

Web Page Basics – static pages, dynamic pages, languages

A very basic web page is going to be written in a scripting language called HTML or XHTML. The code for displaying a web page in HTML or XHTML is very similar to how word processors work. A word processor has syntax to handle bold letters, images, text alignment etc.

The way a web page is displayed is via a web browser, such as Internet Explorer, Mozilla Firefox, Opera, etc. Each browser reads the web page syntax slightly different. The more browsers you are compatible with the more people can view the web page.

There are two basic types of web pages *static* and *dynamic*. A static web page will always show the same content every time someone views it. A static web page is primarily used to publish a document on-line that will **not** change and **not** process any type of data. A dynamic web page is constantly changing. Usually receiving some type of data and handling the data in a certain fashion. A basic web form (data capture) is commonly handled with a server side programming language.

Two very common server side programming languages are PHP(Personal Home Pages) and ASP(Active Server Pages). Basically the differences between the two are PHP will work on virtually any system or server available as its open source. ASP on the other hand is written by Microsoft and requires you to use Microsoft IIS servers (there are some open ports to make ASP cross platform and run on any server software, but they this means ASP is ran in emulation if its not on Windows). There is also CGI common gateway interface normally written with C, C++, PERL Python. Most have left CGI as build costs are usually higher than the cost of building a PHP or ASP website.

	PHP 4	PHP 5	ASP.NET
Software Price	Free	Free	Free
Platform Price	Free	Free	\$\$
Speed	Strong	Strong	Weak
Efficiency	Strong	Strong	Weak
Security	Strong	Strong	Strong
Platform	Strong	Strong	Weak (IIS Only)*
Platform	Any	Any	Win32 (IIS Only)*
Source Available	Yes	Yes	No
Exceptions	No	Yes	Yes
OOP	Weak	Strong	Strong

* ASP can be ran in emulation on virtually any operating system. Though most hosts do not provide this type of emulation.

References to help choose the difference between ASP and PHP

http://www.oracle.com/technology/pub/articles/hull_asp.html

<http://www.pointafter.com/Archives/nl0203.htm>

<http://www.webpronews.com/expertarticles/expertarticles/wpn-62-20051222ASPvsPHP.html>

Hosting a web page - domain names, naming conventions, hosting options.

One major piece to note when you setup a domain name. The domain name is pointed to one single server. This means you will get one “*index*” page per domain name you have. An index page is also called a default page or a home page. Naming conventions for most index pages are index.html,

index.php, index.asp. Some hosts provide a variety of index pages such as default.html, home.html, etc. Most hosts have no limitation on how many web pages make up a website. Limitations are usually brought upon by storage capacity. Most basic websites will stay under 100 megabytes of space. Of course website sizes will vary mainly depending on the size and amount of images they contain. Web pages that make up a site are case sensitive, where domain names are not. This means if you own <http://www.pepsi.com> and have a sub page of [contactinformation.html](http://www.pepsi.com/contactinformation.html) your sub page will be <http://www.pepsi.com/contactinformation.html>.

Valid

<http://www.PePSI.com/contactinformation.html>

Invalid

<http://www.pepsi.com/ContactInformation.html>

Domains cannot be pointed to www.domainname.com/somepage.html without a lot of server side configuration which most hosts do not setup. The [somepage.html](http://www.domainname.com/somepage.html) would need to be renamed to the index page convention provided by the host.

There are a handful of options you want to look at when determining what host you want to go with. In my experience the hosts that stay up and run decently are hosts that use a POSIX type system for there server. This includes Linux, FreeBSD, OpenBSD, or any type of Unix style operating system. These types of systems are capable of running PHP and ASP in emulation (Chili!Soft ASP). Though the majority of POSIX hosts primarily run PHP 4 or PHP5 and rarely run ASP in emulation. Costs for these services will vary anywhere from \$5.00 per month to \$50.00 per month. The main differences in price usually depend upon dedicated and shared servers.

