Work Force Development

By

Jason Swartz

Submitted to
the Faculty of the Information Engineering Technology Program
in Partial Fulfillment of the Requirements for
the Degree of Bachelor of Science
in Information Engineering Technology

University of Cincinnati
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Jason Swartz	Date
Professor Prabhakar, Faculty Advisor	Date
Patrick C. Kumpf, Ed.D. Interim Department Head	Date

Acknowledgements

I would like to give a special thanks to Anthony Ricciardi, Director of Development at the University of Cincinnati, for the opportunity to redesign his website and believing in the vision I had for his site. I would also like to thank and acknowledge JR, for his continuing and valuable assistance. I would like to thank John Bayless, IT Manager of ACNielsen Bases. Another thank you goes out to the job search Web Sites who allowed me to put banners on the site. Finally, I would like to thank the dozens of volunteers who gave their time in visiting the various sites and providing feedback, I thank you all for providing a much needed and greatly appreciated perspective.

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Abstract

Workforce Development Association's Web Site was created for Anthony Riciardi, who is the Director of Development at the University of Cincinnati, College of Applied Science. Workforce Development Association (WDA) is a non-profit organization. The primary focus is to assist students with education, training and career opportunities. The site has several design features to enhance the user's experience, which include easy navigation around the Web Site, clean rotating advertising banners, an easy to use job search page and a live chatting feature. WDA's site was built with the latest software and language tools: ASP.NET, HTML, Microsoft Access 2003 and JavaScript. This Web Site is geared towards an audience of students, young job seekers and established professionals. The overall look of the WDA's Web Site is clean, appealing to the eye and user friendly.

Work Force Development

1. Statement of the Problem

The primary focus of the Workforce Development Association (WDA) is to assist students with education, training and career opportunities. WDA is a non-profit organization. The only funds generated by WDA are reinvested, used to finance activities and further their various programs. These funds are currently accumulated through banner advertisements on their Web Site, as well as through private donations.

The WDA was first brought to my attention while I was searching through Blackboard posts looking for a possible project. I contacted Anthony Ricciardi, who is in charge of WDA. Mr. Ricciardi is also the founder of the association. He communicated to me that the senior project would consist of creating a totally new Web Site for the association. I looked at the site and told Mr. Ricciardi that I would take on the challenge of redesigning a new Web Site. Mr. Ricciardi further stated that the mission of WDA has changed and he needs a site that fits the new goals of the association.

The most pressing problem, according to Mr. Ricciardi, is a change in the focus of the WDA, and therefore the Web Site also needed to be changed. In the past, the sole purpose of the site was to help graduates find jobs and employers in finding an active pool of potential employees. Now there is a pressing need to start planning fund raisers to provide scholarship assistance at the College of Applied Science.

Another area in which Mr. Ricciardi expressed dissatisfaction was with the current database, which matches job seekers with employers. He found this database was no longer necessary because of other job matching Web Sites. Mr. Ricciardi further

stated his desire that the WDA's job search program would be better suited if done by a job search company.

As Mr. Ricciardi's concerns were focused more on finance and funding issues, I viewed the site with an eye towards retaining its functionality, while improving its aesthetics and creating a more inviting atmosphere for potential visitors. It is my belief that improvements in these areas will increase visits to the site and improve Mr. Ricciardi's chances of raising the aforementioned funds.

When viewing the site, I came across several design flaws in the Web Site, which can be referenced below in Figure 1. The first flaw I noticed is the overall layout of the site. The color palette is very monotone and not very dynamic. The ads on the site were overpowering, distracting, and shown all at once in inanimate windows. The images of the people in the top right corner were out-dated, not effective and sometimes angled strangely. Navigation around the site was unclear and confusing.

Figure 1: A screen shot taken from the Home page of careersandjobs.com

I sent the Web Site link to a group of people who are well-versed in Web design. I also sent it to a group of casual Internet users, as well as students who would be specifically interested in such a site and the offered services. Nearly all who viewed and navigated the site had the same response They stated that the font was too small and there was too much thrown at the visitor on the opening page. They further stated that the Web page design did not fill a full page, leaving wide blank borders, which further added to the uninviting, amateurish feel of the site. A majority of the responses communicated to

me stated, that at first glance, this was not a site that they would enter or spend any time navigating.

2. Description of the Solution

Mr. Ricciardi's dissatisfaction and concerns regarding the site's functionality were valid but were also, easily corrected. My solution is to replace the current job search feature with a redirection to four job searching Web Sites. These sites allow for the ability to simultaneously access all the top job searching companies. The list of sites on the job search page includes:

1. Collegegrad.com - The #1 Entry Level Job Site
2. Jobsearchtoolbar.com - Search the top job boards with one click including Active Wireless, Hot Jobs, Monster, Dice, Career Journal, Flip Dog and now Direct Employers!
3. Jobseekernetwork.com – allows searching all the major job sites from one page
4. Jobvertise.com - The world's largest FREE job and resume database!

Mr. Ricciardi will now be able to raise funds and accept donations on the Web Site because of PayPal. PayPal would be a good tool to use when incorporating a donations button. PayPal accepts all major credit cards, debit cards, bank transfers, and PayPal payments are secure and hassle-free. (10)

My solution to the design flaws of the Web Site was to create a Web Site geared toward an audience of students and young job seekers, as well as established professionals. I planned to create a Web Site that was clean and appealing to the eye. I do not want the user to feel overwhelmed by text, as many users stated they felt on the existing site. I used http://www.tutorialized.com/ to help get ideas on how to create the

Web Site template. (8)

Some key features of the Web Site will include:

- *Login*

  A login section so the user is able to use our job search function.

- *Sponsor Banner*

  Sponsor's logos will rotate every minute.

- *Job Search*

  Banners on the Job Search page of four great sites which allow searching of the top job companies from one site.

- *Donations*

  PayPal will allow the public to participate in fundraisers and make donations.

Key points the Web Site will include:

- *Navigation*

  Easy-to-read buttons with a mouse over special effect.

- *Table of Contents*

  Links at the bottom of the Web Site for easy navigation.

2.1 User Profile

There are four user profiles based on the specifications that WDA outlined.

2.1.1 Web Administrator

The web administrator is Mr. Ricciardi. He will be the person who will manage the site and update the Web Page when needed. There are three main pages he will need to maintain. Besides maintaining those pages of the site, Mr. Ricciardi will also need to check and maintain the database of registered users of the site.

2.1.2 Registered Students

The student group is made up of students who have registered with the site in order to search the Job Search page for a job, and/or post a resume. They are required to sign into the site by using a username and password they have set from the registration page. Students who have registered can visit all the pages of the site. They are also able to make donations to the association.

2.1.3 Registered Professionals

The professional group is made up of professionals who have registered with the site. They are able to search the Job Search page for student resumes. Like the students who register, professionals are required to sign into the site using a username and password they have set from the registration page. They are also able to visit all the pages of the site and encouraged to make donations to the association.

2.1.4 General Public

The general public is made up of students and professionals who have not registered with the site. They cannot access the Job Search page, but are able to search the other pages in the site. The general public is able to fill out the registration page and become a member of the site. The general public is also able to make donations to the association.

2.2 Design Protocols

The Web page will consist of three major areas. The first area is the navigation bar. The buttons are linked to Home, Job Search and Contact Us. Underneath the buttons is the second area. The date/time feature will be displayed on the left and a Google.com search bar will be placed on the right. The last major area is where the

content is located. After the content, is the table of content links. The table of content includes Home, Job Search, Contact Us, Registration, Password Retrieval and Live Chat. The Home page can be found in Figure 2.

