Design and Implementation of mailbox

By Asp.net in vb.net

A Project Report Submitted to the College of Science, Baghdad
University in Partial Fulfillment of the Requirements for the BSc Degree of
Science in Computer Science

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بسم الله الرحمن الرحيم

مسلم الله العليم

هام تا جمع

أثق من الله

CSD PRPJECT
Dedications

To the tender heart which gave me all the love and the support in the world.
my mother.

To the person who give me the power to complete my way.
my father.

To the person who give me the hope to success in my life.
my love.

To whom I am proud of them
my family and my martyr brother.

To my friends who shared the most beautiful years of my life and gave me the anew meaning of devotion.

Names of friends:
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To the candles that always lights up my way for a better future by giving me knowledge.
my teachers.
Gratitude and Appreciation

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Lastly, we offer our regards and blessings to all of those who supported us in any respect during the completion of the project.
Abstract

About CSD Project

our project is dynamic website, it is design and implementation of mail box, can anyone to has profile, can send the messages and receive it and can attach any file it is depend on the size of mail server on the Internet, can search in web search above of any page, any website consists of more than one page such as homepage, sign up page, sign in page, etc. .

These pages will be explained in Third Chapter.
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSD</td>
<td>Computer Science Department</td>
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<tr>
<td>MTA</td>
<td>Mail Transfer Agent</td>
</tr>
<tr>
<td>MDA</td>
<td>Mail Delivery Agent</td>
</tr>
<tr>
<td>MUA</td>
<td>Mail User Agent</td>
</tr>
<tr>
<td>ASP</td>
<td>Active Server Pages</td>
</tr>
<tr>
<td>HTML</td>
<td>Hyper Text Markup Language</td>
</tr>
<tr>
<td>CSS</td>
<td>Cascading Style Sheets</td>
</tr>
<tr>
<td>WWW</td>
<td>World Wide Web</td>
</tr>
<tr>
<td>PHP</td>
<td>Personal Home Page</td>
</tr>
<tr>
<td>XML</td>
<td>Extensible Markup Language</td>
</tr>
<tr>
<td>SQL</td>
<td>Structure Query Language</td>
</tr>
<tr>
<td>IIS</td>
<td>Internet Information Services</td>
</tr>
<tr>
<td>ISAPI</td>
<td>Internet Server Application Programming Interface</td>
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<tr>
<td>E-Book</td>
<td>Electronic Book</td>
</tr>
<tr>
<td>CC</td>
<td>Carbon Copy</td>
</tr>
<tr>
<td>BCC</td>
<td>Blind Carbon Copy</td>
</tr>
<tr>
<td>DLL</td>
<td>Dynamic Link Layer</td>
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</tbody>
</table>
Chapter 1

Introduction of Project

Content

Electronic e-mail
Asp.net Introduction
What You Should Already Know?
What is ASP.NET?
What is an ASP.NET File?
How Does ASP.NET Work?
The Microsoft .NET Framework
Programming languages
Development environments
Electronic mail

What is the Electronic Mail? ★

Electronic mail, sometimes called email, is a computer based method of sending messages from one computer user to another. These messages usually consist of individual pieces of text which you can send to another computer user even if the other user is not logged in (i.e. using the computer) at the time you send your message. The message can then be read at a later time. This procedure is analogous to sending and receiving a letter.

Originally, email messages were restricted to simple text, but now many systems can handle more complicated formats, such as graphics and word processed documents.

When mail is received on a computer system, it is usually stored in an electronic mailbox for the recipient to read later. Electronic mailboxes are usually special files on a computer which can be accessed using various commands. Each user normally has their individual mailbox.
How Email Appears To Work

In the figure (1), it is the way to send electronic mail between users of different computer systems which are connected to major networks. Most major academic and research institutions and companies throughout the world can now be reached by electronic mail. In addition, a growing number of individuals can be contacted in this way. In the UK, most academic and research institutions are linked by a network called JANET (or Super JANET). This is effectively part of the Internet, so email can be exchanged with most national and international networks.

Figure 1: How Email Really Works
ASP.NET Introduction

What You Should Already Know?

Before you continue you should have a basic understanding of the following:

WWW, HTML and the basics of building Web pages

The basics of server side scripting like ASP or PHP

We used ASP.NET Microsoft visual studio 2008…

What is Classic ASP?

