ST. XAVIER'S COLLEGE

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NET CENTRIC COMPUTING

[CSC 360]

THEORY ASSIGNMENT #1

Submitted By

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Submitted To

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Prepare a detailed report on "Active Server Page (ASP)"

Background:

The Web and the Internet began to really heat up and receive significant media exposure starting around 1994. Initially, the Web started as a great way for academics and researchers to distribute information; but as millions of consumers flocked to the Internet, it began to spawn completely new business models. Three good examples of innovative models include [6]:

- Amazon - Amazon (which opened its doors in July, 1995) houses a database of millions of products that anyone can browse at any time. It would have been impossible to compile a list this large in any medium other than the Web.
- Ebay - Online auctions make it easy and inexpensive for millions of people to buy and sell any imaginable item. It would be impossible to do this at a reasonable cost or in a timely manner with any medium other than the Web.
- Epinions - Thousands of people contribute to a shared library of product reviews. One of the Web's greatest strengths is its worldwide view and collaborative possibilities.

These different business models are all visible to anyone surfing the Web. One of the most interesting behind-the-scenes business models that the Web has created is called the ASP, or Application Service Provider. ASPs are a completely new way to sell and distribute software and software services. Although ASPs were possible before the advent of the Web, the Web makes them so easy to create that they have proliferated hugely in the last several years [6].

What is Active Server Page (ASP)?

An Active Server Page (ASP) is an HTML page that includes one or more scripts (small embedded programs) that are processed on a Microsoft Web server before the page is sent to the user [1].

According to Microsoft:
Active Server Pages (ASP) is a server-side scripting environment that you can use to create and run dynamic, interactive Web server applications. With ASP, you can combine HTML pages, script commands, and COM components to create interactive Web pages and powerful Web-based applications that are easy to develop and modify [2].

An ASP is somewhat similar to a server-side include or a common gateway interface (CGI) application in that all involve programs that run on the server, usually tailoring a page for the user. Typically, the script in the Web page at the server uses input received as the result of the user's request for the page to access data from a database and then builds or customizes the page on the fly before sending it to the requestor [1].

ASP is a feature of the Microsoft Internet Information Server (IIS), but, since the server-side script is just building a regular HTML page, it can be delivered to almost any browser. You can create an ASP file by including a script written in VBScript or JScript in an HTML file or by using ActiveX Data Objects (ADOs)

program statements in the HTML file. You name the HTML file with the ".asp" file suffix. Microsoft recommends the use of the server-side ASP rather than a client-side script, where there is actually a choice, because the server-side script will result in an easily displayable HTML page. Client-side scripts (for example, with JavaScript) may not work as intended on older browsers [1].

For Web service applications, Microsoft provides a new version of ASP support called ASP.NET.

Note [3]: ASP is an old (but still powerful) tool for making dynamic Web pages.
ASP is a technology (much like PHP) for executing scripts on a web server.

What is an ASP file?

ASP is a file extension for the Active Server Page file format used by an HTML file containing a Microsoft server-processed script. An ASP files' scripts are processed on a Microsoft Web server before the page is sent to the user, usually tailoring a page for the user [4].

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How to Open ASP file?

Asp is active server page file. Depending on what you want to do when you open it. These are different ways to open it. One easy way is

1. Open the file explorer.
2. Right click the file and click open with.
3. There are some application icons on top of the popup windows. Click the icon io and open it.
4. If can't find your application icons there, you can 'choose default programs..'.
5. In the popup windows, you will see application icons in two categories recommended programs and other programs.
6. If you find them in the list, click the icon to confirm and open file. There is a check box at the bottom; check it when you want the program opens this file automatically. Otherwise, uncheck it if you want this program opens this file just for this time.

There are lots of Programs to open asp file depending on what do you want to do with it. Here are some.

- Notepad – view contents in plain text.
- FrontPage - view contents and related html or script code.
- Development tools such as MS Visual Studio – view contents and related html or script code.
- IE-View contents or page layout and may execute code if in IIS server.

What can ASP do for you?