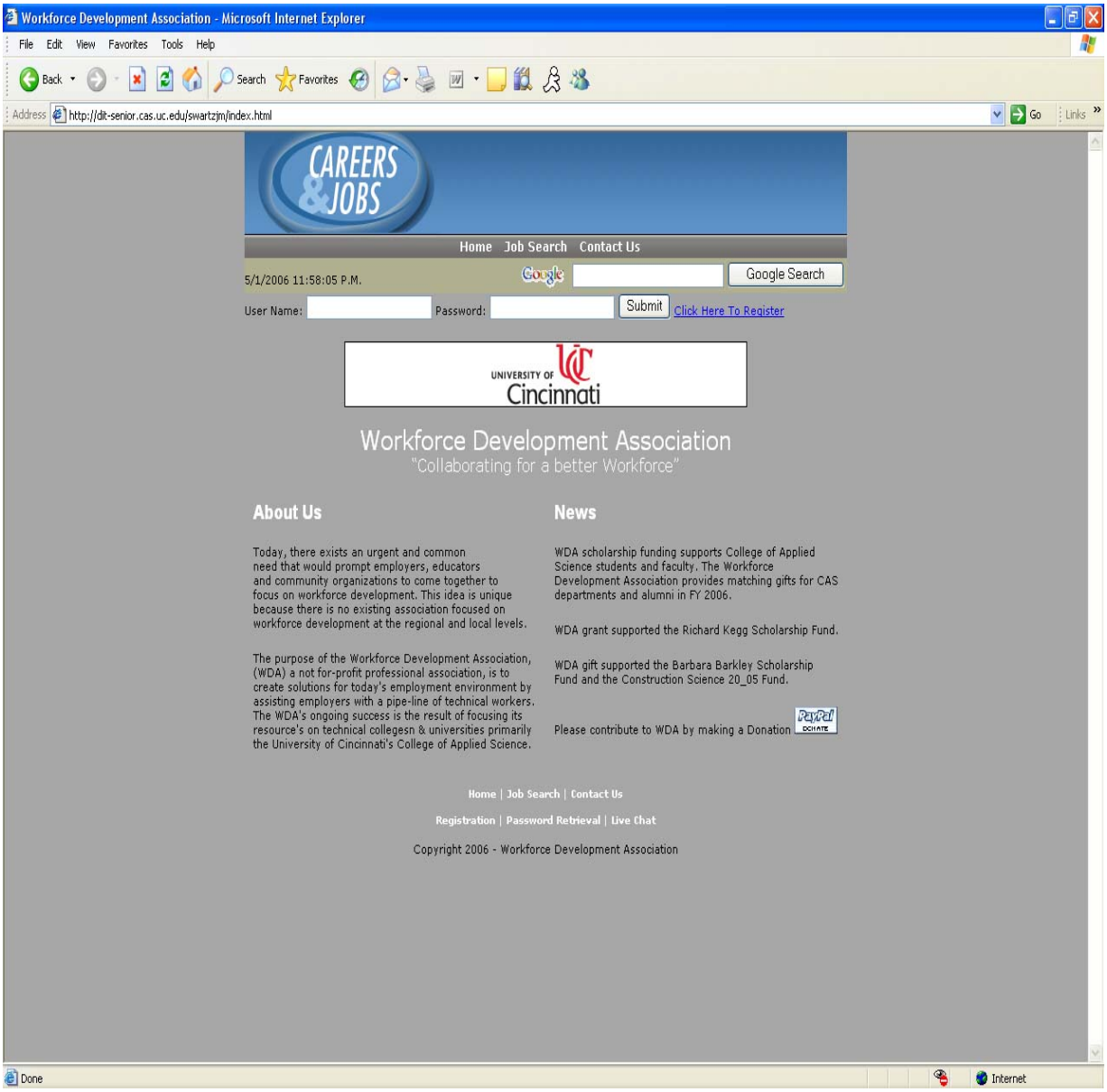

Figure 2: Home Page

2.2.1 Organizational Scheme

The WDA Web Page is split into four parts, based on who is viewing the site. When a visitor enters the site, they start at the Home page. If the person is a general user he or she will be able to click on the registration link to register to the site. Users who decide not to register will be able to browse through the site, but will not have access to the Job Search page. If the person viewing the site is a registered member, they will enter the site at the Home page, and will have the ability to login from there, or enter the Job Search page and login. The person will also be able to view all the other pages. The access that each person has can be seen in Figure 3.

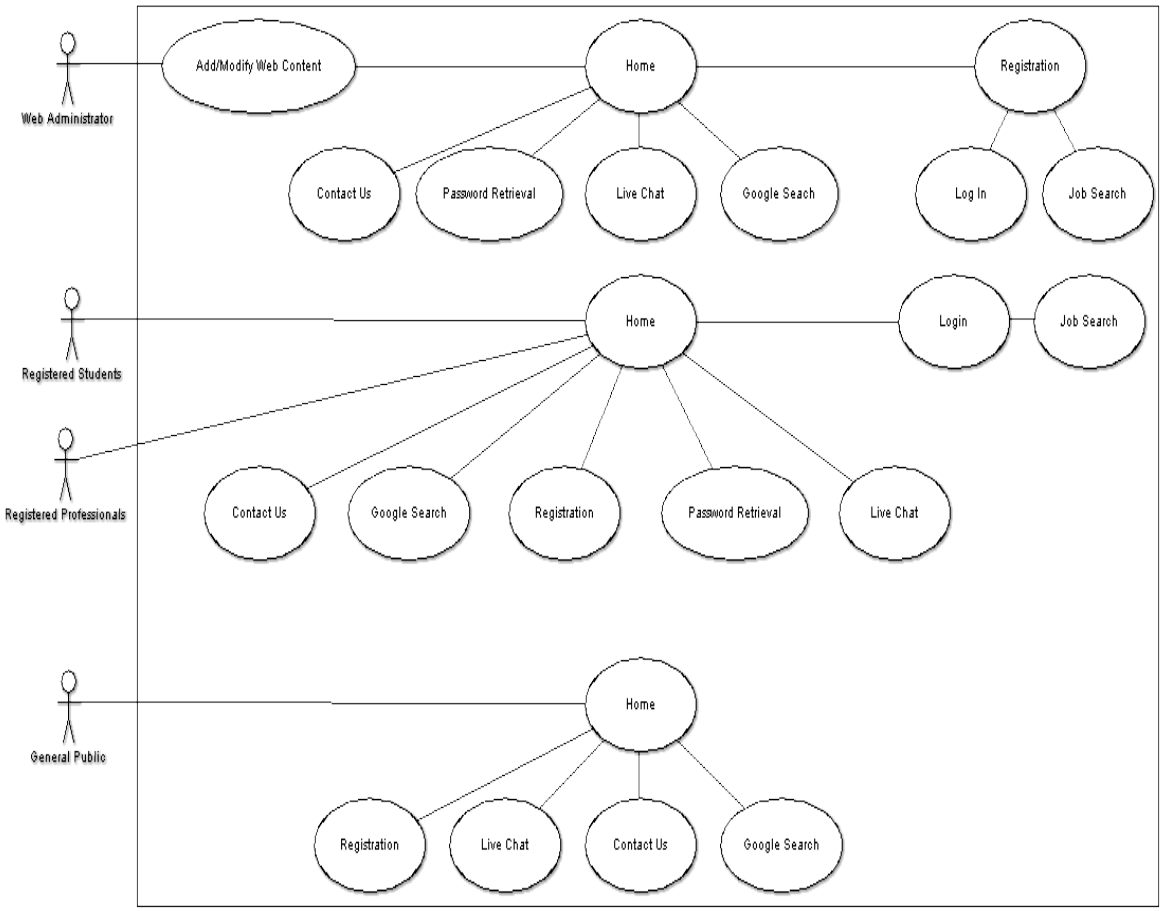

Figure 3: Use-Case Diagram

2.2.2 Database Design

The database for my Web page is not overly complex. There is one table called, 'login,' to keep track of the registered members. This table consists of UserID, First Name, Last Name, Email Address, Username, Password and DateTime. This table will also be referenced when a user either registers to the site, when a user logs in to access the Job Search page, or requests their password. Active Server Pages (ASP) was used to connect the database with the Web Site. ASP ensures that the connection to the database is secure.