Microsoft's previous server side scripting technology ASP, Other differences compared to ASP classic are:

- Compiled code means applications run faster with more design-time errors trapped at the development stage.
- Significantly improved run-time error handling, making use of exception handling using try-catch blocks.
- ASP.NET uses the multi-language abilities of the .NET Common Language Runtime, allowing Web pages to be coded in VB.NET, C#, J#, Delphi.NET, Chrome, etc.
- Ability to cache the whole page or just parts of it to improve performance.
- Ability to use the code-behind development model to separate business logic from presentation.
- Ability to use true object-oriented design for programming pages and controls
What is ASP.NET?

- ASP.NET is a server side scripting technology that enables scripts (embedded in web pages) to be executed by an Internet server.
- ASP.NET is a Microsoft Technology,
- ASP stands for Active Server Pages,
- ASP.NET is a program that runs inside IIS,
- IIS (Internet Information Services) is Microsoft's Internet server
- IIS comes as a free component with Windows servers
- IIS is also a part of XP Professional and windows 7*

*we Used Windows 7

What is an ASP.NET File?

1. An ASP.NET file is just the same as an HTML file
2. An ASP.NET file can contain HTML, XML, and scripts
3. Scripts in an ASP.NET file are executed on the server
4. An ASP.NET file has the file extension " .aspx "

How Does ASP.NET Work?

When a browser requests an HTML file, the server returns the file
When a browser requests an ASP.NET file, IIS passes the request to the ASP.NET engine on the server, the ASP.NET engine reads the file, line by line, and executes the scripts in the file finally, the ASP.NET file is returned to the browser as plain HTML.
The Microsoft .NET Framework

The .NET Framework is the infrastructure for the Microsoft .NET platform.

The .NET Framework is an environment for building, deploying, and running Web applications and Web Services.

Microsoft's first server technology ASP (Active Server Pages), was a powerful and flexible "programming language".

But it was too code oriented. It was not an application framework and not an enterprise development tool. The Microsoft .NET Framework was developed to solve this problem.

.NET Frameworks keywords:

- Easier and quicker programming
- Reduced amount of code
- Declarative programming model
- Richer server control hierarchy with events
- Larger class library
- Better support for development tools

The .NET Framework consists of 3 main parts:

Programming languages:

1. C# (Pronounced C sharp)
2. Visual Basic (VB .NET)*
3. J# (Pronounced J sharp)

* “The Language we used”

: 1
Server technologies and client technologies:

- ASP .NET (Active Server Pages)
- Windows Forms (Windows desktop solutions)
- Compact Framework (PDA / Mobile solutions)

Development environments:

Visual Studio .NET (VS .NET)

Visual Web Developer
Chapter 2

Tools

Content

Tools

- ASP.NET.
- Why we used asp.net?
- Database SQL SERVER.
- Why we used SQL 2005?
- Photoshop CS5.

Installation of Application used

- SQL server 2005
- IIS
ASP.NET

- Why we used ASP.NET?

ASP.Net is a Microsoft development that is part of the .Net framework. Do not confuse it with ASP as they are two completely different things that happen to share part of their name in common. ASP.Net requires the use of a programming language such as VB or C# so that you can program a dynamic website via the server (that is because both VB and C# are languages used with the .Net framework). However, you have the option of creating server side scripts using PHP or ASP, but those two languages do not use the .Net framework and can be a bit more time consuming to use in web development.
Why we used SQL (Structured Query Language) 2005?

SQL Server 2005 makes it simpler and easier to deploy, manage, and optimize enterprise data and analytical applications. It enables you to monitor, manage, and tune all of the databases in the effective way.

SQL Server 2005 Advantage:

- Streamlined Installation.
- Better Performance Features.
- Better Security Features.
- Lower Ownership Costs.
We Used Photoshop CS5 to design the images, Text and some pages that needs to design.

It is a program of image processing …

Installation of Application Used

Installation of SQL Server

- SQL server 2005
Double click on the setup.exe file.

After a few seconds a dialog box appears:
IIS Installation

IIS 7 can be installed and features of IIS 7 can be added or removed by Windows 7 "Control Panel > Programs" management screen. You can add and install Windows 7 components and build in applications using the "Turn Windows features on or off" link.