Active Server Pages offers a plenty of possibilities [5]:

- The advantage of using ASP is its speed and ease of use.
- ASP is appropriate whenever you want your pages to be created dynamically when the browser requests the page. For example, you can display date, time, and other information in different ways. ASP will make your website more dynamic in content and a heck of a lot easier to update.
- ASP makes it easy to customize a Web page to make it more useful for individual users.
- ASP code cannot be viewed from any browser. ASP scripts will be executed before the page loads in the user's browser. As far as the user is concerned, ASP files look like a straightforward HTML page and if they 'view source' that is all they will see.
- With ASP you can track the number of page hits or the number of visitors and guests of your Web site.
- You can make a survey form and ask people who visit your site to fill it out, send emails, save the information to a file, respond to user requests and etc.
- ASP allows accessing data or databases and returning the results on your web site.
- With ASP it is easy to create password-protected websites and encrypt information in your database.

This is only a small part of possibilities that ASP provides you with [5].

How Does ASP works?

As you have learned, scripts in an ASP file are a server-side script, which means that the scripts are processed on the server and then the result of the scripts will be converted to HTML before sending to the web browser. To illustrate, let's take a look at this table to compare the process of retrieving an HTML page and an ASP page [7].

HTML process

1. A user requests a web page (i.e. http://www.utexas.edu/index.html in the web browser.
2. The browser finds the appropriate web server, and asks for the required page.
3. The web server locates the required page and sends it back to the browser as HTML text.
4. The browser executes the client side scripting (like JavaScripts) determining how to display the results

ASP process

1. A user requests a web page (i.e. http://www.devasp.com/test.asp in the web browser.
2. The browser finds the appropriate web server (like IIS or PWS), and asks for the required page.
3. The web server locates the required page, and parses out the ASP code within the ASP script delimiters (<%…%>), produces a standard HTML page. The server sends that HTML page back to the browser, so the user cannot see ASP code.
4. The browser executes the client side scripting (like JavaScripts) determining how to display the results

As you can see, the whole process of the two is quite similar. Since ASP is a server-side technology, the required page is executed on the server before the HTML is created and served to the client. To make it clearer, Figure1 shows the processing behind a browser request to an ASP page.