2.2.3 Interface Design/Navigation

"Creating good web site navigation is the most important task a web designer has to accomplish in the web design process. Web site navigation is the pathway people take to navigate through sites. It must be well constructed, easy to use and intuitive" (7). Site navigation is accomplished by pressing the buttons on the top of the page which can be referenced in Figure 4. Links will also be placed at the bottom of the page to make it easier to move around the site and can be viewed in Figure 5.

Buttons of the site:

- *Home*

  No matter where you're located on the site, visitors can press the 'Home' button or the logo, and be returned to the Home page.

- *Job Search*

  Upon entering the site, four job banners will be automatically displayed. Visitors can click on these banners to be taken to the selected sites.

- *Contact Us*

On this page the user can send comments to Mr. Ricciardi.

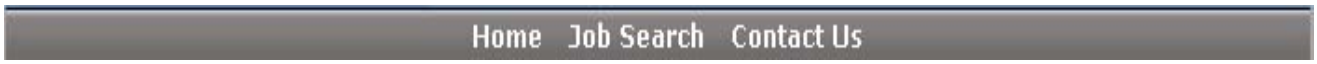

Figure 4: Button Bar

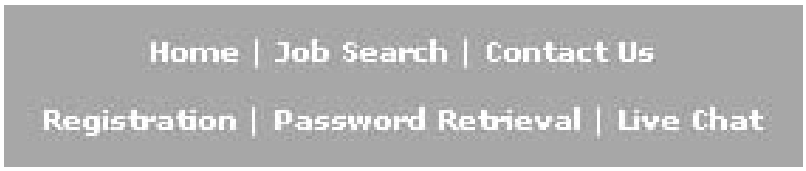

Figure 5: Bottom Links

2.2.4 Icons/Graphical Symbols

The only graphic that is displayed throughout the Web page is the logo, which is shown in the top left-hand corner of the page. This logo changes appearances whenever a mouse hovers over it. The Logo can be seen in Figure 6. Users will be able to click on this logo, which will return them to the Home page.

Figure 6: WDA Logo

2.2.5 Color Scheme

The color scheme for this project contains different shades of blue and white, as well as a few shades of gray. The blue colors and white scheme came from the logo, which was previously developed for the existing site. I added shades of gray to the color scheme because I felt they matched well, as well as bringing an inviting feel to the overall site.

2.2.6 Help

The Web Site will have a 'Contact Us' page, which will prompt the user for a name, email address and a textbox where the user can type their question or comments. When clicking the 'Submit' button an email is formed and sent to Mr. Ricciardi. The 'Contact Us' page can been seen in Figure 7.

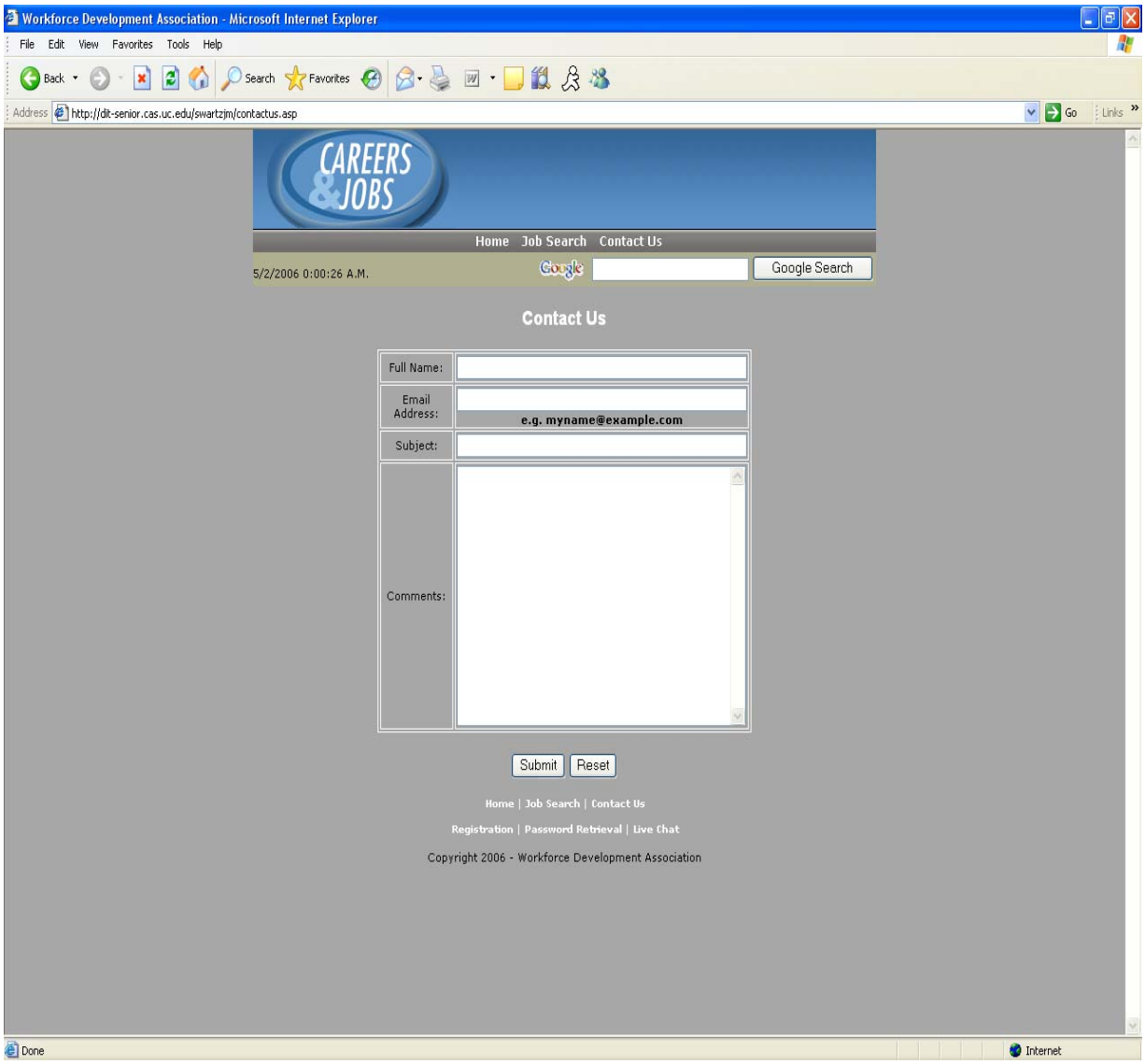

Figure 7: Contact Us Page

3. Deliverables

To provide a well-designed and easy-to-use Web page, the deliverables have been laid out. The following deliverables are the result of the design phase of Work Force Association:

- Web Site developed in HTML, ASP Visual Basic, and JavaScript
- A back-end Access 2003 database with a table that stores login information
- Authentication for registered users to use the Job Search feature
- Navigation bar / Table of Content on every page
- Rotating Banner
- Google Search Bar
- Date/Time feature
- Mouse over buttons, links and logo
- Registration page
- Forgotten Password page
- Contact Us form
- Live Chat feature
- PayPal Donation button
- Session Variable

4. Design and Development

The following sections describe the project's timeline, overall budget costs and project resources.

