

Complete Assistance – A Manual for

Domains, Hosting, and Structure of Websites

The Website Manual

A PERSONAL AND PROFESSIONAL WEBSITE GUIDE

The Website Manual

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Resource Sites

<http://www.thewebsitemanual.com>

<http://www.hostsearchsite.com>

<http://www.besthostcompare.com>

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Thank you,

Jonathan Charpie

Domains

Resources, References, Reminders – Taking the Mystery Out of Domain Names

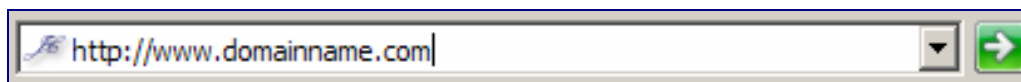
Lets start out with the basics. If you need something more advanced, just skip to the next section. For those of you who have no clue about anything related to domains, let me start off with a few definitions. After you understand these, then we can relate them to what else you need to know and help you understand why you need to know it. Before you realize it, you will be the resource your friends go to for questions about the ins and outs of any domain questions.

Common Domain Terms and Their Definitions

There are lots of terms thrown around in the webmaster community. Unfortunately, not all of them are well defined and even more unfortunate is the fact that not everyone that uses the terms knows what they mean. To clear up the confusion on these points, let's first start out by understanding domain terms. Some of the definitions may seem a little lengthy for some of the terms, but think of these as a better foundation to build the rest of your knowledge on.

Domain Name

Your domain or domain name is simply the name that internet users would type into their address bar. In this example, the domain name is domainname.com.



Note, the domain name does NOT include the “http://”. This will be very important later when you are trying to set up your website. Also note that I did not include the “www” in the domain name. Some references do not make this distinction, but it is of some importance to realize that while some websites require the “www” to be typed when looking for their website, it is not required all the time and it is universally expected that a domain name will start out with “www”. I will leave the “www” discussion alone until we get to defining subdomains.

Your domain name is your address on the internet. If someone wants to get to your house in real life, you give them your street address. If someone wants to go to your website, you give them your domain name. Just like your address is more important to the post office than your name, your domain name is more important to computers than what is on your website or who you are as you run your website.

A domain name can only contain letters, numbers, and hyphens; no spaces or numbers. All single letter domains are either already taken or reserved. (www.t.com) Your domain must be between 2 and 63 characters.

Domain Parking

Domain parking refers to a method people use to reserve a domain. Typically what happens is someone registers a domain name because they want to reserve it, but they either don't have the website ready or they just want to be able to use email addresses at that domain without actually having a website.

Domain parking consists of registering a domain and having that homepage be a page that looks like an error or a page full of advertising or other relatively non-helpful information. Sometimes a simple "under construction" page is used, even if there is no intention of constructing the page in the future.

Domain Forwarding

Domain forwarding is exactly what it says, the domain just forwards to some other website. What happens is the person who owns the domain wants the domain, but they want to use the content on a site they already own, so they set the second domain up to forward to the first domain.

There are many reasons why someone might want to forward a domain. Think of a company that sells a product. Say for example, you own a company that sells flower seeds and the company name is Company DEF, you may want to use both the domain name flowerseeds.com and the domain name companydef.com. Domain forwarding allows you to use both domain names without having to build separate sites for each domain, you can just have one of the domains forward to the other.

DNS

DNS is an acronym which stands for Domain Name System/Domain Name Server. When you type a domain name, like howguru.com into the address bar in your browser (i.e. Internet Explorer, Firefox, etc.), your computer has to be able to know where to go to pull up the site you typed in. Domain name servers translate the domain into a location your computer uses to find the page you are looking for. Don't worry! In setting up a website, you don't have to worry too much about domain name servers. All you need to know right now is that the domain name server helps the world know where to find your website. You may have to change some DNS settings sometime, but we will discuss how easy that is later.

Expired Domains

Every domain must be registered or reserved so that the rest of the world knows who is using that domain. In order to register a domain, you have to pay someone to register it for you. Domains are registered for anywhere from 1 to 10 years, in 1 year increments. If you register a domain, then let the registration run out, without re-registering or renewing, the domains soon becomes expired.

Expired domains are domains which someone else registered and used at one time, but no longer use today. Some resources have suggested that purchasing expired domains and forwarding them to existing sites is a good way to get traffic. Unfortunately most search engines are getting better and better with detecting these methods of trying to boost traffic, so if this method works well now, it may

not work nearly as well in a month or two. Whatever the case, there are most likely some links out there to many expired domains and if the domain has enough links and your content is close to what the previous content of that domain was, you may be able to profit from purchasing an expired domain. Most registrars do not make distinctions between domains that have never been registered and those that expired more than month ago.

Subdomain

A subdomain is a sub-section of your website. Let me show you what a subdomain is with an example. Let's take the domain howguru.com. A subdomain would be something.howguru.com. So if you wanted to go to the subdomain "something," you would type "http://something.howguru.com." Note that I did not include a "www" before the subdomain "something." This is important because sometimes adding a www before a subdomain will get you to the same page and sometimes it will not. Always default to not using "www" before a subdomain. Some resources refer to "www" as a subdomain of the primary domain anyway.

Subdomains are often used to organize a site with many different topics or sections. The subdomains are thought by some to be neater and tidier than making people go to "http://www.howguru.com/something/." Whether you want to go one route or the other is up to you. One benefit to subdomains is that you are often able to create email addresses as the various subdomains. This allows you to create different sections of a site for different people to administer while also giving them all administrative email addresses at their subdomains.

