i = 0 To ddlms.items.count - 1
if ddlms.Items(i).tostring() = strMS then
    ddlms.selectedIndex = i
end if
next
end sub

sub Load_sex(byval strsex as string)
for i = 0 to ddlsex.items.count -1
    if ddlsex.items(i).tostring = strsex then
        ddlsex.selectedIndex = i
    end if
next
end sub

sub Load_state(byVal strStateName as string)
    ds = clsdb.getState()
ddlState.datasource = ds
ddlState.DataSource = ds.Tables("State")
ddlState.dataTextField = "name"
ddlState.dataValueField = "abbreviation"
ddlState.DataBind()
For i = 0 to ddlState.items.count - 1
if ddlstate.Items(i).value = strStateName then
    ddlstate.selectedIndex = i
    'ddlstate.items(i).value
end if
next
end sub

sub DataBinding()
try
    'Dim dr as DataRow
    'dr = clsdb.getMemberinfo(strSessionUser)

Dim intGroupID as integer = clsdb.getGroupID(strSessionUser)

strQuery = "select i.last_name, i.first_name, i.middle_name, i.street1, " & _
"i.street2, i.city, i.state, i.zipcode, i.phone, i.phone2, " & _
"i.phone_ext, i.phone2_ext, i.email, i.dob, i.ssn, i.gender," & _
"lg.language, lo.location_name, g.group_name," & _
"(select p.last_name + ', ' + p.first_name as Provider_Name " & _
"from [user] u, insured i, provider p, pcp_pcp " & _
"where u.username=" & strSessionUser & "" & _
"and i.fk_usertable = u.pk_user and i.pk_insured = pcp.fk_insured _
"and pcp.fk_provider = p.pk_provider and pcp.most_current =1) as " & _
"Provider_name, ms.maritalstatus from Insured i, [user] u, " & _
"maritalstatus e, [group] g, location lo, language lg, " & _
"maritalstatus ms where u.username=" & strSessionUser & "" & _
"and u.pk_user = i.fk_usertable and i.pk_insured = e.fk_insured " & _
"and g.pk_group = " & intGroupID & "" and lo.pk_location = " & _
"g.fk_location and e.fk_group = g.pk_group and " & _
"lg.pk_language = i.fk_language " & _
"and i.fk_maritalstatus = ms.pk_maritalstatus " & _
"and e.pk_eligibility in " & _
"(select e.pk_eligibility from eligibility e " & _
"where e.most_current=1)"

Dim blnResult as boolean
ds = new Dataset()
blnResult = clsdb.FillDataset(strQuery, ds, "Insured")

if blnResult = true then
    lblTop.text &= "<br>FillDataset works well"
else
    lblTop.text &= "<br>FillDataset does not work"
end if
Dim tblInsured as DataTable = ds.Tables("Insured")
if intGroupID <> -1 then
    tblInsured.Rows(0)("first_name")
else
    tblInsured.Rows(0)("last_name")
end if

'tData bind the first table block
txtfirstname.text = clsdb.checkfornull(tblInsured.rows(0)("first_name"))
txtlastname.text = clsdb.checkfornull(tblInsured.rows(0)("last_name"))
txtmiddlename.text = clsdb.checkfornull(tblInsured.rows(0)("middle_name"))
txtstreet1.text = clsdb.checkfornull(tblInsured.rows(0)("street1"))
'Data bind the second table block

txtdob.text = clsdb.checkForNull(tblInsured.rows(0)("dob"))
txtssn.text = clsdb.checkForNull(tblInsured.rows(0)("ssn"))
txtsex.text = clsdb.checkForNull(tblInsured.rows(0)("gender"))
txtlocation.text = clsdb.checkForNull(tblInsured.rows(0)("location_name"))
txtemail.text = clsdb.checkForNull(tblInsured.rows(0)("email"))

catch ex as exception
    response.write(ex.tostring())
    exit sub
end try
end sub

sub EditPersonalInfo_Click(sender as object, e as EventArgs)
    'convert the panel to edit condition
    panelPersonal.visible=false
    panelEditPersonal.visible=true
    'Dim dr as DataRow
    try
        'dr = clsdb.getMemberinfo(strSessionUser)
        'Data bind the first table block
        p2txtfirstname.text = txtfirstname.text
        p2txtlastname.text = txtlastname.text
        p2txtmiddlename.text = txtmiddlename.text
        p2txtstreet1.text = txtstreet1.text
        p2txtstreet2.text = txtstreet2.text
        p2txtcity.text = txtcity.text
        Dim strStateName as string = txtstate.text
        load_state(strStateName)
        p2txtzipcode.text = txtzipcode.text
        p2txthomephone.text = txthomephone.text
    end try
end sub
Dim strLanguage as string = txtlanguage.text
Load_Language(strLanguage)
Dim strSex as string = txtext.text
Load_Sex(strSex)
p2txtlocation.text = txtlocation.text
p2txtmedicalgroup.text = txtmedicalgroup.text
Dim strMS as string = txtextms.text
Load_MaritalStatus(strMS)
p2txtpcp.text = txtpcp.text

catch ex as exception
    response.write(ex.toString())
    exit sub
end try
end sub

sub ShowDependent_Click(sender as object, e as EventArgs)
    'panelPersonal.visible=false
    'panelDependent.visible=true
end sub

sub savePersonalInfo_Click(sender as object, e as EventArgs)
    If page.isValid() Then
        'call savePersonalInfoChanged function
        Dim intResult as integer
        Dim tblInsured as string 'datatable
        strQuery = " Update Insured set first_name = ", p2txtfirstname.text & ", last_name = ", p2txtlastname.text & ", middle_name = ", p2txtmiddlename.text & ", street1 = ", p2txtstreet1.text & "
        p2txthomephoneext.text & ", phone2 = " & p2txtcellphone.text & "
    End If
end sub
"phone2_ext = " & p2txtcellphoneext.text & ", email = " & _
p2txtemail.text & ", dob = " & convert.ToDateTime(p2txtdob.text) & ", ssn = " & p2txtssn.text & ", fk_language = " & _
cint(ddllanguage.selectedItem.value) & ", gender = " & _
"ddlsex.selectedItem.value & ", fk_maritalstatus = " & _
cint(ddlms.selectedItem.value) & ", date_modified = " & _
"DateTime.Now & from insured i, [user] u " & _
" where i.fk_usertable = u.pk_user and u.username=" & _
strSessionuser & "
intResult = clsdb.execSQL(strQuery, false,strError)
if intResult = -1 then
lblTop.text &= "<br>No record had been updated" & strError
else
lblTop.text &= "<br>" & intResult.toString & " records had been modified."
end if
end if
DataBinding()
panelEditPersonal.visible=false
panelPersonal.visible=true
end sub

sub cancelPersonalInfo_Click(sender as object, e as EventArgs)
panelEditPersonal.visible=false
panelPersonal.visible=true
end sub
</script>

MemEligibility.aspx

<script language="vb" runat="server">
Public strSessionUser as String 'username from the previous page
Public strQuery as String 'string value to hold all query to database
Public strBenefitplancode as string 'global value for benefitplan.ascx property
Public clsdb as new clsMedasolution
Public myConn as new SqlConnection(clsdb.connectionString)
Public myCmd as sqlCommand
Public myDataReader as sqlDataReader
Public myParameter as sqlParameter
sub Page_load(a as object, e as EventArgs)
strSessionUser = httpContext.current.session("username").ToString()
lblTop.text = "Welcome, " & strSessionUser & "!"

66
if Not Page.IsPostBack then
    DataBind()
end if
end sub

sub DataBind()
    myCmd = new SqlCommand("sp_selectInsuredGroupProvider", myConn)
    myCmd.CommandType = CommandType.storedProcedure
    myParameter = new SqlParameter("@username", SqlDbType.nvarchar, 50)
    myCmd.parameters.add(myParameter)
    myCmd.Parameters("@username").value = strSessionuser

    try
        myConn.open()
        myDataReader = myCmd.ExecuteReader()
        if myDataReader.read() then
            txlastname.text = myDataReader("last_name")
            txtfirstname.text = myDataReader("first_name")
            txtmiddlename.text = myDataReader("middle_name")
            txtemploymentstatus.text = myDataReader("status_name")
            txtgroup.text = myDataReader("group_name")
            txtpcp.text = myDataReader("Provider_name")
            txtbenefitplan.text = myDataReader("benefitplan_name")
            txteffdate.text = myDataReader("eff_date")
            txttermdate.text = myDataReader("term_date")
            strBenefitplancode = myDataReader("benefitplan_code")
            viewstate("benefitplancode") = myDataReader("benefitplan_code")
        end if
    catch ex as sqlException
        lblfirst.text &= "<br> data reader is failed."
    Finally
        myDataReader.close()
        myConn.close()
        'deliver value to ascx property strValue
        benefitplanascx.strValue = strbenefitplancode
    end try
end sub
</script>