4.1 Timeline

Creating Workforce Developments Association's Web Site provided me with an opportunity to learn new aspects in building a professional site. It also presented me with many challenges, as well as the ability to accomplish set tasks.

4.1.1 Senior Design Accomplishments

During Senior Design I accomplished the following:

- Analyzed professional Web Sites
- Researched design layouts and ASP
- Created deliverables list according to Mr. Ricciardi needs
- Developed Photoshop images and Web Site skeleton
- Began the development process with functionality
- Put together my proposal and oral presentation

During the research phase I visited many professional Web Sites to see how the designs were laid out. I also visited many design tutorials online in the hopes of gathering more ideas. My intent in viewing these sites, was an attempt to discover what it was about these sites that made them so appealing to potential visitors. In an effort to acquire as many perspectives as possible, I further queried various people (whom I enlisted to visit these sites) as to what they thought of different sites. These varied opinions were most beneficial. Furthermore, in doing continued research, I found several designs, which guided me to the final design I created.

4.1.2 Senior Design Management I Accomplishments

During Senior Design Management I, I accomplished the following:

- Design database with Web Site connectivity

- Develop ASP scripts
- Test Web pages
- Put together the Design Freeze and oral presentation

Designing the images, then laying them out on the Web Site, required a good deal of effort and time. It proved to be a complicated process. Producing the images in Photoshop was easy enough, however problems arose in getting the web page to appear as I had envisioned and hoped. Programming the Home page was a critical part of building the site. Setting up the styles sheet to organize the layout of the site was time consuming. But once I had achieved the desired look and style of the Home page, I found the rest of the pages were created smoothly and with greater speed and efficiency.

4.1.3 Senior Design Management II Accomplishments

During Senior Design Management II, I accomplished the following:

- Added live chat functionality
- Added PayPal donation feature
- Enabled Session Variables
- Tested Web Site
- Put together the final paper and oral presentation

I was able to add the live chat functionality, and the PayPal donation feature without any problems. In adding the links and code, both worked instantly and without complication. I had some difficulty in getting the session variables to operate properly, but after converting every page to ASP, it worked without any incidents to report.

4.2 Budget

The following software, required to complete this project, was acquired by using academic licenses. The prices for the software used are listed below in the budget table. The costs for the software are retail prices and not the prices I paid to purchase the software. There are no costs for the machine I used, as it was given to me as a donation (See Figure 8.).

	Product	Developer	Explanation	Cost
SOFTWARE	Dreamweaver MX 2004	Macromedia	Own	$64.95
	Adobe Photoshop CS 8.0	Adobe	Own	$225.95
	Access 2003	Microsoft	Own	$189.00
	Notepad	Microsoft	Own	Free
			Total Cost	$479.90
			My Cost	$0.00

Figure 8: Budget

4.3 Project Resources

Hardware:

Both the laptop and desktop I am currently using for this project can handle the hardware requirements to run the appropriate software. The recommended hardware items are listed below. Having more than the recommended hardware requirements will dramatically help in how fast the applications run with other programs and/or opened windows.

Processor: 600 MHz Intel Pentium III or equivalent

RAM: 512 MB

Hard Drive: 500 MB - 2GB extra space for Photoshop image files and other files

Note: This Web Site will be updated and maintained by Mr. Ricciardi from UC. Upon inspection of his computer system, I determined that he will be able to handle the hardware requirements. (3,9)

Software:

The chosen software will be used to display images and create the functionality of the Web Site. For the creation of this Web Site, I used Photoshop CS 8.0 to create the images, which were used for the layout of the site. I chose Photoshop because they allow the creation of images which can be viewed on many different platforms and browsers. For actually creating the Web Site and navigation of the site, I used Macromedia Dreamweaver MX 2004, as well as Notepad.

Macromedia Dreamweaver MX 2004

I will used this software to develop the Web Site

Adobe Photoshop CS 8.0

Photoshop was used to create images that were used for the layout of the site

Adobe ImageReady CS 8.0

ImageReady was used to animate images.

Microsoft Access 2003

Access 2003 database was used, since the database size will not require a great deal of space.

Extra Resources:

I used various free Web Site sources to help code the ASP scripts. The following features are from sample scripts I found. The scripts were used to help

me write my own scripts. The Web Site I used to creating the ASP scripts came from http://www.aspwebpro.com. (2) I was able to find the Google search bar from http://www.Google.com. (4) The script I used to create the date/time feature came from http://www.computerhope.com/j2.htm. (1)

5. Proof of Design

The next section describes how the deliverables of the project were completed and what if any challenges I encountered.

5.1 Web Site Development

The Web Site was developed with Hypertext Markup Language (HTML), ASP Visual Basic and JavaScript languages. Using all three languages together gave the site a dynamic feel. In the following paragraphs I will explain how I used each language starting with HTML, ASP Visual Basic and ending with JavaScript.

5.1.1 HTML

The layout of the site was created using a Cascading Style Sheet (CSS). The whole site uses a Style sheet to control the display, layout and content. By using a Style sheet, it allowed me a greater degree of layout and display control. The format coding used to control display characteristics is far less than if I did not choose to use a style sheet. In using a DIV class attribute, which is a HTML tag, it provided the opportunity to create the look and feel I desired. HTML is used to also create forms on the Web Site. The HTML code is embedded in the ASP pages.

5.1.2 Google Search Bar

Also using HTML is the Google.com search bar which is seen in Figure 9. The code for the Google search bar is below.

Figure 9: Google Search Bar

```
<!-- Search Google -->
<FORM method=GET action="http://www.google.com/search">
<input type=hidden name=ie value=UTF-8>
<input type=hidden name=oe value=UTF-8>
<TABLE bgcolor="#B0AF90" align="right"><tr height="23"><td height="23">
<A HREF="http://www.google.com/">
<IMG SRC="http://www.google.com/logos/Logo_40wht.gif"
border="0" ALT="Google" align="absmiddle" height="24"></A>
<INPUT TYPE=text name=q size=25 maxlength=255 value="">
<INPUT type=submit name=btnG VALUE="Google Search">
</td></tr></TABLE>
</FORM>
```

5.1.3 PayPal Donation Button

The PayPal donation button will allow Workforce Development Association to generate money from Web Site visitors, or businesses who want to donate money. Firstly Mr. Ricciardi created and setup a profile on PayPal. After he entered all the required information PayPal required, they provided me with the code to create the donation button which is connected directly to the account Mr. Ricciardi created.

Figure 10: PayPal Donation Button

PayPal Donation Code:

<form action="https://www.PayPal.com/cgi-bin/webscr" method="post">

<p>Please contribute to WDA by making a Donation<input type="hidden" name="cmd" value="_s-xclick">

<input type="image" src="https://www.PayPal.com/en_US/i/btn/x-click-but04.gif" border="0" name="submit" alt="Make payments with PayPal - it's fast, free and secure!" height="25">

<img alt="" border="0" src="https://www.PayPal.com/en_US/i/scr/pixel.gif">

<input type="hidden" name="encrypted" value="-----BEGIN PKCS7-----

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MQswCQYDVQQIEwJDQTEWMBQGA1UEBxMNTW91bnRhaW4gVmlldzEUMBIG