ICANN

ICANN (Internet Corporation for Assigned Names and Numbers) is the international corporation that has final control over managing domain names. You will never deal with them directly. You may see little notes on websites that say "ICANN Certified." All that means is that that site claims to be registered with and in contact directly or indirectly with ICANN at some point in its business operation. To the average user, all issues related with ICANN should be handled by someone else, so you shouldn't worry about them at all.

Name Server

When someone types your domain name into their browser, their computer connects to the internet with a request for your website.



The computer first gets a response that tells them the address of the computer that knows where your website is.



Next, your computer goes and visits that computer with the same request for your website.



The computer (name server) that knows where your website is then tells your personal computer the exact server and file folder to go to.

The name server is the last server a computer contacts before it gets to your website. If you register your domain with a registrar other than your hosting company, you will have to tell the registrar what the hosting company's name servers are. This is always needed, so your hosting company will always have a place that lists which name servers to use. These are often in the FAQs section.

Name servers are often listed under "DNS" or "Advanced DNS Settings." So when you need to change the name servers, log in to your registrar, open up the domain control panel and look for a link for "DNS" or "Advanced DNS Settings." Once there you should have an option for changing the name servers. Name servers are usually in the format: ns#.hosting-company-domain.com. For my hosting company, [Servage.net](http://www.servage.net), the name servers are:

```

ns1.servage.net
ns2.servage.net
ns3.servage.net
ns4.servage.net
  
```

You should always use all available name server options. If your registrar has four spaces for name servers and your hosting company offers four name servers, use all of them. Some hosting companies only have two name servers or some registrars only offer the ability to define two name servers. Two name servers should be enough, but four is better.

Some registrars have a domain lock/unlock feature. *Locking* refers to an electronic hold on your domain which ensures that no one can change your name server or other DNS information. This ensures that no one can try to steal your domain and point that domain to their servers. For some registrars, like [Yahoo.com](http://www.yahoo.com), you must unlock a domain in order to change the name server settings.

Register

Registering is the process of purchasing the rights to a domain name. You are able to register a domain for anywhere from 1-10 years. Registering a domain name usually costs about \$7-10 per year. Often you can get the first year for just \$3 with many sales on the internet. An example is Yahoo who provides the first year for just under \$3 on new domains [through this link](#). (Yes, you probably have to

use this link to get the latest deal. I try to keep it up to date with the latest promotion Yahoo gives me to promote. If you go right to Yahoo's website you may have to pay the regular price.)

Registrar

The registrar is the company with which you register a domain. If, for example, you register your domain through Yahoo, Yahoo becomes the registrar. This is the company that has the ability to let the rest of the internet know what server has the files that you want used with your domain. Usually the registrar provides you with a web interface by which you can make all the changes you need to on the domain registration.

Renew

Since every domain is only active when someone has registered it and you can only register it in one year increments between 1-10 years, it follows that you would have to renew the domain registration at some point. When your domain registration is close to expiring you have the option to renew your registration. Renewing your domain ensures you can still use the domain.

Transfer

When you transfer a domain, you are only transferring your registration of a domain to another registrar. There are probably only two reasons you would want to do this. One reason is that the new registrar will let you renew the domain for less cost to you than the previous registrar. The other reason is that the new registrar might offer you some tools and options that the previous one did not have. Whatever the case, if you plan on owning your domain for a long period of time, you will probably have to transfer your domain at least once. Often registrar hopping is financially beneficial in the long run.

WHOIS

WHOIS refers to a type of search. Since every domain on the internet is registered by someone at sometime, there has to be a database somewhere that keeps information on who owns every domain. A WHOIS search will tell you who owns a domain and who to contact for administrative or technical errors.

This also means that anyone can find out that you own your domain. Because of this, do not be surprised if you get mail related to your domain, at the address at which you register the domain.

Domains: Putting It All Together

So you know what all the basic terms regarding domains mean, but what good does that do you? Well, now that you know what all these terms mean you are ready to register a domain name. I would suggest waiting to actually do this until after you read the next chapter on domain hosting, but you can come back to this section when you need to.

Step 1: Choosing the Domain

This may just be the worst part of starting up a website. Let me start off by warning you that odds are that the first 30 domains you try are going to be taken. You will be sleeping peacefully in the middle of the night, only to bolt from your sleep with a sudden flash of inspiration for a domain name. As soon as you get up, you are going to check, and sure enough that domain is already registered. There are

tools that you can use that will allow you to type in keywords so it can suggest a domain name. Usually these tools only suggest domains that are not taken, so if you are at a loss for a good domain, try one of these sites out.

Tips on Choosing a Good Domain Name

- **Keep it short:** Always remember that some people are going to look at your website and 3 weeks later want to come back. Keep it down to 2 or 3 words so that your website viewers can remember it.
- **Make it memorable:** Try to find something that rolls off the tongue and sticks in the mind.
- **Make the domain match the content of the site:** One of the most annoying things is when you go to a domain and the website content has nothing to do with the domain. Say for example you want to start a website that provides suggestions on how to *find* ripe tomatoes. It may seem obvious, but don't try to register redpotatoes.com or freshergardens.com. Just because it worked for Amazon.com doesn't mean it can work for you.
- **.com; .net; .org; .info; .us; .ca; .how-do-i-know-what-to-choose:** When deciding whether to go with a .com or .net, remember that each of these endings actually means something to someone.
 - .com – Company
 - .edu – Educational Organization
 - .org – Organization
 - .net – Internet Reference/Resource
 - .info – Informational Resource
 - .us – United States

This list is just a small number of options. If you have a non-profit that is looking for a website, go with a .org. If the site is for a company, go with a .com. It is true that .com is probably the most common, and as such has more or less lost its meaning as a company domain ending to the general public. As such, if your site content doesn't really fit anywhere else or you think most people will remember it best as .com, but you aren't a company, you can still register a .com domain. No one is going to say anything to you if your domain ending doesn't match the official meaning.