MemDependentInfo.aspx

<script language="vb" runat="server">

67
public strSessionuser as string
public strQuery as string
public clsdb as new clsMedasolution
public myConn as new SqlConnection(clsdb.connectionString)
public myCmd as sqlCommand
public myDataAdapter as sqlDataAdapter
public myParameter as SqlParameter
public myDataReader as SqlDataReader
public ds as Dataset
public strDependentPK as string  'dependent table PK
public strProcess as string    'determine viewstate("InsertEdit")
sub Page_load()
    strSessionuser = httpContext.current.session("username").ToString()
    if Not Page.IsPostback then
        viewstate("InsertEdit") = 0
        lblTop.text = "Welcome, " & strSessionUser & "!
        Databind()
        LoadRelationship()
    end if
end sub

sub Databind()
    'lblfirst.text &= "<BR>" & strSessionuser
    myCmd = new sqlCommand("sp_getDependents", myConn)
    myCmd.CommandType = CommandType.StoredProcedure
    myParameter = new sqlParameter("@username", sqlDBType.nvarchar, 50)
    myCmd.parameters.add(myParameter)
    myCmd.Parameters("@username").value = strSessionuser
    try
        myConn.open()
        dg_getDependent.datasource = myCmd.ExecuteReaderQ
        dg_getDependent.Databind
    catch ex as sqlexception
        response.write(ex.tostring())
    finally
        myConn.close()
    end try
end sub

sub checkbox_checked(a as object, e as eventargs)
    'Show the input table for users
    if cbInsertIndex.checked = true then
viewstate("InsertEdit") = 1
panelDependent.visible = true
'lblfirst.text &= "<br>strProcess = " & viewstate("InsertEdit")
end if
end sub

sub dg_EditItem(a as object, e as DataGridCommandEventArgs)
    Dim pkCell as TableCell = e.Item.cells(0)
    Dim lastnameCell as TableCell = e.Item.cells(1)
    Dim firstnameCell as TableCell = e.Item.cells(2)
    Dim sexCell as TableCell = e.Item.cells(3)
    Dim dobCell as TableCell = e.Item.cells(4)
    Dim ssnCell as TableCell = e.Item.cells(5)
    Dim relationshipCell as TableCell = e.Item.cells(6)
    Dim fulltimestudentCell as TableCell = e.Item.cells(7)
    if e.CommandSource.CommandName = "Edited_Row" then
        viewstate("InsertEdit") = 2
        panelDependent.visible = true
        viewstate("DependentPK") = pkCell.text
        txtdeplastname.text = lastnameCell.text
        txtdepfirstname.text = firstnameCell.text
        ddldepsex.selectedvalue = sexCell.text
        txtdepdob.text = dobCell.text
        txtdepssn.text = ssnCell.text
        Dim i as integer = 0
        Dim li as ListItem
        for each li in ddldeprelationship.items
            if li.text = relationshipCell.text then
                ddldeprelationship.selectedindex = i
            end if
            i = i + 1
        next
        sldepfs.checked = boolean.parse(fulltimestudentCell.text)
    end if
end sub

sub LoadRelationship()
    ddldeprelationship.DataSource = (clsdb.getRelation()).defaultView
    ddldeprelationship.DataTextField = "relationship"
    ddldeprelationship.DataValueField = "pk_relation"
    ddldeprelationship.Databind
    "Insert a prompt at the first selection
ddldeprelationship.Items.Insert(0,"select a relationship")
ddldeprelationship.selectedIndex = 0
end sub

public Function getCharBit(byVal blnValue as boolean) as integer
    Dim intBit as integer
    if blnValue = true
        intBit = 1
        return intBit
    else
        intBit = 0
        return intBit
    end if
end Function

sub SaveDependent_Click(sender as object, e as EventArgs)
    """
    """
    "ViewState 1 --Insert a new value"
    if cint(viewstate("InsertEdit")) = 1 then
        myCmd = new SqlCommand("sp_InsertNewDependent", myConn)
        myCmd.CommandType = CommandType.storedProcedure
        myCmd.Parameters.add(new SqlParameter("@lastname", sqlDbType.nvarchar, 35))
        myCmd.Parameters("@lastname").value = txtdeplastname.text
        myCmd.Parameters.Add(new SqlParameter("@firstname", sqlDbType.nvarchar, 35))
        myCmd.Parameters("@firstname").value = txtdepfirstname.text
        myCmd.Parameters.Add(new SqlParameter("@gender", sqlDbType.nvarchar, 1))
        myCmd.Parameters("@gender").value = ddldepsex.selectedvalue
        myCmd.Parameters.Add(new SqlParameter("@dob", sqlDbType.smallDateTime, 4))
        myCmd.Parameters("@dob").value = txtdepdob.text
        myCmd.Parameters.Add(new SqlParameter("@fk_relation", sqlDbType.int, 4))
        myCmd.Parameters("@fk_relation").value = ddldeprelationship.selectedIndex
        myCmd.Parameters.Add(new SqlParameter("@dependentcode", sqlDbType.int, 4))
        myCmd.Parameters("@dependentcode").value = dg_getDependent.items.count + 1
        myCmd.Parameters.Add(new SqlParameter("@ssn", sqlDbType.nvarchar, 11))
        myCmd.Parameters("@ssn").value = txtdepssn.text
        myCmd.Parameters.Add(new SqlParameter("@date_created", & _
            sqlDbType.smallDateTime, 4))
        myCmd.Parameters("@date_created").value = dateTime.now
    70
myCmd.Parameters.Add(new SqlParameter("@date_modified", SqlDbType.smallDateTime, 4))
myCmd.Parameters("@date_modified").Value = dateTime.now
myCmd.Parameters.Add(new SqlParameter("@IsArchived", SqlDbType.nvarchar, 1))
myCmd.Parameters("@IsArchived").Value = 0
myConn.Open()
    myCmd.ExecuteNonQuery()
    'lblfirst.text &= "<br>Insert into INSURED table successfully."
catch ex As SQLException
    lblfirst.text &= "ERROR: fail to insert a record into " & _
        "INSURED. <br>" & ex.ToString()
Finally
    myConn.Close()
end try

'get PK of new entry for the dependent table
Dim strPKInsured As String
Dim intPKInsured As Integer
strPKInsured = "select pk_insured from insured where last_name = " &
    txtdeplastname.text & " and first_name = " & txtdepfirstname.text & ""
try
    myConn.Open()
    myCmd = New SqlCommand(strPKInsured, myConn)
    myDataReader = myCmd.ExecuteReader()
    if myDataReader.Read() Then
        intPKInsured = myDataReader.GetInt32(0)
    Else
        intPKInsured = 0
    End If
    catch ex As SQLException
        lblfirst.text &= "<br>error: fail to get PK of insured" & ex.ToString()
    Finally
        myDataReader.Close()
        myConn.Close()
    end try

'get insured primary key of the new entry
Dim strPKInsuredPrimary As String
Dim intPKInsuredPrimary As Integer
strPKInsuredPrimary = "select pk_insured from insured i, [user] u " & _
    "where u.pk_user = i.fk_usertable and u.username = " & strSessionUser & ""
try
myConn.open()
myCmd = new sqlCommand(strPKInsuredPrimary, myConn)
myDataReader = myCmd.ExecuteReader()
if myDataReader.read() then
    intPKInsuredPrimary = myDataReader.GetInt32(0)
else
    intPKInsuredPrimary = 0
end if
catch ex as sqlexception
    lblFirst.text &= "<BR>ERROR: fail to get PK of insured Primary." & _
    ex.toString()
Finally
    myDataReader.close()
    myConn.close()
end try
myCmd = new SqlCommand("sp_InsertNewDependentToDependentTable", myConn)
myCmd.CommandType = CommandType.storedProcedure
myCmd.Parameters.Add(new SqlParameter("@fk_insureddependent", _
    sqlDBType.int, 4))
myCmd.Parameters("@fk_insureddependent").value = intPKInsured
myCmd.Parameters.Add(new SqlParameter("@fk_insuredprimary", " & _
    sqlDBType.int, 4))
myCmd.Parameters("@fk_insuredprimary").value = intPKInsuredPrimary
myCmd.Parameters.Add(new SqlParameter("@date_created", " & _
    sqlDBType.smalldatetime, 4))
myCmd.Parameters("@date_created").value = datetime.now
myCmd.Parameters.Add(new SqlParameter("@date_modified", " & _
    sqlDBType.smalldatetime, 4))
myCmd.Parameters("@date_modified").value = datetime.now
myCmd.Parameters.Add(new SqlParameter("@full_time_student", " & _
    sqlDBType.char, 1))
myCmd.Parameters("@full_time_student").value = getCharBit(sldepfs.checked)
myCmd.Parameters.Add(new SqlParameter("@IsArchived", " & _
    sqlDBType.nvarchar, 1))
myCmd.Parameters("@IsArchived").value = 0
try
    if intPKInsuredPrimary = 0 or intPKInsured = 0 then
        exit sub
    else
        myConn.open()
myCmd.ExecuteNonQuery()
end if

catch ex as sqlException
        lblfirst.text &= "ERROR: fail to insert a dependent 2. <br>" & ex.toString()

Finally
        myConn.close()
end try

clearBoxValue()
panelDependent.visible = false

else if cint(viewstate("InsertEdit")) = 2 then
    strDependentPK = viewstate("DependentPK")
    'get the pk_insured PK in the Insured table

    strQuery = "select fk_insureddependent from dependents " & _
             "where pk_dependents =" & cint(strDependentPK)
    Dim intInsuredPK as integer
    try
        myConn.open()
        myCmd = new SqlCommand(strQuery, myConn)
        myDataReader = myCmd.ExecuteReader()
        if myDataReader.read() then
            intInsuredPK = myDataReader.GetInt32(0)
        end if
    end try
    catch ex as sqlException
        lblfirst.text &= "<BR>get pk_insured error" & ex.toString()
    end try
    myConn.close()