A1UEChMLUGF5UGFsIEluYy4xEzARBgNVBAsUCmxpdmVfY2VydHMxETAPBgN
VBAMUCGxpdmVfYXBpMRwwGgYJKoZIhvcNAQkBFg1yZUBwYXlwYWwuY29t
MB4XDTA0MDIxMzEwMTMxNVoXDTM1MDIxMzEwMTMxNVowgY4xCzAJBgN
VBAYTAlVTMQswCQYDVQQIEwJDQTEWMBQGA1UEBxMNTW91bnRhaW4gV
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HMxETAPBgNVBAMUCGxpdmVfYXBpMRwwGgYJKoZIhvcNAQkBFg1yZUBwY
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UtcKG+wQ1mSUa6GBlKSBkTCBjjELMAkGA1UEBhMCVVMxCzAJBgNVBAgTAk
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GkxHDAaBgkqhkiG9w0BCQEWDXJlQHBheXBhbC5jb22CAQAwDAYDVR0TBAU
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6VR5w/cCMn5hzGCAZowggGWAgEBMIGUMIGOMQswCQYDVQQGEwJVUzELM
AkGA1UECBMCQ0ExFjAUBgNVBAcTDU1vdW50YWluIFZpZXcxFDASBgNVBAo
TC1BheVBhbCBJbmMuMRMwEQYDVQQLFApsaXZlX2NlcnRzMREwDwYDVQQ
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llXYnaP95pbgVYMpKkm7zr2Mw1g==-----END PKCS7-----
">

5.1.4 ASP

I decided to go with ASP Visual Basic to make the connection from my Login section to the database. As I mentioned earlier, using ASP ensures that the connection to the database is secure. Not only is ASP useful in connecting to a database, but it can also be used in form validation and to send email. ASP takes the information entered in HTML forms and makes it useable. The whole site is made in the file extension .asp. I chose to use ASP because it gave me a chance to add more functionality than if I used HTML.

5.1.5 Database Connection

The code to allow simultaneous connection to the Web Site and database, is detailed below. The code is placed at the top of my submit.asp page.

```
<%
Dim Conn
Set Conn = Server.CreateObject("ADODB.Connection")
Conn.ConnectionString = "Provider=Microsoft.Jet.OLEDB.4.0;Data Source="   &_
Server.MapPath ("/swartzjm/datastore/login.mdb") & ";"
Conn.Open
```

%>

5.1.6 Contact Us Form/Email Form Generator

Using ASP to send emails is very useful feature. Unlike using JavaScript or HTML, which uses an Email client such as Microsoft Outlook, the email is sent through the web server, and in my case the Internet Information Services (IIS) server. I was not familiar on how to code in ASP Visual Basic, at first but after studying examples I quickly learned how to use this powerful tool and language. The 'Contact Us,' form can be referenced back to Figure 7. The code for the form and email generator are detailed below.

Contact Us Form:

```
<form action="formToEmail.asp" method="POST">
<FORM ACTION="validate.asp" METHOD="POST">
<table align="center" table border="1" width="60%"
bordercolor="#FFFFFF">
  <tr>
    <td width="31%"><div align="center">Full Name:
</div></td>
    <td width="69%"><input
name="name" type="text" value=""
size="50"></td>
  </tr>
   <tr>
    <td><div align="center">Email Address:</div></td>
```

```
    <td><input name="email" type="text" value=""
size="50">
        <b>e.g. myname@example.com</b></td>
  </tr>
   <tr>
    <td><div align="center">Subject:</div></td>
    <td><input name="subject" type="text" value=""size="50"></td>
  </tr>
   <tr>
     <td><div align="center">Comments:</div></td>
     <td><textarea name="message" rows="15" cols="38"></textarea>
</table>
Contact Us Form Email Generator:
<%
Dim strname, stremail, strmessage, strsubject, objMail
strname=request.form("name")
stremail=request.form("email")
strsubject=request.form("subject")
strmessage=request.form("message")
'create the mail object and send the details
Set objMail = Server.CreateObject("CDO.Message")
objMail.From = "ContactForm@CareersandJobs.com"
objMail.To = "swartzjm@email.uc.edu"
```

```
objMail.Subject = "New message sent.."
objMail.TextBody = "Name: " & strname & vbCrLf & _
                   "Email: " & stremail & vbCrLf & _
                   "Subject: " & strsubject & vbCrLf & vbCrLf & _
                 "Comments: " & vbCrLf & strmessage
objMail.Send
Set objMail = nothing
Response.Write "Your Message has been sent"
%>
```

5.1.7 Register Form/Form Validation

The register form is where users can register with the site to enable them access to the Job Search page. After filling in the required information the user clicks the submit button. The data goes through a validation check, to ensure that the entered data is in the correct format, and to make sure relevant and required information has not been omitted. Once the data is cleared by validation a new row is entered into the database. At this step, the user is registered with the site and has the ability to login. Figure 11 shows the register form. Below the figure is the code for both the register form and validation.