- **Don't violate someone else's trademark:** Are you tempted to register coke.com or so-easy-a-cave-man-could-do-it.com? Don't even think about it. People used to register domains so they could sell them to corporations and make a profit. Now the company will just sue you for the domain and win it, because you are infringing on their trademark. Since this is illegal and will cost you lawyer fees, I would suggest not doing it. Instead, be original and make money from your own ideas – it will save you a lot of hassle in the end.
- **Use your keywords in the domain:** If you are creating a resource for accomplishing a task, try to include the task name in the domain. This helps you have credibility and clout in the internet

community. This suggestion ties back to the third suggestion about making the content match the domain.

Once you have chosen a domain that you are happy with and no one else owns, you are ready to register it.

Step 2: Registering the Domain

Registering a domain is easy, but every registrar does it differently. I have only used about 4 registrars, so I have probably not come across every possible situation, but I have registered a fair number of domains and the information they want is usually the same.

They will want to know:

- Name
- Street Address
- Email address (use one that is *not* @your-new-domain-name.com)
- Phone Number
- Fax Number (If you have one)

Your information that you provide does become public record for ownership of your domain. The email address you use is your official electronic contact for future registration issues of your domain and your street address is where you will receive about 3-5 pieces of junkmail per year offering you services on your domain.

Most places offer “private registration” or something along those lines. The average cost for this I have seen is \$9/year. If you feel privacy is a big deal, go for it, it’s your money. What the company does is register your domain under *their* name so they get your junkmail and your information is not available to any techie who wants to know who owns that domain. You may want to save \$9 per year and throw away the junkmail yourself, because sometimes the “private registration” is done in such a way that leaves the registrar as the owner of the domain in the case of legal disputes. If you trust your registrar and you don’t want anyone to know who you are though, go with “private registration.”

Registrars should allow you to use separate contact information for different types of contact inquiries. If you have someone else dealing with the technical side of things or a different contact for billing or website administration, feel free to put different contact information for the different types of contact inquiries. If you are the main contact, just keep all the contact info the same.

The process of registering the domain may take a couple hours to complete after you give them all the information. There are some registrars that are able to provide discounts because they get a really good deal on buying many domains at once. What this means to you is that they have to wait, typically just a couple hours before they can purchase the domain after you order it. So, just sit tight once they say they are processing your request, you may just have to be a little patient.

Step 3: Setting Up the Domain

Registering the domain is not enough. Once the domain is registered you still have things to do. If you are registering your domain through your web hosting company, you can skip this section, otherwise, the following step is *VERY* important.

To set up the domain, you need to change the name servers so they point to your hosting company. If you use Servage.net, for example, you will find their name servers listed under the documentation section. In this case they are:

```
ns1.servage.net
ns2.servage.net
ns3.servage.net
ns4.servage.net
```

Go to your hosting companies website and either search the help or documentation until you find the name servers, submit a support ticket, or often you can chat with a support person from the hosting company webpage.

Once you have found the name server information, you need to go to your registrar's home page and find the section that allows you to change the name servers. Yahoo has this under "Advanced DNS Settings." Other registrars may have this setting under other names like DNS, Name Servers, Domain Settings, etc. You may have to look a little, but if the registrar is worth anything you should be able to find the name server settings. Once you found them, change them to match what your hosting company said they should be.

Specify as many name servers as you can. Often the hosting company will only have two name servers, but if they have more, specify all of them with the registrar.

Make sure your hosting company knows the domain that you are going to be hosting with them. Often, if you are able to host multiple domains under one hosting account, you can just add domains to a list of domains you are hosting. Your hosting company has to know the domain name you are hosting, otherwise the name server won't be able to direct inquiries for that domain. The entire process of name server updating may take between 3-72 hours. Don't expect instant results, otherwise you will be extremely frustrated.

Logging in 5 years

Once the name server settings are set, you are done with worry about the domain itself. Now you need to make sure you can remember your domain name, website and company name of the registrar, and the username and password you used to register with them. You may not visit the registrar again for a few years, so make sure you have this information in a few different places.

My trick for remembering usernames and passwords is to use [Roboform](#). It is great because it will remember your username and passwords and every time you go back to that site, it will pop-up and offer to fill in the form for you. The program allows you to have one master password that must be entered to use the program.

It is also a good idea to put all your domain information in a file where you can find later when you have to renew your domain. If you forget your registrar, you can always do a WHOIS search on your domain and it will tell you the registrar name. Whatever you do, don't lose your username and password.

Domain Hosting

Understanding the Ins and Outs of Web Hosting

We are going to start with definitions again. There are three different sets of definitions: general hosting terms, email terms, and design related terms. Some of these terms relate so, even if you don't feel like all the terms apply to what you need to know right now, it wouldn't hurt to skim through all of them just enough to get a thorough idea of everything involved in web hosting. Even if you don't need to know now, you will probably need to know sometime in your web-mastering career.

Hosting Terms and Definitions

There are a lot of terms used in web hosting. At first, they may seem overwhelming, but do not fear, their definitions are here! I had to decide between presenting the terms and definitions in alphabetical order or presenting them in groups of related terms. When reading through them, the later makes more sense, when looking up a term, the former makes more sense. They are not in alphabetical order, but rather grouped together and in an order that should make the most sense while reading through it.