    'Update the Insured table first
    strQuery = "update Insured set last_name = @last_name, first_name" & _
               " = @first_name, ssn = @ssn, dob = @dob, gender =@gender, " & _
               "fk_relation = @fk_relation, date_modified = @date_modified " & _
               "where pk_insured = " & intInsuredPK
    myCmd = new SqlCommand(strQuery, myConn)
    myCmd.Parameters.add(new SqlParameter("@last_name", "sqlDBType.nvarchar, 35))
    myCmd.Parameters("@last_name").value = txtdeplastname.text
    myCmd.Parameters.add(new SqlParameter("@first_name",
                                           "sqlDBType.nvarchar, 35))
    myCmd.Parameters("@first_name").value = txtdepfirstname.text
    myCmd.Parameters.add(new SqlParameter("@ssn", sqlDBtype.nvarchar,
                                           "sqlDBType.nvarchar, 35))
    myCmd.Parameters("@ssn").value = txtdepssn.text
myCmd.parameters.add(new SqlParameter("@dob", sqlDBType.smalldatetime, 4))
myCmd.Parameters("@dob").value = Convert.ToDateTime(txtdepdob.text)
myCmd.Parameters.add(new SqlParameter("@gender", sqlDBtype.nvarchar, 1))
myCmd.Parameters("@gender").value = ddldepsex.selectedvalue
myCmd.Parameters.add(new SqlParameter("@fk_relation", sqlDBtype.int, 4))
myCmd.Parameters("@fk_relation").value = ddldeprelationship.selectedvalue
myCmd.Parameters.add(new SqlParameter("@date_modified", sqlDBtype.smalldatetime, 4))
myCmd.Parameters("@date_modified").value = DateTime.Now
try
  myConn.open()
  myCmd.ExecuteNonQuery()
  lblfirst.text &= "<br>Update INSURED table successfully."
catch ex as sqlException
  lblfirst.text &= "<BR>ERROR: fail to update INSURED table. "
    & ex.toString()
Finally
  myConn.close()
end try
'Update Dependent table
strQuery = "update Dependents set full_time_student = @fulltime_student,
" 
    "date_modified = @date_modified where pk_dependents = " & cint(strDependentPK)
myCmd = new SqlCommand(strQuery, myConn)
myCmd.Parameters.add(new SqlParameter("@fulltime_student", sqlDBtype.nvarchar, 1))
myCmd.Parameters("@fulltime_student").value = getCharBit(sldepfs.checked)
myCmd.Parameters.add(new SqlParameter("@date_modified", sqlDBType.smalldatetime, 4))
myCmd.Parameters("@date_modified").value = DateTime.Now
try
  myConn.open()
  myCmd.ExecuteNonQuery()
  lblfirst.text &= "<br>Update into DEPENDENT table successfully."
catch ex as sqlException
  lblfirst.text &= "<BR>ERROR: fail to update DEPENDENT table.
Finally
    myConn.close()
end try
clearBoxValue()
    panelDependent.visible = false
else
    lblfirst.text &= "Error be here"
end if

DataBind()  
end sub

sub clearBoxValue()
    txtdeplastname.text = 
    txtdepfirstname.text = 
    txtdepssn.text = 
    txtdepdob.text = 
    ddldeprelationship.selectedIndex = 0
    ddldepsex.selectedIndex = 0
    sldepfs.checked = false
end sub

sub CancelinsertDependent_Click(sende as object, e as EventArgs)
    clearBoxValue()
    panelDependent.visible = false
end sub
</script>

MemProviderInfo.aspx

<script language=VB runat=server>
public strSessionUser as string 'username carrier from the previous page
public strQuery as string 'query string
public strErrorMsg as string 'error message string
public clsdb as new clsMedasolution 'declare the dll file
public myConn as new SqlConnection(clsdb.connectionString)
public myCmd as sqlCommand
public myDataReader as sqlDataReader
public myParameter as sqlparameter
sub Page_load(a as object, e as eventargs)
    strSessionuser = httpContext.current.session("username").ToString()
lblTop.text = "Welcome, " & strSessionuser & "!"
if Not Page.IsPostBack then
  if session("classID") <> 2 then
    response.write("../employHome.aspx")
    'response.end
  end if
  LoadEmploymentstatus()
  LoadBenefitplans()
end if
end sub

sub searchEmployee_Click(a as object, e as EventArgs)
  Dim strNeedSearch as string
  if txtsearchname.text <> "" then
    strNeedSearch = "Need Search function"
    DataFiller(strNeedSearch)
    if dg_search.items.count <= 0 then
      'lblfirst.text &= "<Br>No Data is found!"
      panel_display.visible = false
      dg_search.visible = false
    else
      panel_display.visible = true
      dg_search.visible = true
    end if
  else
    lblResult.text = "Need input a name"
    panel_display.visible = true
    dg_search.visible = false
    lblResult.visible = true
  end if
end sub

end sub

sub DataFiller(optional ByVal strWhere as string = "")
  if strSessionuser <> "" then
    if strWhere <> "" then
      strQuery = "sp_ShowAllEmployeeForSearch"
    else
      strQuery = "sp_ShowAllEmployeeInGroup"
    end if
    myCmd = new SqlCommand(strQuery, myConn)
  end if
  if strSessionuser <> "" then
    if strWhere <> "" then
      strQuery = "sp_ShowAllEmployeeForSearch"
    else
      strQuery = "sp_ShowAllEmployeeInGroup"
    end if
    myCmd = new SqlCommand(strQuery, myConn)
  end if
  if strSessionuser <> "" then
    if strWhere <> "" then
      strQuery = "sp_ShowAllEmployeeForSearch"
    else
      strQuery = "sp_ShowAllEmployeeInGroup"
    end if
    myCmd = new SqlCommand(strQuery, myConn)
myCmd.CommandType = CommandType.storedProcedure
myParameter = new SqlParameter("@username", sqlDbType.nvarchar,35)
myCmd.Parameters.add(myParameter)
myCmd.Parameters("@username").value = strSessionuser
if strWhere <> "" then
    myCmd.Parameters.add(new SqlParameter("@lastname", sqlDbType.nvarchar, 35))
    myCmd.Parameters("@lastname").value = txtsearchName.text
end if
try
    myConn.open()
    dg_search.datasource = myCmd.ExecuteReader()
    dg_search.dataBind()
catch ex as sqlException
    lblfirst.text &= "<br>Error: fail to show All Records<br>" & ex.ToString()
finally
    myConn.close
end try
else
    lblfirst.text &= "<BR>Need a login name."
    response.end
end if
end sub

sub EditDeleteRow_Click(a as object, e as DataGridCommandEventArgs)
    if e.Item.ItemIndex > -1 and e.CommandSource.CommandName = "EditThis" then
        'set the viewstate
        viewstate("InsertEdit") = 2 'edit state
        dg_search.selectedIndex = e.Item.ItemIndex
        Dim dgItem as DataGridItem
dgItem = dg_search.selectedItem
        'declare tablecell and load value from datagrid to tablecells
        Dim pkEligibilityCell as TableCell = dgItem.controls(0)
        Dim lastnameCell as TableCell = dgItem.controls(1)
        Dim firstnameCell as TableCell = dgItem.controls(2)
        Dim employmentstatusCell as TableCell = dgItem.controls(3)
        Dim benefitplanCell as TableCell = dgItem.controls(4)
        Dim hiredateCell as TableCell = dgItem.Controls(5)
        Dim effdateCell as TableCell = dgItem.Controls(6)
        Dim termdateCell as TableCell = dgItem.Controls(7)
        'bind tablecell value to table value
viewstate("pk_eligibility") = pkEligibilityCell.text
txtlastname.text = lastnameCell.text
txtfirstname.text = firstnameCell.text
Dim i as integer = 0
Dim li as listitem
txthiredate.text = hiredateCell.text
txteffdate.text = effdateCell.text
txttermdate.text = termdateCell.text
panel_EditInsertTable.visible=true
else if e.Item.itemindex > -1 and e.CommandSource.Commandname = "DeleteThis" then
dg_search.selectedIndex = e.Item.ItemIndex
Dim dgItem as DataGridItem
dgItem = dg_search.selectedIndex
Dim PKEligibilityCell as TableCell = dgItem.Controls(0)
Dim intPKEligibility as integer = Cint(PKEligibilityCell.text)
Dim btnDelete as Button = ctype(e.item.cells(9).controls(0), button)
btnDelete.attributes.add("onClick", "return confirm_Delete();")

'get the insured pk from eligibility table
strQuery = "select fk_insured from eligibility where pk_eligibility ="
    & intPKEligibility
Dim intPKInsuredValue as integer
intPKInsuredValue = clsdb.ExecuteScalar(strQuery, strErrorMsg)
if strErrorMsg <> "" then
    lblfirst.text &= "<br>Error: failed to get fk_insured from eligibility table."
end if
'Delete the record in Eligibility table
Dim intDeleteValue as integer
strQuery = "delete from Eligibility where pk_eligibility =" & intPKEligibility
intDeleteValue = clsdb.execSQL(strQuery, false, strErrorMsg)
if intDeleteValue = -1 then
    lblfirst.text &= "<br>Error: failed to delete a record into ELIGIBILITY TABLE."
end if
'Delete the record in the insured table
strQuery = "delete from insured where pk_insured=" & intPKInsuredValue
Dim intDeleteInsuredRecord as integer = clsdb.execSQL(strQuery,
    false, strErrorMsg)
if strErrorMsg <> "" then
lblfirst.text &="<BR>Error: failed to delete a record in INSURED TABLE."