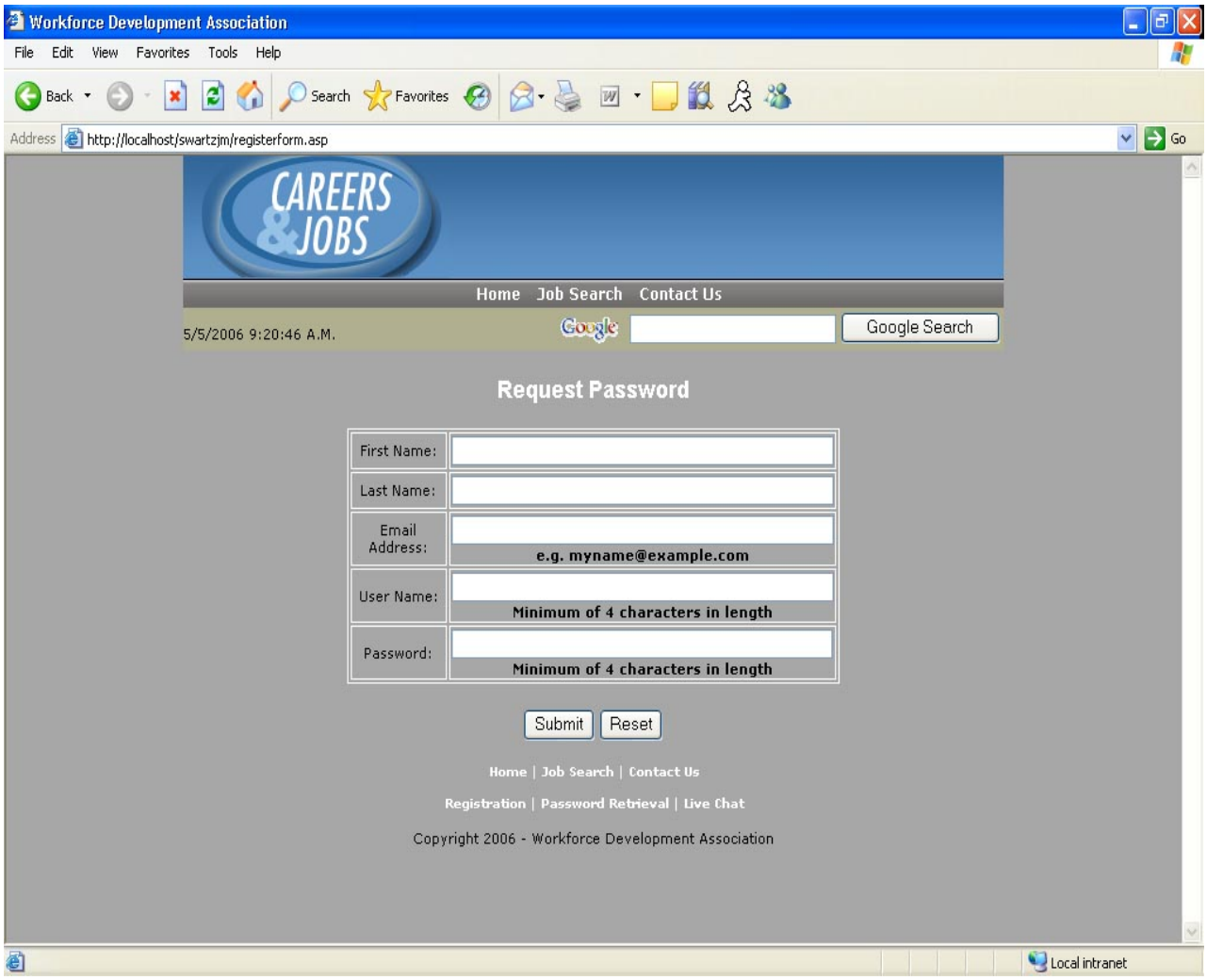

Figure 11: Register Form

Register Form:

```
<FORM ACTION="validate.asp" METHOD="POST">
<table align="center" table border="1" width="60%"
bordercolor="#FFFFFF">
  <tr>
    <td width="31%"><div align="center">First Name:
</div></td>
    <td width="69%"><input
```

```
name="FirstName" type="text" value=""
size="50"></td>
  </tr>
  <tr>
    <td><div align="center">Last Name: </div></td>
    <td><input name="LastName" type="text" value=""size="50"></td>
  </tr>
  <tr>
    <td><div align="center">Email Address:</div></td>
    <td> <div align="center">
        <input name="Email" type="text" value=""
size="50">
        <b>e.g. myname@example.com</b></div></td>
  </tr>
  <tr>
    <td><div align="center">User Name: </div></td>
    <td><input name="Username" type="text" value=""
size="50">
      <b>Minimum of 4 characters in length</b></td>
  </tr>
  <tr>
    <td><div align="center">Password: </div></td>
    <td><input name="Password" type="password" value=""
```

```
size="50">
     <b>Minimum of 4 characters in length<b></td>
  </tr>
</table>
```

Form Validation:

```
<!--#INCLUDE VIRTUAL="/swartzjm/connection.asp"-->
<%
 Form_FName = Trim(Replace(Request.Form("FirstName"),"'","''"))
 Form_LName = Trim(Replace(Request.Form("LastName"),"'","''"))
 Form_Email = Trim(Replace(Request.Form("Email"),"'","''"))
 Form_UName = Trim(Replace(Request.Form("UserName"),"'","''"))
 Form_Password = Trim(Replace(Request.Form("Password"),"'","''"))
  Validated_Form = true
 IF len(Form_FName)<2 THEN
 Validated_Form = false
 END IF
  IF len(Form_LName)<2 THEN
 Validated_Form = false
 END IF
 IF len(Form_Email)<6 OR InStr(Form_Email,"@")=0 THEN
 Validated_Form = false
 END IF
 IF len(Form_UName)<4 THEN
```

```
Validated_Form = false
END IF
IF len(Form_Password)<4 THEN
Validated_Form = false
END IF
IF NOT Validated_Form THEN
%>
Error. Click back in your browser, and fill it out properly!
<%
ELSE
DIM rs
Set rs = Server.CreateObject( "ADODB.Recordset" )
rs.Open "login", Conn, 0, 3, 2
rs.AddNew
rs.Fields("firstname") = Request.Form("FirstName")
rs.Fields("lastname") = Request.Form("LastName")
rs.Fields("email") = Request.Form("email")
rs.Fields("username") = Request.Form("UserName")
rs.Fields("password") = Request.Form("Password")
rs.Fields("dateentry") = Date()
rs.Update
%>
<%
```

```
rs.Close
Set rs = Nothing
Conn.Close
Set Conn = Nothing
 %>
 <HTML>
 <BODY>
 <B>Thank you for filling out the form <%=Form_FName%> !</B>
 <BR><BR>
 You submitted the following information:<BR>
<BR>
<table align="center" table border="0" width="60%" bordercolor="#A7A7A7">
  <tr>
    <td width="50%"><div align="Right">Full Name: </div></td>
    <td width="50%"><div align="Left"><I><%=Form_FName%></I>
<I><%=Form_LName%></I></div></td>
  </tr>
  <tr>
    <td><div align="Right">Email:</div></td>
    <td><div align="Left"><I><%=Form_Email%></I></div></td>
  </tr>
  <tr>
    <td><div align="Right">User Name: </div></td>
```

```
   <td><div align="Left"><I><%=Form_UName%></I></div></td>
  </tr>
  <tr>
   <td><div align="Right">Password: </div></td>
   <td><div align="Left"><I><%=Form_Password%></I></div></td>
  </tr>
</table>
<BR><BR>
<table border="1" width="100%" bordercolor="#FFFFFF">
  <TR>
        <TD CLASS="small" COLSPAN="2"> <div align="center"><strong>Your
account has successfully been created. Please login. </strong></div></TD>
          </TR>
  <tr>
   <td width="100%">
    <FORM ACTION="submit.asp" METHOD=post>
     <p align="center">
     </p>
     <p align="center">User Name: <INPUT MAXLENGTH=50 NAME=id size="20">
     Password: <INPUT MAXLENGTH=20 NAME=pwd TYPE=password size="20">
     <INPUT TYPE="SUBMIT" Name="Login" VALUE="Submit">
        <a href="changepw.asp">Forgot Password</a></p><br>
```

```
If you do not have an account please <a href="register.html">Click Here To
Register</a></p>
        </p>
       <p align="center"></p>
      </form>
      <p align="center"></td>
  </tr>
</table>
```

5.1.8 Login/Session Variable

After registering with the site, visitors will be able to log on. Log in enables the user to use the Job Search page. There are two places where a user can Login. The first is on the Home page and the second is when you hit the Job Search button. When a successful login has occurred, a session variable is created. The session variable allows the user to remain logged in and browse the site. The user is also able to go in and out of the Job Search page without having to log back in. The session variable has a 20 minute limit before it is terminated. If the user wishes to log out they can do so by clicking the Logout link, which is provided on the Job Search page. The code which sets up the session variable is contained within the submit page. Below are two figures. The figure on the top, Figure 12, is the Login form from the Home page. Figure 13 on the bottom is when you click the Job Search page button. Underneath the Figures is the code for the login and submit.