Hosting Plan

Your hosting plan refers to the contract between you and a hosting company. The contract is usually signed electronically, and often implicitly accepted when you pay for the plan. Don't be scared by the term contract, it isn't some overly complicated process that requires lawyers for 10 hours or anything like that. Just remember it is a contract. Sometimes content is limited by the contract, so if you plan on having questionable content on your website (i.e. gambling sites, porno, or heavy bandwidth hogs [pictures, movies, etc]) you should especially make sure you actually read what you are agreeing to. (Of course you should always know what you are agreeing to, so don't ever just blow by the agreements.)

Hosting Plan Types

When you have your website hosted, the hosting company has a server (a type of computer that other computers use) on which they host your website.

Dedicated Hosting

Dedicated hosting refers to a service where the hosting company offers to provide you with a dedicated server, all to yourself. The benefit to this is that you can usually have a little more freedom to hog the

server resources like bandwidth and space. Also, dedicated hosting plans usually allow you to have whatever script support installed that you might want. As well, since you pay so much money for dedicated hosting, the support you receive is usually top of the line. The con of dedicated hosting is the cost. Dedicated hosting plans range from \$99/mo - \$3500/mo. I have no direct experience with a dedicated hosting plan, so if you want information, I have set up a page that compares prices, but that is all. [The dedicated hosting plan search page is found here.](#)

Shared Hosting

Shared hosting refers to the cheapest hosting option available to you. Shared hosting is said to be “shared” because you and other people are all sharing the same server. The hosting company sets the server up so that it can host as many websites as it can handle. The advantages to shared hosting are first of all the cost. Like I already mentioned, it is usually the cheapest option for hosting. Since shared hosting is designed to attract as many customers as possible, shared hosting often supports a lot of different scripting languages and has a lot of different features included in the initial price. The features vary from company to company, but shared hosting is geared toward as many people as possible so you should find something that works for you if you want to try this route.

I have had a number of different companies, and by far the one I appreciate the most is the one I am currently with. At the time of this writing the offer the best value and their customer support response time is amazing. I usually have my support tickets answered within an hour, no matter what time of day I submit them. The company will let you host as many domains under one plan as you want and allows for 600 Gb of transfer and 75 Gb of storage. The amount of storage they allow increases daily by a very small amount for every day you stay with them. They say this is their way of saying thank you. To see what [Servage has to offer you can use this link](#). You should be able to use this coupon code to get a small amount of extra storage space: **WEBMANUAL**. If you want to look for yourself, you can compare shared hosting plans at my [shared hosting page](#).

VPS – Virtual Private Server

A VPS plan is not so easily defined. Some hosting companies use this term to describe their shared hosting plan while others use this term to refer to their plan in between shared hosting and dedicated hosting. The average company attempts to take the benefits of shared hosting and mix them with the benefits of dedicated hosting (customizable servers). Overall, I am told the VPS plans are meant to have a less “generic” feel to them. To compare [VPS hosting plans click here](#).

Reseller Hosting

Reseller hosting allows you to purchase a discounted hosting plan and sell the hosting service to other people, usually under your own name. If you are looking for a business opportunity, reseller hosting may be a viable option for you. What reseller hosting is really good for is to supplement whatever else you may be doing. If your customers would benefit from being able to have a website and you can somehow relate their need for a website to your niche, you may want to consider looking into reseller hosting options. As you can guess, I have tried to take the work out of it for you and have a page set up for you to [browse reseller hosting plans](#).

Kb, Mb, Gb, Tb – Kilobyte, Megabyte, Gigabyte, Terabyte

A byte is the smallest unit of information that is stored in a computer. A single character is a little bit larger than a byte. You have already seen some common abbreviations in this book so far such as Gb, Mb, etc. Here is how they relate to each other. Each is a thousand times the size of the previous.

Kilobyte – KB – 1,000

A thousand bytes is a kilobyte. A long paragraph is usually around a kilobyte. Most files are between 10 and 600 kilobytes.

Megabyte – MB – 1,000,000

A million bytes is a megabyte. The average, unedited digital picture is around a megabyte in size. Ideally when using pictures on a website, you want to edit them and shrink them to make them smaller. In hosting, storage is usually measured in megabytes.

Gigabyte – GB – 1,000,000,000

A billion bytes is a gigabyte. The average DVD holds about 5-6 gigabytes. Usually transfer amounts are measured in gigabytes. Most desktop computers have between 20-100 Gb of storage available to them.

Terabyte – TB – 1,000,000,000,000

A trillion bytes is a terabyte. Not many people use this term, but it is expected to become more commonly used in the coming years. If you imagine 180 DVDs, the information contained in that many DVDs is about a terabyte.

Transfer and Storage

Perhaps the biggest thing that people compare when looking for a web hosting company is the amount of transfer and storage the hosting plan allows. Both are metered and measured in the number of bytes used.

Storage

Storage refers to the space taken up by the files you store on the server. Storage is usually calculated by adding all the space taken up by the files on the server, all the space taken up by emails that are stored on the hosting server, and the amount of space taken up by data stored in databases on the server. Many people forget to include email and database tables in figuring out how much storage they will use. If you receive a lot of large email or have a lot of tables you need to store in databases, you should take that in to account. To give you an idea of storage, I use about 350 Mb of storage for 10 of my websites combined.