end if
dataFiller()
end if
dend

sub BtnInsert_Click(a as object, e as EventArgs)
'set the viewstate
viewstate("InsertEdit") = 1 'Insert state
'show the display panel first
if panel_display.visible = false then
    DataFiller()
    panel_display.visible = true
end if
if dg_search.columns(8).visible = true then
dg_search.columns(8).visible = false
end if
txtlastname.readonly = false
txtfirstname.readonly = false
panel_EditInsertTable.visible = true
dend

sub BtnEdit_Click(a as object, e as EventArgs)
'show the display panel first
if panel_display.visible = false then
    DataFiller()
    panel_display.visible = true
end if
'show/hide the last column in the datagrid
dg_search.columns(9).visible = false
dg_search.columns(8).visible = true
dend

sub BtnDelete_Click(a as object, e as EventArgs)
if strSessionuser <> "" then
    DataFiller()
    panel_display.visible = true
dg_search.visible = true
dg_search.columns(8).visible = false
dg_search.columns(9).visible = true
end if
end sub

sub Save_click(a as object, e as eventargs)
'In Edit state
if viewstate("InsertEdit") = 2 and Page.Isvalid then
callEditSaveRecord()
'In Insert state
else if viewState("InsertEdit") = 1 and Page.Isvalid then
call save_record()
clearTextBoxValue() DataFiller()
panel_EditInsertTable.visible= false
end if
end sub
</script>

EmploerReview.aspx

<script language="VB" runat=server>
public strSessionuser as string 'declare sessionuser
public clsdb as new clsMedasolution 'declare clsMedasolution class object
public myConn as new sqlConnection(clsdb.connectionString)
public myCmd as sqlcommand
public myDataReader as sqlDataReader
public strQuery as string
public strErrorMsg as string 'error message string
sub Edit_Click(a as object, e as Eventargs)
ControlReadonlyState()
end sub

sub Save_Click(a as object, e as eventargs)
call saveRecord()
controlreadonlystate() dataFiller()
end sub

sub ControlReadonlyState()
txtaddress1.readonly= not txtaddress1.readonly
txtaddress2.readonly = not txtaddress2.readonly
txtcity.readonly = not txtcity.readonly
txtzipcode.readonly = not txtzipcode.readonly
txtphone1.readonly = not txtphone1.readonly
EmployeeInfo.aspx

<script language="VB" runat=server>
public strSessionUser as string 'username carrier from the previous page
public strQuery as string 'query string
public strErrorMsg as string 'error message string
public clsdb as new clsMedasolution 'declare the dll file
public myConn as new SqlConnection(clsdb.connectionString)
public myCmd as sqlCommand
public myDataReader as sqlDataReader
public myParameter as sqlparameter
sub searchEmployee_Click(a as object, e as EventArgs)
  Dim strNeedSearch as string
  if txtsearchname.text <> "" then
    strNeedSearch = "Need Search function"
    DataFiller(strNeedSearch)
    if dg_search.items.count <= 0 then
      'lblfirsttext &= "<Br>No Data is found!"
      panel_display.visible = false
      dg_search.visible = false
    else

  end if
end sub
</script>
if strSessionUser = "" then
    if strWhere = "" then
        strQuery = "sp_ShowAllEmployeeForSearch"
    else
        strQuery = "sp_ShowAllEmployeeInGroup"
    end if
end if
myCmd = new SqlCommand(strQuery, myConn)
myCmd.CommandType = CommandType.StoredProcedure
myParameter = new SqlParameter("@username", SqlDbType.NVarChar, 35)
myCmd.Parameters.add(myParameter)
myCmd.Parameters("@username").Value = strSessionUser

if strWhere = "" then
    myCmd.Parameters.add(new SqlParameter("@lastname", SqlDbType.NVarChar, 35))
    myCmd.Parameters("@lastname").Value = txtSearchName.Text
end if
try
    myConn.Open()
    dg_search.datasource = myCmd.ExecuteReader()
    dg_search.dataBind()
catch ex as SQLException
    lblFirst.Text & = "<br>Error: fail to show All Records<br>" & ex.ToString()
finally
    myConn.Close
end try
else
    lblFirst.Text &= "<BR>Need a login name."
response.end
end if
end sub

sub BtnShowAll_Click(a as object, e as EventArgs)
if panel_display.visible=false then
    DataFiller()
    panel_EditInsertTable.visible=false
    panel_display.visible=true
else
dataFiller()
    if dg_search.columns(8).visible = true then
        dg_search.columns(8).visible = false
    end if
end if
end if
end sub

sub EditDeleteRow_Click(a as object, e as DataGridCommandEventArgs)
if e.Item.ItemIndex > -1 and e.CommandSource.CommandName = "EditThis" then
    'set the viewstate
    viewstate("InsertEdit") = 2    'edit state
dg_search.selectedIndex = e.Item.ItemIndex
Dim dgItem as DataGridItem
dgItem = dg_search.selectedItem
'declare tablecell and load value from datagrid to tablecells
Dim pkEligibilityCell as TableCell = dgItem.controls(0)
Dim lastnameCell as TableCell = dgItem.controls(1)
Dim firstnameCell as TableCell = dgItem.controls(2)
Dim employmentstatusCell as TableCell = dgItem.controls(3)
Dim benefitplanCell as TableCell = dgItem.controls(4)
Dim hiredateCell as TableCell = dgItem.Controls(5)
Dim effdateCell as TableCell = dgItem.Controls(6)
Dim termdateCell as TableCell = dgItem.Controls(7)
'bind tablecell value to table value
viewstate("pk_eligibility") = pkEligibilityCell.text
txtlastname.text = lastnameCell.text
txtfirstname.text = firstnameCell.text
Dim i as integer = 0
Dim li as listitem
For each li in ddlemploymentstatus.items
    if li.text = employmentstatusCell.text
ddlemploymentstatus.selectedIndex = i
end if
end if  
i = i + 1
next  
i = 0
For each li in ddlbenefitplan.items
    if li.text = benefitplanCell.text then
        ddlbenefitplan.selectedIndex = i
    end if  
i = i + 1
Next  
txthiredate.text = hiredateCell.text  
txteffdate.text = effdateCell.text  
txttermdate.text = termdatecell.text  
panel_EditInsertTable.visible=true
else if e.Item.itemindex > -1 and e.CommandSource.Commandname =  "DeleteThis" then  
dg_search.selectedIndex = e.Item.ItemIndex  
Dim dgItem as DataGridItem  
dgItem = dg_search.selectedItem  
Dim PKEligibilityCell as TableCell = dgItem.Controls(0)  
Dim intPKEligibility as integer = CInt(PKEligibilityCell.text)  
Dim btnDelete as Button = ctype(e.item.cells(9).controls(0), button)  
btnDelete.attributes.add("onClick", "return confirm_Delete();")
'get the insured pk from eligibility table  
strQuery = "select fk_insured from eligibility where pk_eligibility ="  
   & intPKEligibility  
Dim intPKInsuredValue as integer  
intPKInsuredValue = clsdb.ExecScalar(strQuery, strErrorMsg)  
if strErrorMsg <> "" then  
    lblfirst.text &= "<br>Error: failed to get fk_insured from eligibility table."
end if
'Delete the record in Eligibility table  
Dim intDeleteValue as integer  
strQuery = "delete from Eligibility where pk_eligibility =" & intPKEligibility  
intDeleteValue = clsdb.ExecSQL(strQuery, false, strErrorMsg)  
if intDeleteValue = -1 then  
    lblfirst.text &= "<br>Error: failed to delete a record into ELIGIBILITY TABLE."
end if
'Delete the record in the insured table
strQuery = "delete from insured where pk_insured=" & intPKInsuredValue
Dim intDeleteInsuredRecord as integer = clsdb.execSQL(strQuery, false, strErrorMsg)
if strErrorMsg <> "" then
    lblfirst.text &= ";<BR>Error: failed to delete a record in INSURED TABLE."
end if
dataFiller()
end if

sub BtnInsert_Click(a as object, e as Eventargs)
' set the viewstate
viewstate("InsertEdit") = 1 'Insert state
' show the display panel first
if panel_display.visible = false then
    DataFiller()
    panel_display.visible = true
end if
if dg_search.columns(8).visible = true then
    dg_search.columns(8).visible = false
end if
txtlastname.readonly=false
txtfirstname.readonly=false
panel_EditInsertTable.visible=true
end sub

sub BtnEdit_Click(a as object, e as Eventargs)
' show/hide the last column in the datagrid
if panel_display.visible = false then
    DataFiller()
    panel_display.visible = true
end if
'd show/hide the last column in the datagrid
dg_search.columns(9).visible = false
dg_search.columns(8).visible = true
end sub

sub BtnDelete_Click(a as object, e as Eventargs)
if strSessionuser <> "" then
DataFiller()
panel_display.visible = true
dg_search.visible = true
dg_search.columns(8).visible = false
dg_search.columns(9).visible = true
end if
'panel_EditInsertTable.visible=false
end sub

sub Save_click(a as object, e as eventargs)
""""In Edit state """"
if viewstate("InsertEdit") = 2 and Page.Isvalid then
myCmd = new SqlCommand("sp_updateEligibilityForGroup", myConn)
myCmd.CommandType = CommandType.storedProcedure
myParameter = new SqlParameter("@pk_eligibility", sqlDbType.int)
myParameter.value = viewstate("pk_eligibility")
myCmd.Parameters.add(myParameter)
myParameter = new SqlParameter("@fk_employmentstatus", sqlDbType.int)
myParameter.value = ddlemploymentstatus.selectedValue
myCmd.Parameters.add(myParameter)
myParameter = new SqlParameter("@fk_benefitplans", sqlDbType.int)
myParameter.value = ddlbenefitplan.selectedValue
myCmd.Parameters.add(myParameter)
myParameter = new SqlParameter("@hiredate", sqlDbType.smalldatetime)
myParameter.value = txthiredate.text
myCmd.Parameters.add(myParameter)
myParameter = new SqlParameter("@eff_date", sqlDbType.smalldatetime, 4)
myParameter.value = txttermdate.text
myCmd.Parameters.add(myParameter)
myParameter = new SqlParameter("@term_date", sqlDbType.smalldatetime,
4)
myParameter.value = txttermdate.text
myCmd.Parameters.add(myParameter)
myParameter = new SqlParameter("@date_modified", sqlDbType.
smalldatetime, 4)
myParameter.value = dateTime.now
myCmd.Parameters.add(myParameter)
try
myConn.open
lblfirst.text &= "<BR>record effects is " & myCmd.ExecuteNonQuery()
catch ex as sqlexception
lblfirst.text &= "Error: Fail to update eligibility table." & ex.ToString()
finally
    myConn.close
end try