Application Development Features

I started with the World Wide Web Services and Application Development Features.

Since I'm an ASP.NET developer and aim to work with ASP.NET on IIS 7, I selected the checkbox next to ASP.NET. When you click on ASP.NET the following features will be automatically selected:
- .NET Extensibility,
- ISAPI Extensions and
- ISAPI Filters.
Chapter 3

The Particular

Content
The Pages of Our Website

- Homepage
- Sign up
  - Captcha
  - Security (Password Encryption)
- Sign in
- Profile
  - New message
  - Inbox
- Admin Account
- Edit Account
- Web search

The connection of DB with asp.net

- Open SQL Connection

The Pages of Our website

Homepage

Any Web site on the internet has Homepage, the user can move from it to the other pages, the link of the homepage we found it in the above of other pages.
This page contains new news and its photos by slide show, web search about pdf files “Learning E-book about computer science department” and many links to other page as shown below figure.

Name of the website CSD” computer science department”

There is much more access available from the Homepage.
This page contains a timer with a script manager, because the timer doesn’t work without script manager.

Sign up

If user wants to create an account in our website, he must insert this information.

Hyperlink to the homepage

Textbox

Label

Hyperlinks of PDF files when the user clicks on this link, the browser moves to the PDF files to read them.
Captcha is a type of challenge-response test used in computing as an attempt to ensure that the response is generated by a person, the process usually involves a random image of text to test if person enter the information or software.
A computer asking a user to complete a simple test which the computer is able to grade. These tests are designed to be easy for a computer to generate, but difficult for a computer to solve, so that if a correct solution is received, it can be presumed to have been entered by a human. A common type of CAPTCHA requires the user to type letters or digits from a distorted image that appears on the screen, and such tests are commonly used to prevent unwanted internet bots from accessing websites.

We used dll”dynamic link library” file to perform the captcha image, the dll file written in the assembly language, we add this file”Mscaptcha” to the directory of website “WebApplication folder” in bin directory and we written this code in the config page:

```xml
<httpHandlers>
  <add verb="GET" path="CaptchaImage.axd"
       type="MSCaptcha.CaptchaImageHandler, MSCaptcha"/>
</httpHandlers>
```

Before that we insert this code to above of the current page “Signup”

```csharp
@ Register assembly="MSCaptcha" namespace="MSCaptcha" tagprefix="cc1" %>

Finally in vb code:

```vbnet
ccJoin.ValidateCaptcha(TextBox12.Text)
ccJoin.UserValidated
Return true or false.
```

To check the email is already exist or not, to check length of email, and if the characters in ‘a’ to ‘z’, 0 to 9, ‘_’, or ‘.’

Check the password length, the password is very strong, strong or weak.

With * is Not Optional
Without * is Optional
Security

Password Encryption

Email

User23

password

3071990_m

Date.now

02:05:15 am

Operation

u0s2e0r52135

CSD PRJECT

Direct Standard Method
When the user complete his information insertion and click on create my account button if the all information is ok and all conditions are true then the

Password Encryption Diagram

Date.now
11:30:59 am

Open the account with old key and repeat the encryption operation with new date

When user signing in
explorer moves to complete page like the below figure, this page is very simple, contains welcome message and many labels for the first name of customer and his email with @CSD.com and the tow secret questions and one button named to your profile if the customer click on it or waiting 15 second this page will be hide and display the profile page.

Profile page

These pages for user services, for send and receive messages from and To Friends,
This page is master page contains more than one subpage like “what news”, “send message”, “Inbox”, “Spam”, “Trash” and “Contact”. 

Every page operates some jobs but each one it is complement to another.

We will explain the sign in page before profile page.

The sign in page it is the enter gate to an account of the customer its simple just two field require the Email and Password.

The password in this page encrypted by the same operation in the sign up page.

But before that check the email if already exist or not in the database.

The user has 5 attempts to trying the password and after that maybe the email will be lock.

If the user forgets the password he can press on the “can’t access my account” hyperlink “to forget page”.

Below Figure explain what the objects in this page.

Sign in

Name of web site

Hyperlink to the Home
For news and user photo

- For link to other pages in master page like inbox, new message, etc.

- For Web search for search about the pdf files.

- For link to another pages.

- For web search what the user need to read it.

- For new news

Profile page

For unbounded photo of male/female user

Dropdown list for state of user if available, Invisible, Busy, not here or idle

File up loader for change photo of customer

For sign out from user account and go to homepage

To edit Account page

For web search
Profile page

Inbox

<table>
<thead>
<tr>
<th>Show</th>
<th>from</th>
<th>subject</th>
<th>date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Delete Show</td>
<td>matts1_throhem</td>
<td>test2</td>
<td>5/18/2012 4:05:32 PM</td>
</tr>
<tr>
<td>Select Delete Show</td>
<td>matts1_throhem</td>
<td>test1</td>
<td>5/18/2012 4:05:13 PM</td>
</tr>
</tbody>
</table>
This page will be refresh every second by timer to update the messages if another customer send message to the current customer,

The grid view will be getting the data from the database by this code:

```vbnet
Dim con As SqlConnection = New SqlConnection("Data Source=.;sqlexpress;Initial Catalog=heaven;Integrated Security=True")
If con.State = ConnectionState.Closed Then
    con.Open()
End If
Dim sqlcom As New System.Data.SqlClient.SqlCommand("SELECT [from],subject,date FROM inbox,message WHERE inbox.[to]='" & email & "' and inbox.[to]=message.[to] ORDER BY date desc", con)
Dim od As SqlDataAdapter = New SqlDataAdapter(sqlcom)
Dim ds As DataSet = New DataSet()
od.Fill(ds)
GridView1.DataSource = ds
GridView1.DataBind()
con.Close()
```

Admin Account page
Edit Account

Email and Alternate email and two secret questions for return the account

To homepage
Web Search

- Grid view for pdf files list and hyperlink for open the pdf file
- Textbox for write the name of pdf file
- Button to search for the name of pdf file
- To homepage
The connection of database with asp.net

Open SQL Connection

Dim con As System.Data.SqlClient.SqlConnection = New SqlConnection(Connection String)
If con.State = ConnectionState.Closed Then
    con.Open()
End If
Dim sqlcom As New System.Data.SqlClient.SqlCommand(connection command, con)
sqlcom.ExecuteNonQuery()
con.Close()
Data Source=.\sqlexpress;Initial Catalog=heaven;Integrated Security=True

- Connection string
- Database name
- SQL server 2005
- Security of database
- To execute the sql command
- To open and close connection

sqlcom.ExecuteNonQuery()
con.Open()
con.Close()
Conclusions and Future Works

Conclusions

1. The users of this website can send messages for anyone in the same website or the other website like Yahoo, Hotmail, and Gmail.

2. Cc stands for carbon copy who means that whose address appears after the Cc: header would receive a copy of the message. Also, the Cc header would also appear inside the header of the received message.

3. Bcc stands for blind carbon copy which is similar to that of Cc except that the Email address of the recipients specified in this field do not appear in the received message header and the recipients in the To or Cc fields will not know that a copy sent to these address.

4. You can start a design to suit your site to all users or make their choice in determining the body or the color of the page to profile.

5. There are some problems such as the timer with the pages that the user create a new account or login to the site because the timer to refresh the page by interval time this is contrary to the work of captcha option and insertion of information.

6. Can any user change its state from available to invisible and vice versa or make its state idle, or busy.

7. Lastly when user in above states then no one can enter to the web site by that user email because he has flag when he login to the web site that flag will be set and this flag is reset when the user will be logout.
Future Work

- Mack domain to this website.
- Allocate size for this website on the internet.
- Send messages from this website to mobile.
- Messenger Application on PC.
- Messenger Application on mobile.
Resources

4. http://www.w3schools.com/
جمهورية العراق
وزارة التعليم العالي
والبحث العلمي
جامعة بغداد

تصميم وعمل موقع البريد الإلكتروني

*ASP.NET in VB.NET*


تقرير عن المشاريع المقدمة إلى كلية العلوم، جامعة بغداد في التنفيذ الجزيئي فقط من الاحتياجات اللازمة لدرجة البكالوريوس في كلية العلوم في قسم علوم الحاسبات

نفذ بواسطة

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