Transfer

Transfer (often abbreviated xfr) is the total of how bytes the server had to deal with to serve your website to allow people to view it. If you have a 15 kb web page with 35 kb of pictures and logos that 200 people looked at, you would take have used 15+35 kb per person, times 200 people, or $(15+35) \times 200$ or 10,000 kb or 10 mb. Again, transfer includes every byte of communication the server has related to your website. This includes you uploading your web pages to the server, any email sent or received, and pages viewed on your site. I currently have 6 websites averaging about 500 visitors a day each and I use about 6 gb of transfer a month. The amount of transfer you need will depend on what

type of website you have. Pictures, music, and movies require more transfer than text content based websites.

Operating Systems, Server Software, and Protocols

If you don't see these terms I wouldn't worry about knowing what they mean. Since you are going to see references to this though, we will cover it. The operating system is just the main software that runs the server. The server is then transformed from a computer to a server by having the correct software (program) installed.

Linux/Unix

Linux and Unix are free operating systems. Because they are free, they cost less to own and keep current than the other main option. Linux and Unix are usually paired with *Apache* server software.

Windows/Microsoft

Microsoft is the company that makes Windows. Many people use the terms interchangeably to refer to any software product produced by the company windows. Microsoft charges for their software, so obviously if you are using a hosting company that uses Microsoft software for their operating system, you can expect that you will pay a little extra. *IIS* is the server software that runs off most Microsoft operating systems. Microsoft software will also support *Apache*.

ASP

ASP or Active Server Pages is a scripting language and protocol originally designed by Microsoft. ASP started out costing a little more than other alternatives. Currently a company called *Sum* is making support for ASP at a more affordable price. Some hosting companies use *Sum's* version of ASP support, offering ASP support at no additional cost to you.

CFM - Cold Fusion

Cold fusion is a web server language originally made by Macromedia, before the company was purchased by the makers of the Adobe line of software. Cold Fusion *does* cost money to purchase and usually costs extra to install on a web server over other server language options. Most web hosting companies do not offer .cfm support and the ones who do tend to be a bit more pricey.

HTML

HTML is what everyone hears about. Early on, HTML was the only real scripting language people used. HTML is extremely limited in its functionality when compared to ASP, CFM, PHP, JavaScript, etc. At the same time, you will find that most of these scripts parse out their code into HTML format. Because of this HTML is not to be ignored.

This concept can be kind of difficult to get a handle on, so see if this analogy makes sense. If you have ever made cookies or bread you know that one of the base ingredients of many recipes is flour. Flour does not come out of the field in powder form. A server with PHP or any similar scripting language is like the machine that takes the heads of wheat and crushes and separates it into flour. Most people never think of this machine and most people don't care how it works. If you are building a webpage in PHP, for example, your script will look something like this (color added to emphasize script structure):

```

<?
session_start();
if ($_GET['valid_link'] == "true"){
    $display = "<p><strong>Hello People!!</strong></p>";
}else{
    $display = "<p><em>You shouldn't be seeing this page.</em></p>
    <p><strong>GO AWAY!!</strong></p>";
}
echo $display;
?>

```

This example would then be parsed by the server, which would interpret this code in one of two ways. We can get into more detail later, but if the person coming to this page had click on a valid link, the server would produce HTML:

```
<p><strong>Hello People!!</strong></p>
```

This HTML would be interpreted by the browser (like Internet Explorer or Firefox) as:

```
Hello People!!
```

If the page was not found by clicking on a valid link, the server would produce HTML which would look like this:

```
<p><em>You shouldn't be seeing this page.</em></p>
<p><strong>GO AWAY!!</strong></p>
```

This would then be rendered by your browser as:

```
You shouldn't be seeing this page.
```