In Insert state
else if viewState("InsertEdit") = 1 and Page.IsValid then
    saveButton.attributes.add("onClick", "return bttnsave_click();")

    'Insert value to insured table
    myCmd = new sqlCommand("sp_InsertInsuredForGroup", myConn)
    myCmd.CommandType = CommandType.storedProcedure
    myCmd.parameters.add(new SqlParameter("@last_name", 
        SqlDbType.NVarChar, 35))
    myCmd.Parameters("@last_name").value = txtlastname.text
    myCmd.Parameters.add(new SqlParameter("@first_name", 
        SqlDbType.NVarChar, 35))
    myCmd.Parameters("@first_name").value = txtfirstname.text
    myCmd.Parameters.add(new SqlParameter("@date_created", 
        SqlDbType.SmallDateTime, 4))
    myCmd.Parameters("@date_created").value = dateTime.now
    myCmd.Parameters.add(new SqlParameter("@date_modified", 
        SqlDbType.SmallDateTime, 4))
    myCmd.Parameters("@date_modified").value = dateTime.now
    myCmd.Parameters.add(new SqlParameter("@fk_relation", 
        SqlDbType.Int, 4))
    myCmd.Parameters("@fk_relation").value = 1
    myCmd.Parameters.add(new SqlParameter("@IsArchived", 
        SqlDbType.NVarChar, 1))
    myCmd.Parameters("@IsArchived").value = 0

    Dim intReturnValue as Integer
    try
        myConn.Open()
        intReturnValue = myCmd.ExecuteNonQuery()
        'lblfirst.text &= "<BR>insert insured successfully = " & intReturnValue
    catch ex as SQLException
        lblfirst.text &= "<BR>Error: Fail to insert to INSURED table."
    Finally
        myConn.Close
    end try

    'get the pk_insured for the new insert insured
    strQuery = "select pk_insured from insured where last_name=" & txtlastname.text & 
    " and first_name=" & txtfirstname.text & ""
    Dim intPKInsured as Integer = clsdb.ExecuteScalar(strQuery, strErrorMsg)

    'get the group pk
strQuery = "select g.pk_group from [group] g, [user] u " & _
            " where u.pk_user = g.fk_usertable " & _
            " and u.username ="" & strSessionuser & ""
Dim intPKgroup as integer = clsdb.ExecScalar(strQuery, strErrorMsg)
'get location pk
strQuery = "select fk_location from [group] g, [user] u " & _
            " where u.pk_user = g.fk_usertable " & _
            " and u.username ="" & strSessionuser & ""
Dim intPKlocation as integer = clsdb.ExecScalar(strQuery, strErrorMsg)
'INSERT INTO THE ELIGIBILITY TABLE
if intPKInsured > 0 and intPKgroup <> 0 and intPKLocation <> 0 then
    myCmd = new sqlCommand("sp_InsertEligibilityForGroup", myConn)
    myCmd.CommandType = CommandType.storedProcedure
    myParameter = new SqlParameter("@fk_insured", sqldbtype.int)
    myParameter.value = intPKInsured
    myCmd.Parameters.add(myParameter)
    myParameter = new SqlParameter("@fk_benefitplans", sqldbtype.int)
    myParameter.value = ddlbenefitplan.selectedValue
    myCmd.Parameters.add(myParameter)
    myParameter = new SqlParameter("@fk_group", sqldbtype.int)
    myParameter.value = intPKgroup
    myCmd.Parameters.add(myParameter)
    myParameter = new SqlParameter("@fk_location", sqldbtype.int)
    myParameter.value = intPKlocation
    myCmd.Parameters.add(myParameter)
    myParameter = new SqlParameter("@fk_employmentstatus", sqldbtype.int)
    myParameter.value = ddlemploymentstatus.selectedValue
    myCmd.Parameters.add(myParameter)
    myParameter = new SqlParameter("@hiredate", sqlParameter("@eff_date", sqlDbType.smalldatetime)
    myParameter.value = txthiredate.text
    myCmd.Parameters.add(myParameter)
    myParameter = new SqlParameter("@term_date", sqlDbType.smalldatetime)
    myParameter.value = txtermdate.text
    myCmd.Parameters.add(myParameter)
    myParameter = new SqlParameter("@date_created", sqlDbType.smalldatetime)
sqlDbType.smalldatetime)
myParameter.value = DateTime.now
myCmd.parameters.add(myParameter)
myCmd.Parameters.add(new SqlParameter("@date_modified", _
    SqlDbType.smalldatetime))
myCmd.Parameters("@date_modified").value = DateTime.now
myParameter = new SqlParameter("@most_current",
    SqlDbType.nvarchar, 1)
myParameter.value = 1
myCmd.Parameters.add(myParameter)
myParameter = new SqlParameter("@IsArchived", SqlDbType.nvarchar, 1)
myParameter.value = 0
myCmd.Parameters.add(myParameter)

Dim intReturnResult as integer
try
    myConn.open()
    intReturnResult = myCmd.ExecuteNonQuery()
    'lblfirst.text &= "<BR>insert ELIGIBILITY sucessfully = "
    & intReturnResult
    catch ex as SQLException
        lblfirst.text &= "<BR>Error: Fail to insert to
         ELIGIBILITY table.<BR>"
        & ex.ToString()
    Finally
        myConn.close
    end try
'INSERT A RECORD INTO WEBMASTER TABLE
myCmd = new SqlCommand("sp_InsertWebMasterFromGroup", myConn)
myCmd.commandtype = CommandType.StoredProcedure
myCmd.parameters.add(new SqlParameter("@insuredID", SqlDbType.Int))
myCmd.Parameters("@insuredID").value = intPKInsured
myCmd.parameters.add(new SqlParameter("@requestBy", SqlDbType.Int))
myCmd.Parameters("@requestBy").value = intPKgroup
myCmd.parameters.add(new SqlParameter("@requestDate", SqlDbType.Smalldatetime))
myCmd.Parameters("@requestDate").value = DateTime.now()
Dim intWebMaster as integer
try
    myConn.open()
    intWebMaster = myCmd.ExecuteNonQuery()
catch ex as sqlexception
    lblfirst.text &= "<BR>Error: Fail to insert to ELIGIBILITY table.<BR>" & ex.ToString()
Finally
    myConn.close
end try
'if errorMsg <> "" then
    'lblfirst.text &= "<BR>Error: failed to insert into webmaster."
'end if
else
    lblfirst.text &= "<BR> intPKInsured = " & intPKInsured & "<BR>can't insert eligibility table."
end if
else
    lblfirst.text &= "<br>Impossible to reach there"
end if
clearTextBoxValue()
DataFiller()
panel_EditInsertTable.visible= false
end sub
</script>

BrokReview.aspx

<script language="VB" runat=server>
public strSessionuser as string
    'declare sessionuser
public clsdb as new clsMedasolution
    'declare clsMedasolution class object
public myConn as new sqlConnection(clsdb.connectionString)
public myCmd as sqlCommand
public myDataReader as sqlDataReader
public strQuery as string
public strErrorMsg as string
    'error message string
sub Page_Load(a as object, e as EventArgs)
    strSessionuser = httpcontext.current.session("username").ToString()
    lblTop.text = "Welcome, " & strSessionuser & "!"
    if Not Page.IsPostBack then
        DataFiller()
        LoadState()
    else
if strSessionuser = "" or session("classID") <> 3 then
    response.redirect("../brokHome.aspx")
    response.end
end if
end if
end sub

sub DataFiller()
    strQuery = "select address1, address2,city,state,zip,phone1,phone2,phone1_ext, phone2_ext,fax," & 
            "primary_contact,secondary_contact,primary_email,secondary_email, broker_name " & 
            " from broker b, [user] u where b.fkusertable = u.pk_user and u.username = " & 
            strsessionuser & ""
    try
        myConn.open
        myCmd = new SqlCommand(strQuery, myConn)
        myDataReader = myCmd.ExecuteReader()
        if myDataReader.Read then
            lblcompanyname.text = clsdb.checkForNull(myDataReader("broker_name"))
            txtaddress1.text = clsdb.checkForNull(myDataReader("address1"))
            txtaddress2.text = clsdb.checkForNull(myDataReader("address2"))
            txtcity.text = clsdb.checkForNull(myDataReader("city"))
            txtstate.text = clsdb.checkForNull(myDataReader("state"))
            txtzipcode.text = clsdb.checkForNull(myDataReader("zip"))
            txtphone1.text = clsdb.checkForNull(myDataReader("phone1"))
            txtphone2.text = clsdb.checkForNull(myDataReader("phone2"))
            txtext1.text = clsdb.checkForNull(myDataReader("phone1_ext"))
            txtext2.text = clsdb.checkForNull(myDataReader("phone2_ext"))
            txtfax.text = clsdb.checkForNull(myDataReader("fax"))
            txtcontact1.text = clsdb.checkForNull(myDataReader("primary_contact"))
            txtcontact1email.text = clsdb.checkForNull(myDataReader("primary_email"))
            txtcontact2.text = clsdb.checkForNull(myDataReader("secondary_contact"))
            txtcontact2email.text = clsdb.checkForNull(myDataReader("secondary_email"))
        end if
        catch ex as sqlexception
            lblfirst.text =&="<br> error: failed to read data."
        end try
        myDataReader.close
        myConn.close
    end try
end sub
End sub