Recommended PHP Hosts

<http://www.bluehost.com/>

<http://mediatemple.net/>

Web Forms – Input Validation and Security

Web forms seem to be quite simple for the users. But there is a lot that goes into the back end design to make the users navigation easier. Almost every form has some type of requirements for fields whether that be a valid user name, telephone number, email address etc. The worst thing about web forms are forms that do not give the user an error until its too late forcing the user to resubmit the data. To get around this a lot of web developers have started to use Java Script for form validation. Though this method works, there is one thing to think about. Validation with Java Script is done on the clients browser, if a client has a browser with Java Script turned off or no ability to use Java Script the validation will either disable the client from submitting a form or do nothing what so ever. Validation of input is one of the most important things a web form does, this is why most web forms end up costing way more to develop then they should.

Even if there are no required fields or no data validation done for the user end the data you are collecting has to go somewhere. The majority of the time this data is submitted to a database or sent via an email. If the data is not checked to avoid database and email injects you can have a huge security risk in your hands. At the very minimum you could convert your web server into spam e-mail central. If you have it connecting to your database you run the risk of opening your database to the public or getting your data deleted.

When dealing with any type of data harvesting where you will be getting contacting the client in the near future, sending out emails on a list etc. It is very important to “stamp” the data that was submitted by the form with a time stamp (time and date the form was filled out) and the Internet Protocol (IP) Address of the machine that filled out the form. To comply with anti-spam and telemarketer laws stamping the data with a date and the IP address of who submitted the data will save you if you end up in court.

Design of a page - Purchasing Templates, SEO

Web pages have been around for some time and just about anyone can create and design a web page for a business or individual. However the experience of a designer does make a difference in how your page will be displayed on different web browsers. The *World Wide Web Consortium* (<http://www.w3c.org>) are a group of people that try to make website syntax for browsers standardized. Most any browser that is used follows the syntax provided by the w3c.

When purchasing templates there are a handful of factors. A very basic template will give you the basic layout of your web page. This basic template is usually spread across all sub pages of the website. For dynamic sites there are a handful of templating engines to help separate the html or xhtml (display) code from the server side code. When a web page “template” does not separate the html or xhtml code from the server side code modifications to the page on the internal processing and external display can be a large inconvenience to the task at hand.

A major piece that should be considered when a template is created or purchased is the ability to modify the content easily without losing the design of the web page. A lot of beginner designers design a page that will not shrink and expand depending on the amount of content that is entered into a web page.

Even though a web page may look wonderful to the users that come to it and the back end programming was well written and runs fast. There is another piece to look at this is how search engines or “internet robots” can view the page. Search Engine Optimization (SEO) is a highly desired factor that company's look for. Unfortunately most people and company's start looking into this after the page has been created and designed. It is very important to give designers information on what type of traffic you want to drive to your website. Also the written content on your website worded properly will help these internet robots determine what people to send to your site. If you have a basic sentence that states

“We're the business for you.”

a search engine won't know if you sell products or services.

“We're the business you want to buy your coffee mugs from.”

The latter sentence gives the user and an internet robot the idea that you sell coffee mugs.

Also something to note internet robot do not read text in images the alt tag, and title tag may help depending on the internet robot.

Cascading Style Sheet

Along with standard HTML or XHTML for website design there is also something called Cascading Style Sheets (CSS). CSS allows for the ability to manipulate a web page more than standard HTML or XHTML can do. At a very basic level this allows you to manipulate the color of links text etc. More advanced designers can use CSS to make simple changes for different media types. Say you have a web

page that looks great on your computer screen with a browser. With CSS you have the ability to modify the format of your web page for Printers, PDA's. Most users do not want to waste there ink cartridges to print some fancy website and really only want the content of your web page to be printed. Even though a basic computer user can copy and paste the text to their favorite text editor or word processor. Giving the user the ability to print the content of web page without having to cut and paste and reformat the data is always a great idea.

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