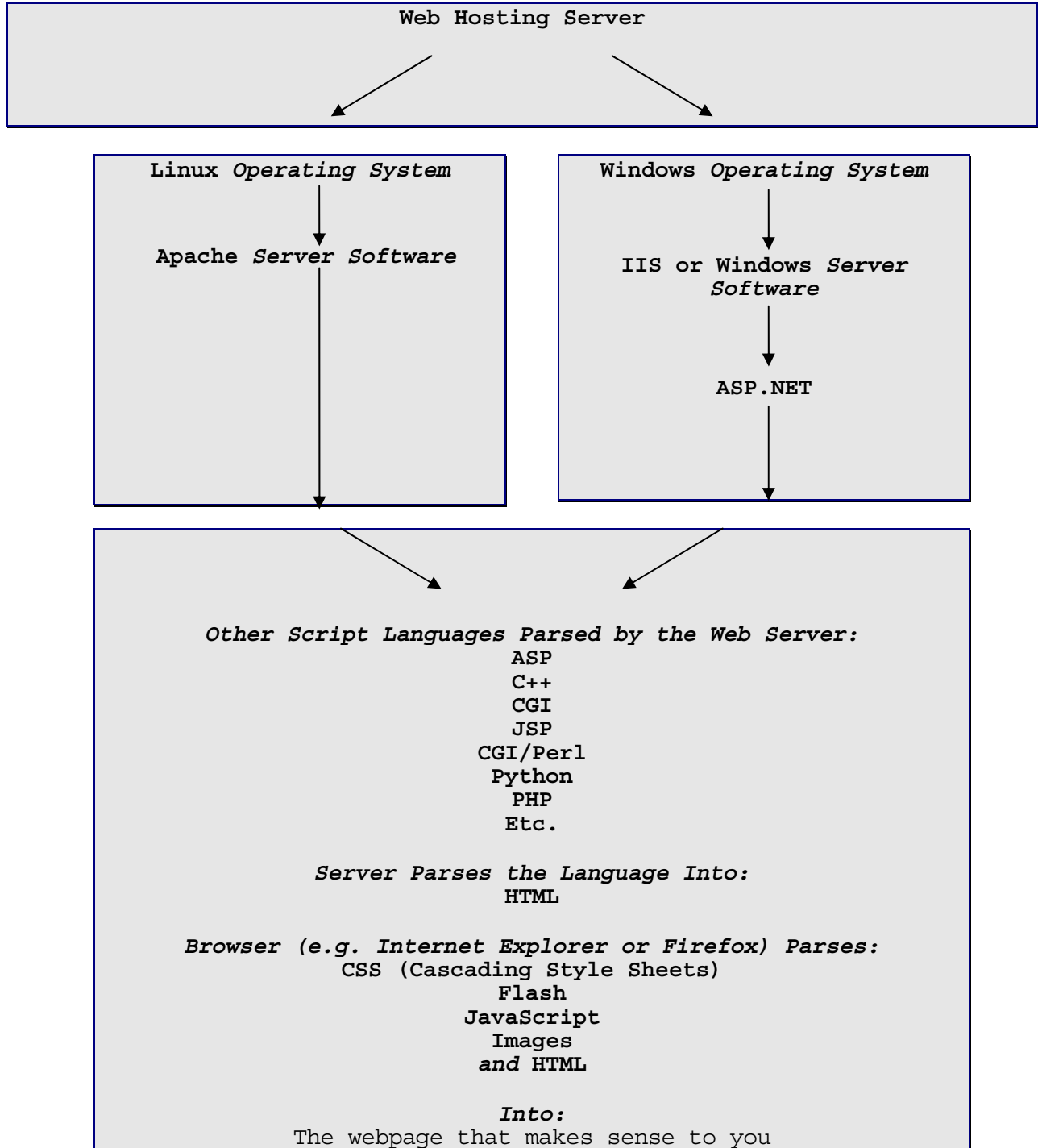
```
GO AWAY!!
```

The whole point here is that HTML is foundational to all web design. At the same time you need to understand the different roles of the different protocols and how they relate the other protocols. There is a diagram at the end of this section to help in understanding this.

PHP

PHP is perhaps the most common server-side protocol. It is currently free software which is easy to implement on most servers. Because it is free, PHP has a lot of users and from this a lot of free, very well written scripts you can download from various sites to help you do pretty much anything you want.

How the Terms Relate



Website Structure

Perhaps the most important step in making your website!

You have probably been told by someone at some time that planning ahead is a great idea. You have probably planned ahead for one thing or another in your life at some point as well. Planning ahead for websites is not just a good idea it is in my opinion the **MOST** important step in setting up a website. By planning ahead for your website what I am referring to is setting up a structure for your website that makes your life easier either next week or next decade when you want to change something on your website.

There are few constants in web sites. Understand these and you can pass from being a novice or beginner web designer to being a moderate web designer. These constants are as follows.

- There will always be something about your website with which you will not be completely happy.
- You will want to add features and scripts to your website you never would have dream of when you are first beginning.
- You are going to want to completely redesign your website at some point, keeping most of the same content.
- You will want to add information, some day that is on the same place on EVERY page.

Plan Ahead, Know How to Grow

To get the ball rolling on how this works, we are going to start with the basic layout of a webpage. I have edited out the code that is not helpful to our discussion and replaced in **bolded underlined** text, a description of what I cut out:

```
<!DOCTYPE html PUBLIC "-//  
//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-  
transitional.dtd">  
<html>  
<head>  
<meta http-equiv="content-type" content="text/html; charset=UTF-8" />  
<meta Meta Tags />
```

```

<link Style Sheets>
<title>The Website Manual</title>
<script>JavaScript Functions and Includes</script>
</head>
<body>
<table width="100%">
  <tr>
    <td colspan="3"><div align="center">Header</div></td>
  </tr>
  <tr>
    <td>Menu</td>
    <td><div align="center">Body</div></td>
    <td><div align="right">Ads</div></td>
  </tr>
  <tr>
    <td colspan="3"><div align="center">Footer</div></td>
  </tr>
</table>
</body>
</html>

```

This would end up looking something like this:

	Header	
Menu	Body	Ads
	Footer	

Not very exciting I know, but it is important to note a couple things. Most of the above information is the exact same on every page. This includes the header, footer, menu, and ad code. The part that will be different for every page is the body text. If you think about it, it could get really annoying to have to repeat the same thing that many times. That is why you want to streamline the web design process by making a system where you can reduce not only duplicated coding, but also reduce the size or amount of files you have to upload.

SSI - Server Side Includes

Server side includes are a very easy way to reduce the size of the pages you upload. The basic structure of a page using SSI is that the header, menu, footer, and ads all include all of their information stored in separate files. The way SSI works is that whenever you want to include the html in one file in a section of a particular page, you put an SSI statement right where you want the html to appear in the page. The SSI statement looks like this:

```
<!--#include file="file_name.htm" -->
```

Including this will include ALL of the html in file_name.htm, you can't choose just part of it, so make sure you structure "file_name.htm" so that it consists of only the html you will want to included and not any additional html tags (such as the <body>, <html>, and <meta> tags.)