sub Edit_Click(a as object, e as EventArgs)
    ControlReadonlyState()
end sub

sub Save_Click(a as object, e as EventArgs)
    myCmd = new SqlCommand("sp_updateBroker", myConn)
    myCmd.CommandType = CommandType.StoredProcedure
    myCmd.Parameters.add(new SqlParameter("@address1", SqlDbType.nvarchar, 40))
    myCmd.Parameters("@address1").value = txtaddress1.text
    myCmd.Parameters.add(new SqlParameter("@address2", SqlDbType.nvarchar, 40))
    myCmd.Parameters("@address2").value = txtaddress2.text
    myCmd.Parameters.add(new SqlParameter("@city", SqlDbType.nvarchar, 40))
    myCmd.Parameters("@city").value = txtcity.text
    myCmd.Parameters.add(new SqlParameter("@state", SqlDbType.nvarchar, 50))
    myCmd.Parameters("@state").value = ddlstate.selectedItem.value
    myCmd.Parameters.add(new SqlParameter("@zip", SqlDbType.nvarchar, 40))
    myCmd.Parameters("@zip").value = txtzipcode.text
    myCmd.Parameters.add(new SqlParameter("@phone1", SqlDbType.nvarchar, 15))
    myCmd.Parameters("@phone1").value = txtphone1.text
    myCmd.Parameters.add(new SqlParameter("@phone2", SqlDbType.nvarchar, 15))
    myCmd.Parameters("@phone2").value = txtphone2.text
    myCmd.Parameters.add(new SqlParameter("@phonel_ext", SqlDbType.nvarchar, 5))
    myCmd.Parameters("@phonel_ext").value = txtext1.text
    myCmd.Parameters.add(new SqlParameter("@phone2_ext", SqlDbType.nvarchar, 10))
    myCmd.Parameters("@phone2_ext").value = txtext2.text
    myCmd.Parameters.add(new SqlParameter("@fax", SqlDbType.nvarchar, 15))
    myCmd.Parameters("@fax").value = txtfax.text
    myCmd.Parameters.add(new SqlParameter("@primary_contact", SqlDbType.nvarchar, 40))
    myCmd.Parameters("@primary_contact").value = txtcontact1.text
    myCmd.Parameters.add(new SqlParameter("@secondary_contact", SqlDbType.nvarchar, 40))
    myCmd.Parameters("@secondary_contact").value = txtcontact2.text
    myCmd.Parameters.add(new SqlParameter("@secondary_email", SqlDbType.nvarchar, 40))
    myCmd.Parameters("@secondary_email").value = txtext2.text
sqlDBType.nvarchar, 40))
myCmd.Parameters("@secondary_email").value = txtcontact2email.text
myCmd.Parameters.add(new SqlParameter("@primary_email",
sqlDBType.nvarchar, 40))
myCmd.Parameters("@primary_email").value = txtcontact1email.text
myCmd.Parameters.add(new SqlParameter("@date_modified",
sqlDBType.nvarchar, 40))
myCmd.Parameters("@primary_email").value = DateTime.Now
myCmd.Parameters.add(new SqlParameter("@username",
sqlDBType.nvarchar,
35))
myCmd.Parameters("@username").value = strSessionuser
Dim intReturnValue as integer
try
myConn.open
intReturnValue = myCmd.ExecuteNonQuery()
'lblfirst.text &="<BR>" & intReturnValue.tostring() & " record is updated."
catch ex as sqlException
lblfirst.text &="<BR>Error:failed to update to GROUP table."
finally
myconn.close
end try
controlreadonlystateO
dataFiller()
end sub
</script>

BrokerCalculationSummary.aspx

<script language=VB runat=server>
public clsdb as new clsMedasolution
public strSessionuser as string
public strQuery, strErrorMsg as string \'query string
Dim sum1, sum2 as double \'public runningTotal as double
Dim sum3, sum4 as double
public myConn as new sqlConnection(clsdb.connectionstring)
public myCmd as sqlCommand
public myDataReader as sqlDataReader
public ds as new dataset
public dt as DataTable
public dr as DataRow

sub LoadIndividualCommission()
strQuery = "select e.pk_eligibility, i.pk_insured, i.last_name, i.first_name, " & _
"bp.benefitplan_name, bp.month_rate, e.eff_date, e.term_date, " & _
"datediff(month, e.eff_date, getDate()) as months_todate, " & _
"month_rate * datediff(month, e.eff_date, getDate())* 0.15 as " & _
"upToNowTotal, datediff(month, e.eff_date, e.term_date) as " & _
"months_to_end, month_rate * datediff(month, e.eff_date, " & _
"term_date)*0.15 as expectationTotal " & _
"from insured i, eligibility e, benefitplans bp where i.pk_insured = " & _

e.fk_insured and e.fk_broker = " & _
"( select pk_broker from broker b, [user] u where b.fk_usertable = " & _

"u.pk_user and u.username=" & srsessionuser & ") and e.fk_group " & _
"is null and e.fk_benefitplans = bp.pk_benefitplans and " & _
"e.most_current = 1 "and getdate() between e.eff_date and e.term_date
"

Dim blnReturnValue as boolean = clsdb.FillDataSet(strQuery, ds, " & _
"IndividualInBroker")
if blnReturnValue then

dg_individual.datasource = ds.tables("IndividualInBroker").defaultView
dg_individual.databind
panel_individual.visible=true
else
lblindividual.text &="<br><font color=red>You donot have " & _
"individual client.</fonr>"
end if
end if

sub FillGroupDataSet(byval strCurrentuser as string)
"1. GET DATASET WITH ROWS FROM MEDASOLUTION DATABASE
Dim strQueryGroupid = "select _group, group_name, primary_contact, " & _
"primary_email, phone1, fax from [group] g where g.fk_broker = ( " & _
"select pk_broker from broker b, [user] u " & _
"where u.username=" & strCurrentuser & ") and u.pk_user = b.fk_usertable)"

Dim strQueryGroupInsured = "select e.fk_group, i.last_name, i.first_name, " & _
"bp.benefitplan_name, bp.month_rate, e.eff_date, e.term_date, " & _
"datediff(month, e.eff_date, getDate()) as months_todate, " & _
"month_rate * datediff(month, e.eff_date, getDate())* 0.15 as " & _
upToNowTotal,
"datediff(month, e.eff_date, e.term_date) as months_to_end, " & _
"month_rate = datediff(month, e.eff_date, term_date)*0.15 as expectationTotal
"from eligibility e, benefitplans bp, insured i " & _
"where e.fk_insured = i.pk_insured and e.fk_benefitplans = p.pk_benefitplans
"and e.fk_group in ( select pk_group from [group] g where g.fk_broker = ( "
"select pk_broker from broker b, [user] u " & _
"where u.username ="' & strCurrentuser & "' and u.pk_user = b.fk_usertable)
"
") and e.most_current = 1 " & _
"and getdate() between e.eff_date and e.term_date "

2. CONNECT DATABASE AND EXECUTE QUERY
Dim blnGroupId as boolean = clsdb.FillDataSet(strQueryGroupid, ds,"GroupId")
Dim blnGroupInsured as boolean = clsdb.FillDataset(strQueryGroupInsured, ds, "GroupInsured")

3. SETUP THE RELATIONSHIP BETWEEN TWO TABLES
if blnGroupId and blnGroupInsured then
Dim odatRel as new DataRelation("TwoTables",
    ds.Tables("GroupId").columns("pk_group"), _
    ds.Tables("GroupInsured").columns("fk_group"))
ds.relations.add(odatRel)
end if
end sub

sub LoadGroupCommission()
"1. GET COUNTS OF GROUP DEVELOPED BY THIS BROKER
strQuery = "select count(*) from [group] where fk_broker = ( " & _
"select pk_broker from broker b, [user] u " & _
"where u.username ="' & strCurrentuser & "' and u.pk_user = b.fk_usertable)
"

Dim intTotalCount as integer = clsdb.ExecScalar(strQuery, strErrorMsg)