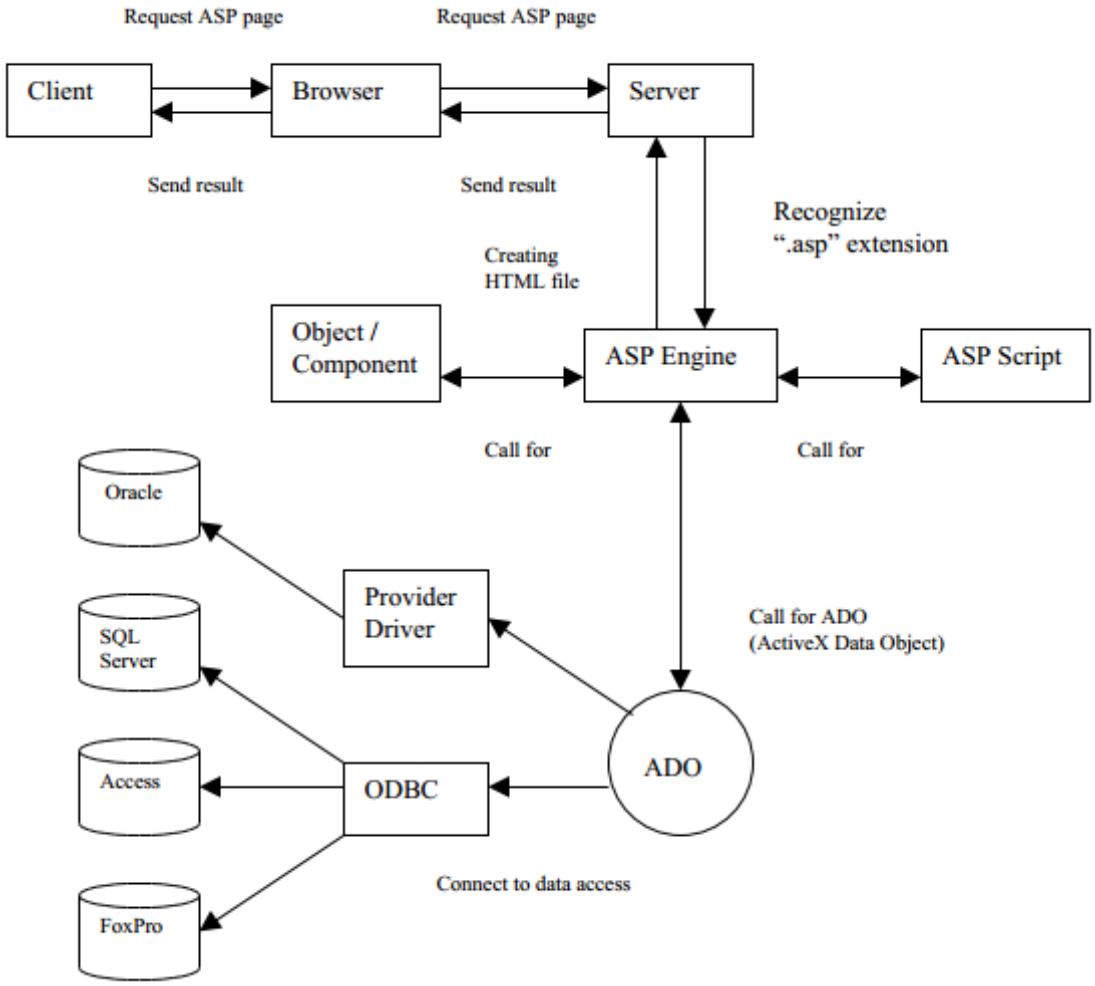

Figure 1: How ASP works?

For example, a client types in a URL into your browser. The browser requests the ASP page from the web server. The server proceeds the file with ".asp" extension to ASP Engine in which Objects or ActiveX Components can be used to extend the web server with application-specific functionality. In addition, ASP will use ADO to connect to a database (SQL, Access, Oracle, etc.) to pull out the relevant data, such as the current weather in a specific area. Thus, a different page is generated according to the area specified and time that the page is accessed. Then, the server generates HTML tags before sending it back to the client. Therefore, when you view the source of an ASP file, you will not see any different from a standard HTML file.

ASP includes five build-in objects [7]:

· Request – to get information from the user that is passed along with an HTTP request
· Response – to output data to the requesting client· Server – to control the Internet Information Server
· Session – to store variables associated with a given user session
· Application – to store information that remain active for the lifetime of an application, such as a page counter.

Summary [3]:

What is ASP?

- ASP stands for Active Server Pages
- ASP is a Microsoft Technology
- ASP is a program that runs inside the web server

What is an ASP file?

- An ASP file has the file extension ".asp"
- An ASP file is just the same as an HTML file
- An ASP file can contain server scripts in addition to HTML
- Server scripts in an ASP file are executed on the server

What can ASP do for you?

- Edit, change, add content, or customize any web page
- Respond to user queries or data submitted from HTML forms
- Access databases or other server data and return results to a browser
- Provide web security since ASP code cannot be viewed in a browser
- Offer simplicity and speed

How does it work?

- When a browser requests a normal HTML file, the server just returns the file.
- When a browser requests an ASP file, the server passes the request to the ASP engine which reads the ASP file and executes the server scripts in the file.
- Finally the ASP file is returned to the browser as plain HTML.

Reference

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[3] "ASP Tutorial", w3schools.com, 2016. [Online]. Available: http://www.w3schools.com/asp/ [Accessed: 23-August-2016].

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[5] "What can ASP do for you?", webcheatsheet.com, 2016. [Online]. Available: http://webcheatsheet.com/asp/what_asp_can_do.php [Accessed: 23-August-2016].

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[7] "Introduction to ASP", edb.utexas.edu, 2016. [Online]. Downloadable: http://www.edb.utexas.edu/minliu/multimedia/Intro%20to%20ASP.pdf [Accessed: 23-August-2016].