Then when you create a page, instead of repeating the same structure in every page, like you would if your page looked like this:

```

<table width="100%">
  <tr>
    <td colspan="3"><div align="center">Header</div></td>
  </tr>
  <tr>
    <td>Menu</td>
    <td><div align="center">Body</div></td>
    <td><div align="right">Ads</div></td>
  </tr>
  <tr>
    <td colspan="3"><div align="center">Footer</div></td>
  </tr>
</table>

```

You replace the repeated parts with something that looks like this: (notice that the body is not replaced by our SSI statement.

```

<table width="100%">
  <tr>
    <td colspan="3"><div align="center">
      <!--#include file="header.htm" --></div></td>
  </tr>
  <tr>
    <td><!--#include file="menu.htm" --></td>
    <td><div align="center">Body</div></td>
    <td><div align="right"><!--#include file="ads.htm" --></div></td>
  </tr>
  <tr>
    <td colspan="3"><div align="center">
      <!--#include file="footer.htm" --></div></td>
  </tr>
</table>

```

At first glance, in this example it seems to be adding more work to your platter, but in reality it doesn't. The menu, for example, is often 20-100 lines of code long. So if you only are updating the one file "menu.htm" instead of every page that displays your menu, you can save yourself a lot of work. Another thing to consider is that you will want both a header.htm/php and a footer.htm/php, even if they are currently blank. In the future, you will want to add something to them, even if you can't imagine now. A lot of statistics or ad scripts require something that needs to be included in the code on every page, so it is easier to put it in a header.htm or footer.htm file once that all other pages reference.

Most web hosting companies do offer SSI support, but make sure yours does before trying it. If you haven't signed up with a web hosting company, you may want to think about looking for one that offers SSI support.

You should not have any problems including a blank file by SSI. Never try to include a file that doesn't exist, but nothing should produce errors if the file is blank.

PHP - include ("file_name.php")

If you are using a server side scripting language, there is usually a function you can use to include another file in the script you are writing. The same things that apply to SSIs apply to files included by

this PHP function. The entire file is included, so make sure you don't have any variables or functions with the same names. If you don't know what a variable or function is, read the next chapter and that will all be explained.

We are going to use PHP's include statement because odds are that that is the most likely coding language you will be able to support with most hosting companies. The following examples are simply for example sake. Do not feel like you have to use any or all of these or that these are all you can do. If you aren't sure what I am referring to, just look at the next chapter for term definitions.

Include statements in PHP allow you to define variables that are site specific. One way of doing this is to define all your initial variables in a config.php file or something along those lines. Then on any page where this might be needed, you just insert into the page:

```
<?
include "config.php";
?>
```

PHP does allow you to include the same file over and over again. What is important to realize is that if you have multiple pages including the same file, any variables or functions contained in the included file will be redefined. What this means is that if you were adding to a variable defined in a different file from an include statement, if you include that file again, it will redefine the variable so you start with the default value in the include file.

With functions, PHP never allows you to define a function twice. If you attempt to include the same file twice and it contains a function definition statement, then PHP will come up with a fatal error and stop the script. In order to avoid this, use **include_once** instead. The statement looks the same, except you just add “_once” to the end of the include:

```
<?
include_once "config.php";
?>
```

Always use **include_once** when you are including a file that defines a function.

CSS, JavaScript

In the final html on your page, you will more than likely need to include a Cascading Style Sheet (Style Sheets/CSS) or JavaScript file. These are included by using the appropriate html statement. For style sheets, you need to use the following syntax:

```
<link rel="stylesheet" href="inc/sheet_name.css" type="text/css" />
```

Obviously, you would replace the bolded part with the appropriate style sheet information. If on the other hand, you need to include a JavaScript file, you would use a different html statement, changing the bold to the appropriate information again:

```
<script language="javascript" src="inc/js_file_name.js"></script>
```

Notice the differences between the two statements. With CSS you use “link” instead of “script.” With JavaScript, you have to define the language and leave a closing “</script>”. The CSS uses “href” to define the file name while the JavaScript uses “src” to define the file name. It is important never to get the two confused or you will be annoyed with your page not working.

Directory Structure

A directory structure refers to the location of your files within folders. In web design you want to store like files in the same folder. What this allows you to do is have multiple files with the same name, just in different folders. This also allows you to find files easier and faster, the more intuitive your directory structure is.

Another important issue to keep in mind when setting up your website is how your folders/directories are set up. If your webpage has images and separate pages, like it should, it is in your best interest to set up a folder system to keep this file types apart. For small sites with less than 100 files, a simple structure can work, for larger sites you will need to think about a more complex file or directory structure.

In general, it is common to have a folder with core images, like your menu buttons, header image, etc. Often webmasters name the folder **img/**. Your CSS file(s) and any default configuration files often fit quite nicely in a folder you could name something like **inc/**. Notice how the names are abbreviated forms of “image” and “include” respectively. You will quickly notice how often you are typing the folder names. If you are afraid you will have a hard time remembering the folder name, stick with using a folder name that is easier to remember. As a general rule, figure out something that works for you and wouldn’t take someone else too long to figure out.

You can have as many folders as you want, but if more than one of your folders only has one or two files in it, you probably have too many folders. The folder system is supposed to help you, not make it more difficult to find files when you forget where they are or what they are named.

The main reason there is even a section on this is the confusion that comes in with trying to refer to files in folders. Let’s say we have the following directory tree, which is a decent directory structure for small sites.