2. INSERT THE PKGROUP AND GROUPNAME INTO A TABLE
if intTotalCount > 0 then
    FillGroupDataSet(strSessionuser)
dg_outer.datasource = ds.Tables("GroupId")
dg_outer.dataBind
end if
end sub

sub dgIndividual_ItemDataBound(a as object, e as DataGridItemEventArgs)
if e.item.itemType = listitemtype.item or e.item.itemtype =
listitemtype.alternatingitem then
sum1 += Double.parseDouble(e.item.cells(9).text);
e.item.cells(9).text = string.Format(\"\{0:c}\", convert.ToDouble(e.item.cells(9).text));
sum2 += Double.parseDouble(e.item.cells(11).text);
e.item.cells(11).text = string.Format(\"\{0:c}\", convert.ToDouble(e.item.cells(11).text));
else if e.item.itemtype == ListItemType.footer then
 e.item.cells(2).text = "Total"
e.item.cells(9).text = string.Format(\"\{0:c}\", sum1)
e.item.cells(11).text = string.Format(\"\{0:c}\", sum2)
end if
end sub

sub dggroup_itemDataBound(a as object, e as DataGridItemEventArgs)
if e.item.itemType == listitemtype.item or e.item.itemtype ==
 listitemtype.alternatingitem then
sum3 += Double.parseDouble(e.item.cells(7).text);
e.item.cells(7).text = string.Format(\"\{0:c}\", convert.ToDouble(e.item.cells(7).text));
sum4 += Double.parseDouble(e.item.cells(9).text);
e.item.cells(9).text = string.Format(\"\{0:c}\", convert.ToDouble(e.item.cells(9).text));
else if e.item.itemtype == ListItemType.footer then
 e.item.cells(0).text = "Total"
e.item.cells(7).text = string.Format(\"\{0:c}\", sum3)
e.item.cells(9).text = string.Format(\"\{0:c}\", sum4)
end if
end sub

sub dgouter_itemDateBound(a as object, e as DataGridItemEventargs)
if e.item.itemtype == ListItemType.footer then
 e.item.cells(0).text = "Total"
e.item.cells(1).text = "Up-To-Now Total: "
e.item.cells(1).text &= string.Format(\"\{0:c}\", sum3) & &nbsp;&nbsp;&
string.Format(\"\{0:c}\", sum4)
e.item.cells(1).text &= "Expect. Total: "
e.item.cells(1).text &= string.Format(\"\{0:c}\", sum4)
end if
end sub
</script>
brokerClientRecord.aspx

<script language=VB runat=server>
public clsdb as new clsMedasolution
public strSessionuser as string
public ds as new Dataset
public strQuery as string
sub Page_Load(a as object, e as eventargs)
if httpcontext.current.session("username").tostring() <> "" then
    strSessionuser = session("username").ToString()
    lblTop.text = "Welcome, " & strSessionuser & " !"
else
    response.redirect("../brokHome.aspx")
    response.end
end if
LoadIndividualRecord()
LoadGroupRecord()
end sub

sub LoadIndividualRecord()
    strQuery = "select e.pk_eligibility, i.pk_insured, i.last_name,i.first_name ," & _
    "i.phone as Phone, i.email as Email, bp.benefitplan_name, " & _
    "e.eff_date, e.term_date from insured i, eligibility e, " & _
    "benefitplans bp where i.pk_insured = e.fk_insured " & _
    "and e.fk_broker = ( select pk_broker from broker b, [user] u 
    "where b.fk_usertable = u.pk_user " & _
    "and u.username=" & strSessionuser & ") and e.fk_group is null " & _
    "and e.fk_benefitplans = bp.pk_benefitplans and e.most_current = 1"
Dim blnReturnValue as boolean = clsdb.FillDataSet(strQuery, ds, " & _
    "IndividualInBroker")
if blnReturnValue then
    dg_individual.datasource = ds.tables("IndividualInBroker").defaultView
    dg_individual.databind
    panel_individual.visible=true
else
    lblindividual.text &= "<br><font color=red>You donot have " & _
    "individual client.</font>"
end if
end sub

sub LoadGroupRecord()
    strQuery = "select g.pk_group, g.group_name, g.phone1, g.fax,

```vbnet
Dim blnreturn as boolean = clsdb.FillDataSet(strQuery, ds, "GroupInBroker")
if blnreturn then
    dg_group.datasource = ds.tables("GroupInBroker").defaultview
    dg_group.databind
    panel_group.visible = true
else
    lblgroup.text &= vbCrLf & "<font color=red> You donot have GROUP client.</font>"
end if
end sub
</script>

brokerInsertEmployee.aspx

<script language=VB runat=server>
public clsdb as new clsMedasolution
public strSessionuser as string
public ds as new Dataset
public strQuery, strErrorMsg as string
public myConn as new sqlConnection(clsdb.connectionString)
public myCmd as sqlCommand
sub Page_Load(a as object, e as EventArgs)
    if HttpContext.Current.Session("username")().ToString() <> "" then
        strSessionuser = Session("username").ToString()
        lblTop.text = "Welcome, " & strSessionuser & "!"
    else
        response.redirect("../brokHome.aspx")
        response.end
    end if
    if Not Page.IsPostBack then
        loadState()
        panel_group.visible = false
        panel_insert.visible = true
    end if
end sub

sub LoadGroupRecord()
strQuery = "select g.pk_group, g.group_name, g.phone1, g.fax, g.primary_contact, g.primary_email " & "from [group] g where g.pk_broker = "
```
Dim blnreturn as boolean = clsdb.FillDataSet(strQuery, ds, "GroupInBroker")
if blnreturn then
    dg_group.datasource = ds.tables("GroupInBroker").defaultview
dg_group.databind
panel_group.visible = true
else
    'lblgroup.text &= "<br><font color=red> You donot have GROUP client.</font>"
end if
end sub

sub Save_Click(a as object, e as eventargs)
"1. VALIDATE THE INPUT TEXTBOX
"2. GET THE PK_BROKER
strQuery = "select pk_broker from broker b, [user] u where b.fk_usertable = u.pk_user and u.username = " & strSessionuser & ""
Dim intPKbroker as integer = clsdb.ExecuteScalar(strQuery, strErrorMsg)
if strErrorMsg = "" then
    lblreminder.text &= "<br>pkbroker=": & intPKbroker
end if
"3. INSERT INTO GROUP TABLE
strQuery = "sp_InsertGroupFromBroker"
myCmd = new SqlCommand("sp_InsertGroupFromBroker", myConn)
myCmd.CommandType = CommandType.StoredProcedure
myCmd.Parameters.add(new SqlParameter("@group_name", SqlDbType.nvarchar, 40))
myCmd.Parameters("@group_name").value = txtemployername.text
myCmd.Parameters.add(new SqlParameter("@address1", SqlDbType.nvarchar, 40))
myCmd.Parameters("@address1").value = txtaddress1.text
myCmd.Parameters.add(new SqlParameter("@address2", SqlDbType.nvarchar, 40))
myCmd.Parameters("@address2").value = txtaddress2.text
myCmd.Parameters.add(new SqlParameter("@city", SqlDbType.nvarchar, 40))
myCmd.Parameters("@city").value = txtcity.text
myCmd.Parameters.add(new SqlParameter("@state", SqlDbType.nvarchar, 50))
myCmd.Parameters("@state").value = ddlstate.selectedItem.value
myCmd.Parameters.add(new SqlParameter("@zip", SqlDbType.nvarchar, 40))
myCmd.Parameters("@zip").value = txtzipcode.text
myCmd.Parameters.add(new SqlParameter("@phone1", SqlDbType.nvarchar, 15))
myCmd.Parameters("@phone1").value = txtphone1.text
myCmd.Parameters.add(new SqlParameter("@phone2", sqlDBType.nvarchar, 15))
myCmd.Parameters("@phone2").value = txtphone2.text
myCmd.Parameters.add(new SqlParameter("@phone1_ext", sqlDBType.nvarchar, 5))
myCmd.Parameters("@phone1_ext").value = txttext1.text
myCmd.Parameters.add(new SqlParameter("@phone2_ext", sqlDBType.nvarchar, 10))
myCmd.Parameters("@phone2_ext").value = txttext2.text
myCmd.Parameters.add(new SqlParameter("@fax", sqlDBType.nvarchar, 15))
myCmd.Parameters("@fax").value = txtfax.text
myCmd.Parameters.add(new SqlParameter("@primary_contact", sqlDBType.nvarchar, 40))
myCmd.Parameters("@primary_contact").value = txtcontact1.text
myCmd.Parameters.add(new SqlParameter("@secondary_contact", sqlDBType.nvarchar, 40))
myCmd.Parameters("@secondary_contact").value = txtcontact2.text
myCmd.Parameters.add(new SqlParameter("@secondary_email", sqlDBType.nvarchar, 40))
myCmd.Parameters("@secondary_email").value = txtcontact2email.text
myCmd.Parameters.add(new SqlParameter("@primary_email", sqlDBType.nvarchar, 40))
myCmd.Parameters("@primary_email").value = txtcontact1email.text
myCmd.Parameters.add(new SqlParameter("@date_modified", sqlDBType.nvarchar, 40))
myCmd.Parameters("@date_modified").value = DateTime.Now
myCmd.Parameters.add(new SqlParameter("@date_created", sqlDBType.nvarchar, 40))
myCmd.Parameters("@date_created").value = DateTime.Now
myCmd.Parameters.add(new SqlParameter("@fk_broker", sqlDBType.int, 4))
myCmd.Parameters("@fk_broker").value = intPKbroker
myCmd.Parameters.add(new SqlParameter("@taxid", sqlDBType.nvarchar, 40))
myCmd.Parameters("@taxid").value = txttaxid.text
myCmd.Parameters.add(new SqlParameter("@eff_date", sqlDBType.smalldatetime, 4))
myCmd.Parameters("@eff_date").value = txteffdate.text
myCmd.Parameters.add(new SqlParameter("@term_date", sqlDBType.smalldatetime, 4))
myCmd.Parameters("@term_date").value = txteffdate.text
Dim intReturnValue as integer
try
public clsdb as new clsMedasolution
public ds as new dataset

sub Page_load(a as object, e as EventArgs)
    strSessionuser = httpContext.current.session("username").ToString()
    lbltop.text = "Welcome, " & strSessionuser
    if not Page.IsPostBack then
        if session("classID") <> 4 . or (session("username") is nothing) then
            response.redirect("/dreamweaver/providhome.aspx")
        end if
        loadDiagnosiscode()
    end if
end sub