Figure 12: Login on Home page

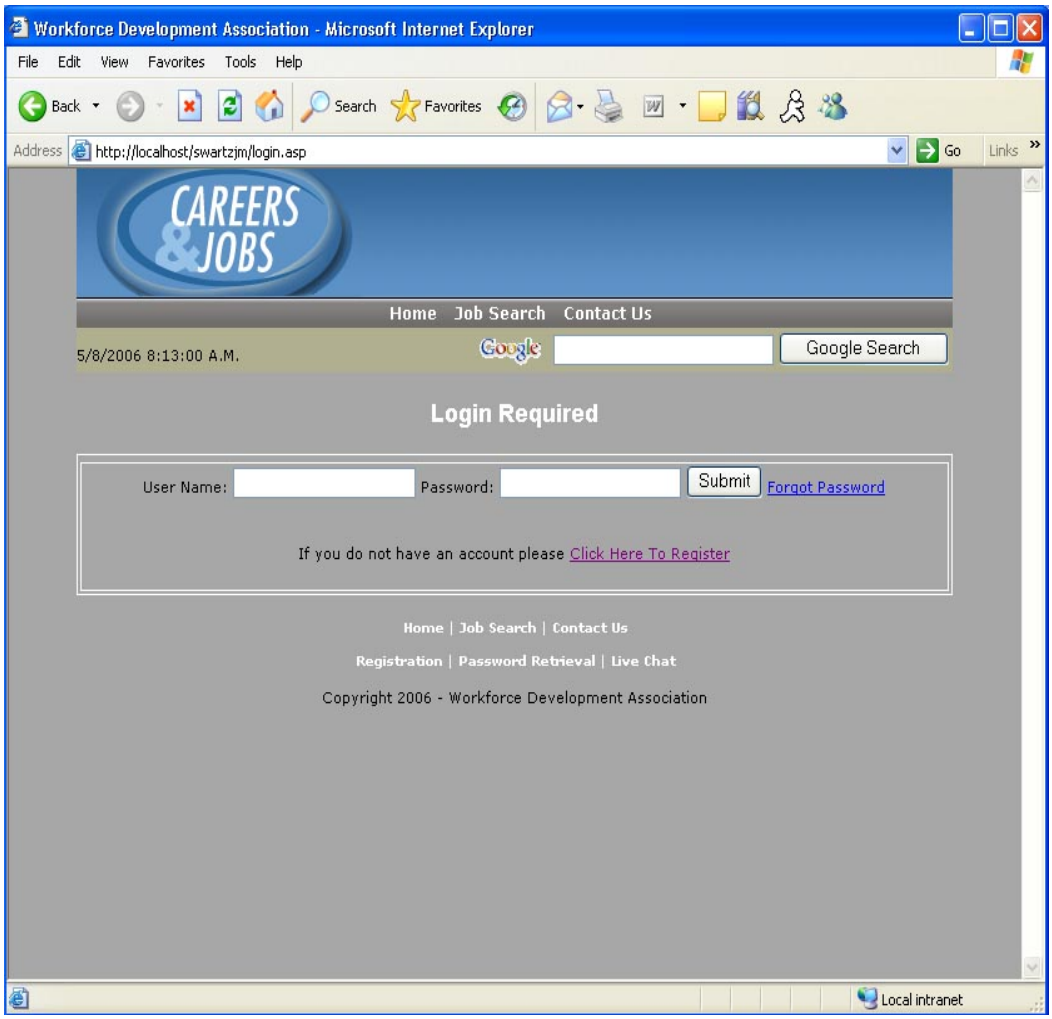

Figure 13: Login from Job Search Page

Login:

```
<table border="1" width="100%" bordercolor="#FFFFFF">
  <TR>
        <TD CLASS="small" COLSPAN="2">
        <% If Session( "loginFailure" ) = True Then %>
          <p align="center"><font size="2" color="#FF0000"><b>Invalid
Password</b></font>
        <% End If %>
```

```
            </TD>
          </TR>
  <tr>
    <td width="100%">
     <FORM ACTION="submit.asp" METHOD=get>
      <p align="center">
     </p>
      <p align="center">User Name: <INPUT MAXLENGTH=50 NAME="username"
size="20">
      Password: <INPUT MAXLENGTH=20 NAME="password" TYPE=password
size="20">
      <INPUT TYPE="SUBMIT" Name="Login" VALUE="Submit">
         <a href="changepw.asp">Forgot Password</a></p><br>
         If you do not have an account please <a href="registerform.asp">Click Here To
Register</a></p>
Submit:
<%
dim strODBC  ' connection string
dim strSQL     ' SQL query string
dim dl           ' Data connection object
dim rs           ' Recordset for query results
strODBC = "Provider=Microsoft.Jet.OLEDB.4.0;Data Source=" & _
         Server.MapPath ("/swartzjm/datastore/login.mdb") & ";"
```

```
strSQL = "Select username FROM login WHERE username = '" &
request.QueryString("username") & "' AND password = '" &
request.QueryString("password") & "'"
set dl = Server.CreateObject("ADODB.Connection")
dl.Open strODBC
set rs = dl.Execute(strSQL)
If (rs.EOF = True) and (rs.BOF = True) then
Session( "loginfailure" ) = True
Response.Redirect( "login.asp" )
else
Session("BlnLoggedIn") = True
Session.Timeout=20
Session("Username") = request.QueryString("username")
Response.Redirect "jobsearch.asp"
End If
%>
```

5.1.9 Forgotten Password Retrieval/Email Password Generator

The forgotten password retrieval feature allows users to retrieve the password they used to register to the site. The user enters the email address used to register with the site. After clicking the submit button, an email is generated and sent to the email address they provided. The email is created exactly the same way 'Contact Us,' email is formed. The only difference is, with this feature, the email generator connects to the

database to retrieve the information. The email gives the user there username and password. Below is a Figure 14 is of the password retrieval page.

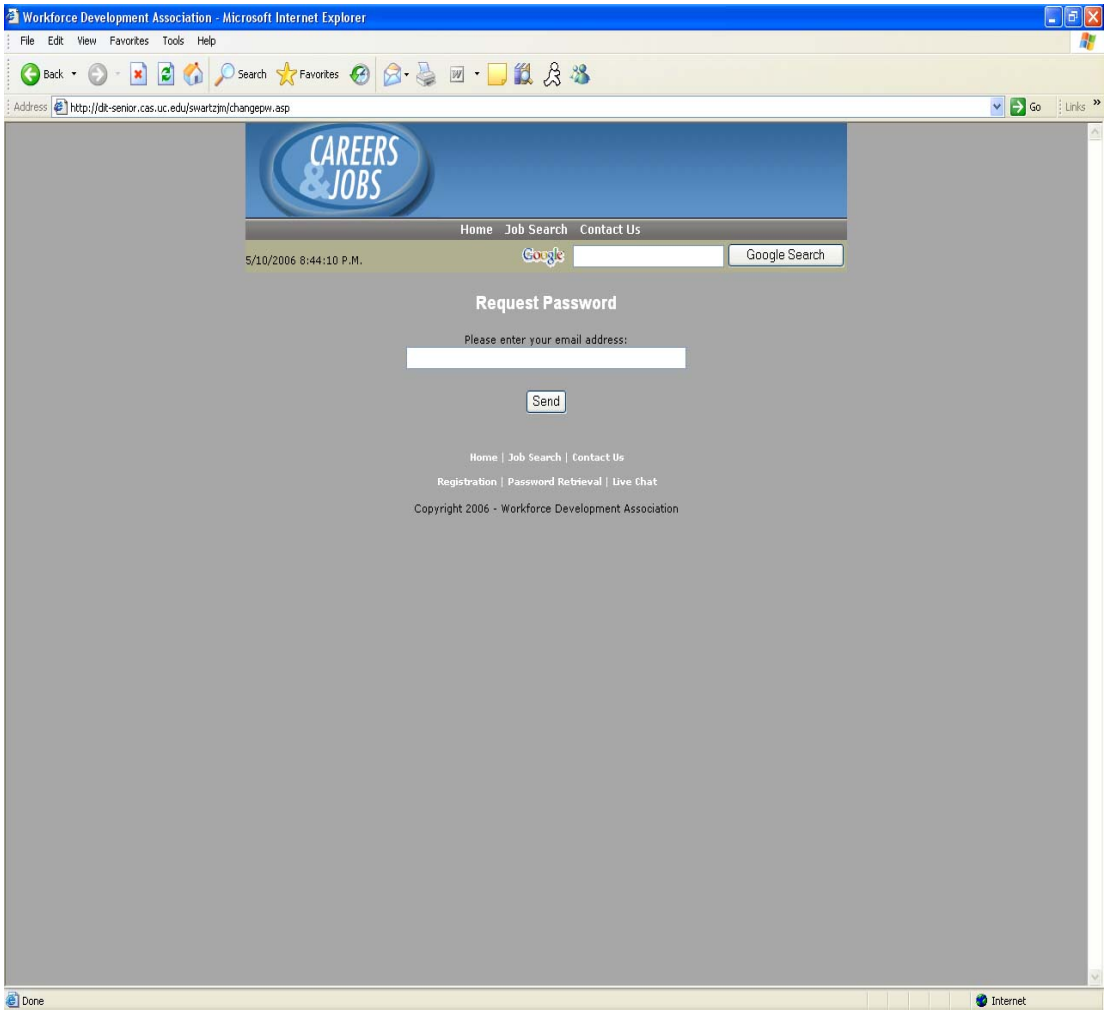

Figure 14: Forgotten Password Retrieval Page

5.1.10 JavaScript

Last but not least JavaScript is used throughout WDA's site. Both of these features code came from the internet and were free to use.