The Example

```
admin/
  index.php
  login.php
img/
  header.jpg
  small_logo.gif
  corner_top_left.gif
  corner_top_right.gif
  corner_bottom_left.gif
  corner_bottom_right.gif
inc/
  css/
    main.css
    menu.css
    admin_menu.css
  ads.js
  database.php
  file1.htm
  file2.htm
  file1.php
  file2.php
  footer.php
  header.php
  menu.js
  contact_us.php
  index.php
  page1.php
  page2.php
  page3.php
  privacy_policy.php
  site_map.php
```

Now as we already discussed, header.php and footer.php are included practically everywhere. The issues start to come in when you want to include the header.php in both your **[admin/index.php]** and your regular **[/index.php]**. In your **[admin/index.php]** you would put the statement:

```
<?
include_once "/inc/header.php";
?>
```

In your **[/index.php]** you include the statement:

```
<?
include_once "inc/header.php";
?>
```

There is only one difference between these two, that is the addition of the “/” at the beginning of the file definition in the first example. When you are referring to a file, “/” at the beginning will set you

back one directory in your references, while “.../.../” will set your reference point up two directory folders.

Now stick with me with this next issue that needs sorted out. Lets assume, for the sake of argument, that your [inc/file1.htm] looks something like this:

```
<p>Please help support us by visiting our partners</p>
<script language="javascript" src="???ads.js"></script>
```

What needs to go where the “???” are if I am going to include this in [/index.php] using SSI?? What about if I am going to include this in [admin/index.php] using SSI?? What if I am going to use a PHP method?

The Answer - Using SSI

For an SSI in [index.php], you would need to have [inc/file1.htm] read something like this:

```
<p>Please help support us by visiting our partners</p>
<script language="javascript" src="inc/ads.js"></script>
```

And the SSI statement should read like this:

```
<!--#include file="inc/header.htm" -->
```

For an SSI in [admin/index.php], you would need to have [inc/file1.htm] read like this:

```
<p>Please help support us by visiting our partners</p>
<script language="javascript" src="/inc/ads.js"></script>
```

And this SSI statement should read like this:

```
<!--#include file="/inc/header.htm" -->
```

If you are looking to include [inc/ads.js] in both [index.php] and [admin/index.php], you can't include [inc/file1.htm] in both of them, you have to have separate files for each, otherwise one of them won't be referencing the file correctly and you will end up with a JavaScript error when you load the page.

The Answer - Using PHP

What about a PHP **include_once**? Well, I am glad you asked, because it is different! It isn't too much different, but watch the “/” before the file names as they are important. For a PHP **include_once**, you should include a file that is PHP, so instead of including [file1.htm], you would want a [file1.php], just so you can take advantage of variables and future site growth. That said, let's look at the PHP method.

For PHP **include_once** in [index.php], your [inc/file1.php] should read like this:

```
<?
$ad_html = "<p>Please help support us by visiting our partners</p>
<script language=\"javascript\" src=\"inc/ads.js\"></script>";
?>
```

Then your include statement in **[index.php]** is going to read something like this:

```
<?
include_once "inc/file1.php";
echo $ad_html;
?>
```

Now for **[admin/index.php]**, your **[inc/file1.php]** should read like this:

```
<?
$ad_html = "<p>Please help support us by visiting our partners</p>
<script language=\"javascript\" src=\"/inc/ads.js\"></script>";
?>
```

Then your include statement in **[admin/index.php]** is going to read something like this:

```
<?
include_once "../inc/file1.php";
echo $ad_html;
?>
```

This is very important to understand, so if you don't quite have a handle on this, you should probably reread this section. If you understand it perfectly, then you are ready to move on to web design.

Site Resources

Getting additional tools for building your website

The following list is a list of tools to help you build your website and maintain it. Some are free, some cost money. Let me just remind you that you get what you pay for. There are more and more free programs and services available, but you may find that some web-mastering tools are well worth the cost for a superior product. I am a cheap-skate, but I have put out money for a few things in my life. If they cost, most of these offer trials before you buy the product.

Resources for building the site

Dreamweaver

I use Dreamweaver practically every day. It is a tool for editing all your code for your web-pages. I strongly suggest it as it supports most if not all common scripting languages including PHP, ASP, ASP.NET, CFM, JSP, JavaScript, HTML, etc.

Dreamweaver does cost, but I think it is well worth it. [Click here to learn more about Dreamweaver.](#)

Flash

You have seen the amazing smooth, crisp animations that many websites use for their header image? The ones that have the smooth transitions, etc? Well most of these are made in Flash, a very nice image animation tool. Flash costs money, but again, I would suggest purchasing it. [Click here to see what Flash has to offer you.](#)

Fireworks

This is the best image editing program I have ever seen for web designers. This program is well worth the cost as it allows you to do ANYTHING you could ever need to do for images on the web. [Click here to learn more about Fireworks.](#)

Design Product Suite

[This link will take you to a site where you can purchase Dreamweaver, Flash, Fireworks, and other helpful programs in one bundle.](#) This bundle saves you money and time when compared with the cost of ordering the products separately.

Making money on the site

Commission Junction

This company manages affiliate programs. Sign-up is free and you can start making money immediately, I would say that most of my affiliate sales have come through Commission Junction and I am really happy with their service. I would strongly suggest Commission Junction for anyone who is trying to sell their own product with an affiliate system or if you are looking to make money from advertising other people's products. [Click here to sign up for Commission Junction.](#)

Share-a-Sale

This is another affiliate program management website. Again, sign-up is free, so you have nothing to lose. In the last two years I have seen their merchant list increase substantially. Highly recommended! [Click here to sign up for Share-A-Sale.](#)

Free Scripts For the Site

Hot Scripts

This is a great site for finding free website scripts. I highly suggest looking here for ideas on what you can do on your website. [Click here to go to Hot Scripts.](#)

Other Resource

An Update Page

I try to keep this page updated with good resources. [Click here to see what is new.](#)