sub LoadDiagnosiscode()
    with ddldiagnosisname
        .Datasource = clsdb.getDiagnosiscode()
        .datatextfield = "diagnosiscode_name"
        .datavaluefield = "pk_diagnosiscode"
        .Databind()
        .items.insert(0, "-----select a diagnosis name-----")
        .selectedindex = 0
    end with
end sub

sub SearchByPatient_click(a as object, e as EventArgs)
    strQuery = "select i.last_name+,',',i.first_name as patient_name," & _
        "p.last_name +',',+ p.first_name as provider_name," & _
        "d.diagnosis_date, dc.diagnosiscode_name " & _
        "from insured i, provider p,diagnosiscode dc, diagnosis d " & _
        "where i.pk_insured = d.fk_insured and p.pk_provider = d.fk_provider 
        " & 
        "and dc.pk_diagnosiscode = d.fk_diagnosiscode and i.last_name = "
        & txtsearch.text & ""
    Dim blnResult as boolean = clsdb.FillDataSet(strQuery, ds, "Diagnosis")
    if blnResult then
        With dg_searchByPatient
            .Datasource = ds
            .DataBind()
        end with
    end if
if panel_searchByProvider.visible= true then
panel_searchByProvider.visible = false
end if
panel_searchByPatient.visible = true
else
dg_diagnosis.visible = false
end if
end sub

sub SearchByProvider_Click(a as object, e as eventargs)
    Databind()
end sub

sub Databind()
    strQuery = "select i.last_name + "," + i.first_name as patient_name, " & 
    "p.last_name + "," + p.first_name as provider_name," & 
    "d.diagnosis_date, dc.diagnosiscode_name from insured i, " & 
    "provider p, diagnosiscode dc, diagnosis d " & 
    "where i.pk_insured = d.fk_insured and p.pk_provider = 
    d.fk_provider " & 
    "and dc.pk_diagnosiscode = d.fk_diagnosiscode " & 
    "and d.fk_provider = (select pk_provider from provider p, [user] u " 
    & 
    "where p.fk_usertable = u.pk_user and u.username = " & 
    strsessionuser & ")"

    txtsearch.text = ""
    Dim blnValue as boolean = clsdb.FillDataset(strQuery, ds, "Diagnosis")
    if blnValue then
        with dg_searchByProvider
            .Datasource = ds
            .DataBind()
        end with
        if panel_searchByPatient.visible = true then
            panel_searchByPatient.visible = false
        end if
    end if
    panel_searchByProvider.visible = true
end if
end sub

sub Insert_Click(a as object, e as eventargs)
    panel_inserttable.visible = true
end sub
sub Save_Click(a as object, e as eventargs)
    'TEST THE INPUT NAME IS IN THE INSURED TABLE
    strQuery = "select pk_insured from insured where last_name=" & txtlastname.text & " and first_name=" & txtfirstname.text & ""
    Dim intPKInsured as integer = clsdb.ExecuteScalar(strQuery, strErrorMsg)
    if intPKInsured <> 0 then
        'lblfirst.text &= "<BR>pkinsured = ." & intPKInsured
    else
        lblreminder.text &= "<BR><font color=red>Error: The patient name is incorrect.</font>"
        exit sub
    end if

    'GET THE PROVIDER'S NAME FOR THE INSERT INTO DATABASE
    strQuery = "select p.pk_provider from provider p, [user] u " & _
                " where p.fk_usertable = u.pk_user and u.username=" & strsessionuser & ""
    Dim intPKProvider as integer = clsdb.ExecuteScalar(strQuery, strErrorMsg)
    if intPKProvider <> 0 then
        'lblfirst.text &= "<BR>pkprovider= " & intPKProvider
    else
        lblreminder.text &= "<BR><font color=red>Error: The provider name is incorrect.</font>"
        exit sub
    end if

    'CHECK TXTDIAGNOSISDATE IS DATA FORMATE OR NOT
    if txtdiagnosisdate.text = "" and IsDate(txtdiagnosisdate.text) = false then
        lblreminder.text &= "<BR><font color=red>Error: The diagnosis is blank or isnot proper format.</font>"
        exit sub
    else
        Dim dt as datetime = Convert.ToDateTime(txtdiagnosisdate.text)
        if dt.op_greaterthan(dt, datetime.now) then
            lblreminder.text &= "<br>diagnosis date should be less than or equal today." "
        exit sub
        end if
    end if

    'INSERT INFORMATION TO DIAGNOSIS TABLE
strQuery = "insert into diagnosis(fk_insured, fk_provider, fk_diagnosiscode, diagnosis_date, date_created, date_modified)", " values(" & intPKInsured & "," & intPKProvider & "," & ddldiagnosisname.selectedvalue & "," & Convert.ToDateTime(txtdiagnosisdate.text) & "," & datetime.Now & "," & datetime.now & ")"
Dim intInsertValue as integer = clsdb.execSQL(strQuery, false, strErrorMsg)
if strErrorMsg = "" and intInsertValue <> 0 then
lblreminder.text &= "<br>&lt;font color=red size=3&gt;A new record is inserted.&lt;/font&gt;"
panel_inserttable.visible = false
clearTextBox()
else
lblreminder.text &= "Error: failed to insert into DIAGNOSIS TABLE. &lt;BR&gt;" & strErrorMsg
endif
end sub
sub Close_Click(a as object, e as eventargs)
panel_inserttable.visible = false
end sub
sub Reset_click(a as object, e as eventargs)
clearTextBox()
end sub
sub ClearTextBox()
txtlastname.text = ""
txtfirstname.text = ""
txtdiagnosisdate.text = ""
end sub
</script>
drgCode.aspx

<script language="VB" runat="server">
public strSessionuser as string
public strQuery as string
public strErrorMsg as string
Dim blnReturn as boolean
public ds as new dataset
public clsdb as new clsMedasolution
sub Page_load(a as object, e as eventargs)
    strSessionuser = HttpContext.Current.Session("username").ToString()
    lbltop.text = "Welcome, " & strSessionuser & " !"
    if Not Page.IsPostBack then
        ' databind()
    end if
end sub

sub DataBind()
    strSQL = "Select pk_drgcodes, drg_code, drg_name, drg_wgt, drg_year from drgcode"
    blnReturn = clsdb.FillDataset(strQuery, ds, "drgcode")
    if blnReturn then
        dg_drgcode.datasource = ds
dg_drgcode.databind()
    else
        lblfirst.text &= "<br>Bad. <BR> " & strErrorMsg
        exit sub
    end if
end sub

sub viewall_click(a as object, e as eventargs)
txtsearch.text = ""
end sub

sub search_click(a as object, e as eventargs)
    strSQL = "Select pk_drgcodes, drg_code, drg_name, drg_wgt, drg_year from drgcode where drg_name like \\
                    '%" & txtsearch.text & \\
                    '%"
    blnReturn = clsdb.FillDataSet(strQuery, ds, "drgcode")
    if not blnreturn then
        lblreminder.text &= "<font color=red size=3pt>No drug is found, please enter another key word.</font>"
        panel1.visible = false
        exit sub
    else
        dg_drgcode.currentPageIndex = 0
dg_drgcode.datasource = ds
dg_drgcode.databind
end if
end sub

sub PageIndex_change(a as object, e as datagridPageChangedEventArgs)
    dg_drgcode.currentPageIndex = e.newPageIndex
    DataBind()
end sub

</script>
APPENDIX C

ACRONYMS AND ABBREVIATIONS
<table>
<thead>
<tr>
<th>Terminology</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSUSB</td>
<td>California State University, San Bernardino</td>
</tr>
<tr>
<td>ASP.Net</td>
<td>ASP.NET is a technology for creating dynamic Web Applications developed by Microsoft. It is part of the .NET Framework, and it can be used to author ASP.NET applications in any .NET compatible language, including Visual Basic .NET, C#, and J.</td>
</tr>
<tr>
<td>ADO.Net</td>
<td>The latest data access technology developed by Microsoft, and as an integral part of the .Net Framework.</td>
</tr>
<tr>
<td>Flash MX</td>
<td>A tool of web design and animation tool developed by Macromedia Company.</td>
</tr>
<tr>
<td>Dreamweaver MX</td>
<td>A tool of web design developed by Macromedia Company</td>
</tr>
<tr>
<td>IIS</td>
<td>Information Internet Services, ASP.Net server engine developed by Microsoft.</td>
</tr>
<tr>
<td>HTTP</td>
<td>Hypertext Transfer Protocol is the protocol used for delivering web pages on the Internet.</td>
</tr>
<tr>
<td>World Wide Web</td>
<td>World Wide Web–The subset of the Internet that utilizes the Hypertext Transfer Protocol(HTTP)</td>
</tr>
<tr>
<td>HTML</td>
<td>Hyper Text Markup Language</td>
</tr>
<tr>
<td>IEEE</td>
<td>Institute of Electrical and Electronics Engineering</td>
</tr>
<tr>
<td>HHS</td>
<td>The U.S. Department of Health and Human Services</td>
</tr>
<tr>
<td>HIPPA</td>
<td>Health Insurance Portability and Accountability Act of 1996</td>
</tr>
<tr>
<td>NIH</td>
<td>National Insurance Health</td>
</tr>
<tr>
<td>MNO</td>
<td>Health Maintenance Organization</td>
</tr>
<tr>
<td>PPO</td>
<td>Preferred Provider Organization</td>
</tr>
<tr>
<td>Drg code</td>
<td>Diagnosis-related Group. A classification system that groups patients according to diagnosis, type of treatment, age and other criteria.</td>
</tr>
</tbody>
</table>
REFERENCES