5.1.11 Date/Time

The date/time function which is seen on every page on the far left hand side across from the Google.com search bar was coded in JavaScript. The time will update

with every refresh of the page. Figure 15 is the time/date feature. I have also provided the code for this feature, detailed below.

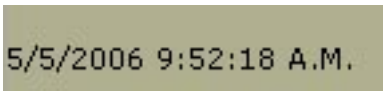

Figure 15: Date/Time Feature

```
Time and Date:
<!--  Date/Time -->
<script langauge="JavaScript">
<!--
// Demonstrates the typical format for date and time info derived form date()
//document.write("<b>Date() Typical Format</b><br>");
// Create a varible with the current data info
var right_now=new Date();
// Month always comes through as one numeric
// Less than the current month. Jan=0 Feb=1 etc.
document.write(right_now.getMonth()+1);
document.write("/");
document.write(right_now.getDate());
document.write("/");
// Year can come as the current year
// or the number of years since 1900
// To account for this we check the value
var right_year=right_now.getYear();
if (right_year < 2000)
```

```
right_year = right_year + 1900;
document.write( right_year );
document.write(" ");
// Begin Ouptut of Time
// Hours come in military time
// To put in civilian time you must check the hours
// To see if they're greater than 12
var right_hours=right_now.getHours()
if (right_hours > 12)
right_hours = right_hours - 12;
document.write(right_hours);
document.write(":");
// To display leading zeros before the minutes
// Check for minutes less then 10
var right_min=right_now.getMinutes();
if (right_min < 10)
document.write("0");
document.write(right_min);
document.write(":");
// To display leading zeros before the seconds
// Check for minutes less then 10
var right_sec=right_now.getSeconds();
if (right_sec < 10)
```

```
document.write("0");
document.write(right_sec);
// To display AM or PM assign a varible to A.M. Value
// If the the hours are greater than 12 then switch
// the value to P.M.
var ampm=" A.M.";
if (right_now.getHours() > 12)
ampm=" P.M.";
document.write(ampm);
// -->
</script>
```

5.1.12 Rotating Banner

The rotating banner found on the Home page was also created using JavaScript. The banners are of sponsors to Workforce Development Association. Figure 16 details the banners, which rotate every minute. The code for the figure is listed below.

Figure 16: Rotating Banner Ads

Rotating Banner:

```
<script type="text/javascript">
<!--
myAd = new Banner( 10, 468, 60, "Visit our sponsor", 1, 0 );
myAd.Ad( "Logos/UC.jpg", "http://UC.edu", null, "University of Cincinnati" ) ;
myAd.Ad( "Logos/53Bank.jpg", "http://53bank.com", null, "53 Bank" ) ;
myAd.Ad( "Logos/AmericanMirco.jpg", "http://www.american-micro.com/", "_blank",
"American Micro" );
myAd.Ad( "Logos/CFC.jpg", "http://www.cinfin.com//", "_blank", "Cincinnati Financial
Corporation" );
myAd.Ad( "Logos/Cinergy.jpg", "http://cinergy.com", "_blank", "Cinergy" );
myAd.Ad( "Logos/KI.jpg", "http://pki.com", "_blank", "Paramount's Kings Island " );
myAd.Ad( "Logos/P&G.jpg", "http://pg.com", "_blank", "P&G" );
myAd.Ad( "Logos/nationalcitybank.jpg", "http://www.nationalcity.com/personal/",
"_blank", "National City Bank" );
myAd.Ad( "Logos/woodandlamping.jpg", "http://www.woodlamping.com/", "_blank",
"Wood & Lamping LLP" );
myAd.output();
// -->
</script>
```

6. Testing Procedures

The development of Workforce Development Association's Web Site followed a step-by-step process, which was repeated for each page. Testing followed the completion of each page and script created. For an example of my testing procedure, I created the Home page, then tested, created Registration page, then tested again. The entire site was created and tested in this fashion. Testing after each page allowed for finding problems and bugs more efficiently.

System testing was completed on the following systems:
Windows 2000, Windows XP, Mac OSX. The following browsers tested are: Microsoft Internet Explorer versions 6.0 and 7.0 Beta, Mozilla Firefox and Safari.

The final critical part of testing went to a group of volunteers who gave their time in helping test the website and provided me with helpful feedback. When I completed the Web Site I had the volunteers go to the site and try everything they could to break the site and generate an error. When they came back to me with feedback and said everything worked, and they could not break it, I than knew I was officially done with the site, and the testing phase was a great success.

7. Conclusions and Recommendations

7.1 Conclusions

This project was originally conceived because of an ad placed by Mr. Anthony Ricciardi. I found this ad on Blackboard under Senior Design class section. The ad detailed the need for a new Web Site, which is professional, visually appealing, and better promotes the goals of the association. I believe I have created a Web Site that has met these goals. It is a site that is clean, appealing to the eye, and will ultimately improve

visitor traffic, as well as help the WDA meet their stated goals. Moreover, the text and graphics on the site are not overpowering, and the user feels more comfortable while navigating the site. The project used the following applications to start and complete the site: Adobe Photoshop CS 8.0 / ImageReady, Macromedia Dreamweaver MX 2004, Microsoft Notepad and Microsoft Access 2003. The project was completed over the three quarter Senior Design sequence. The total cost of the project was $480, not including labor costs. The project included all the Design Freeze deliverables. Testing was performed to ensure the site was fully functional.

7.2 Recommendations

Throughout this school year, I encountered a few minor hold-ups on my project. When starting out, I didn't know much about web programming. The last web page I made was back during my high school days. I was taught then that the first step is to make a layout of the page, and then to put the layout into action.

However, in working on this project, I soon learned I was bereft of much needed information, as well as knowledge of practical application, in relation to the tasks before me. To allay this lacking, I immersed myself in PhotoShop tutorials. I also spent a substantial amount of time and effort in learning its applications, experimenting, and trial and error. In all, it would take me a total of three weeks to master PhotoShop, and another week to implement the lay out of the new Web Site

It took several weeks to learn how to make a Cascading Style Sheet (CSS). I used several tutorials I found on the internet, while doing a Google search for Cascading Style Sheet Tutorials. I also consulted with a friend who is proficient in web programming. With the combination of the Web Sites, and my friend, I was able to develop a layout,

and a Home page that is clean, professional, and appealing to the eye.

When creating all the web pages I knew I was going to use ASP. I didn't know much about ASP, and how dynamic it is or could be. I started off by creating all the pages in .html. With a week left until senior design, I decided to change from .html to .asp. I did this, because it provided more flexibility to add more features, such as setting up session variables. I also decided to have the HTML code embedded in the ASP pages.

After learning as much as I could on design layout, CSS, and ASP, Senior Design (within the time frame of the project) went smoothly.

I was able to complete my deliverables on time, and I was never rushed to catch up on certain parts. I was even able to complete the entire page before the deadline. This gave me time to tweak the site to make it look even better, and also gave me the chance to change the site to .asp.

The end result of the project impressed professors, professionals, as well as casual Internet users. But most importantly (for me, anyway), Mr. Ricciardi, was not only impressed, but fully satisfied that all his desires had been met, and even exceeded, in creating his new Web Site.

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