



---

# **Web Design 101 manual**

---

# 1. Get Started

## What is the Internet?

The Internet, being a large worldwide network of computers, opens many possibilities for learning. It gives the users the ability to send and receive files, to access websites, to share information, and accomplish many different tasks, among the many things it is capable of doing today.

### 1.1 Basic terms

- a. Email- electronic mail sent over the Internet, and is received instantaneously.
- b. File Transfer Protocol (FTP)- a way of transferring files between computers; usually referred to as downloading and uploading
- c. www- is a computer network of internet sites offering graphics, text, sound and animation via hypertext transfer protocol (http)
- d. website- interconnected web pages on the same server that are maintained by someone or a group as a collection of information

It is the website, and the creation thereof, that we will discuss at length in this primer.

So what are the benefits of having a website?

- Websites make gathering and maintaining information easy.
- It is a great way of sharing information with others.
- If you have a business, websites are great mediums for promotion and marketing goods and services as they increase awareness of products and services in the global market.
- There is great freedom in websites since they are available for updates any time of the day and lets users feel free to interact with other users.
- They are advantageous when it comes to cost. Websites reach more people, and still reduce the need for telephone calls, publication costs, and promotional materials.

### 1.2 Kinds of websites:

Basically, there are eight purposes for creating websites:

1. Personal with biographic data
2. Promotional or for selling a product
3. "Current" to provide continuously updated information
4. Informational or aims to share information about a particular topic
5. Advocacy/persuasive to convince and convert users to a particular point of view
6. Instructional or for teaching a unit, course or study
7. Registrational so users can register for courses, information and products online
8. Entertainment

If we simplify the kinds of website there are, we get personal, business/marketing, news, advocacy and informational.

If you want to create a website, all you need is:

1. A computer with the necessary software – to create the web pages.



2. Internet connection and FTP software/browser - to upload the website and view it online.
3. Web hosting space- is the virtual space where the website files are stored so other users can view your site. There are free web hosting sites as well as commercial ones available for a fee.
4. domain name (schoolname.com) – is the Internet address where your website can be viewed or accessed.

## 1.2 What you need

Before you begin, it is important to note that planning a website revolves around the following things: knowing what your website is for, how long it will take, how much can be spent, and other logistics.

Just to give you an idea, professional website planning needs information architects, writers, graphic designers, technical experts and a manager to oversee the entire project.

In designing the website and with the site's objective in mind, find out who are the potential users of your website so you can match them and their background, needs and interests to the site. And lastly for the general tips on getting started, once you have the plan, assess the content you need. This is because developing content is hard and very time-consuming

## 1.4 Resources

[A How To Guide for Accessible Web Design](http://jenrweb.com/aDesign/index.php)

<http://jenrweb.com/aDesign/index.php>

[Field Studies: The Best Tool to Discover User Needs](http://www.uie.com/articles/field_studies/)

[http://www.uie.com/articles/field\\_studies/](http://www.uie.com/articles/field_studies/)

W3C website standards

<http://www.d.umn.edu/itss/support/Training/Online/webdesign/standards.html#w3cguidelines>

## 2. Create Your Website Plan

Now that you have a general background as to what is needed to create a website, the next step would be to create a plan, a blueprint, on what you want to happen with your website.

After all, it's not something you would want to go into half-baked. There has to be a clear set of objectives, target market, sitemap, design elements, and supporting web tools before even thinking about the content. So if you're ready to get started, let's begin.

Developing a website usually goes through six major stages:

- a. Site definition and planning- the initial stage where you have to define your goals and objectives for the website, and determine the budget and resources needed for it.
- b. Information architecture- entails detailing the content and organization of the website. This is where you create the page grid, page design and overall graphic design standards.
- c. Site design- is the stage where illustrations, photography, and other graphic or audiovisual content are created, as well as doing research, writing, organizing, assembling, and editing the site's text content.
- d. Site construction- Only at this mature stage of the project are the bulk of the site's Web pages constructed and filled out with content. By waiting until you have a detailed site architecture, mature content components, and a polished page design specification you will minimize the content churning, redundant development efforts, and wasted energy that inevitably result from rushing to create pages too soon.
- e. Site marketing
- f. Tracking, evaluation, and maintenance

### 2.1 Set Objectives

Figure out what are the things you and the class want to achieve with the website. Is it something that will serve as an online presence for the school but is only sporadically updated or do you want it to become a dynamic, popular website with consistently new content? Do you want it to contain press releases and photo galleries? Do you want it to reach out to alumni? Is the website supposed to have articles and links with other educational institutions?

These are the things you have to consider so you can pinpoint what the purpose of your website will be.

### 2.2 Know Market, Audience

Now that you know what the website is for, determine who the website is for. Your target market or audience is the kind of visitors you want to communicate with. It is only after finding out this demographic that you begin designing the website, with them in mind.

- a. Find out your target market's educational background and technical training. This determines how you should write articles and the overall content of your website. If it is written for high school students, then the vocabulary should be toned down. If it is aimed at

an Internet-friendly audience, then the content and the layout should be kept simple and universally understandable.

- b. Find out their graphical orientation. Will your site communicate better with graphics, sound and video clips? Knowing this factor helps you determine the design presentation of your website. Graphics, of course, should be used sparingly since they slow down your website's loading process.

Knowing these two things answers questions about accessibility and compatibility like what kind of screen resolution, graphic format (either in .jpg, .gif or .png format), color scheme, loading time, and animation, as well as questions on what kind of browser your audience mostly uses like Mozilla Firefox or Internet Explorer (this saves time, maintain consistency, and build the template).

### 2.3 Design the sitemap

Sitemaps are page or pages serving as a directory or a book's table of contents or the "concept map" of the site's content. It lists all the links to all documents and files found in a website, organized to give the web user an image of how all the information in it fits into an outline or framework.

The sitemap, along with the electronic search spider (it collects data and copies content stored in the search engine's database for when keywords are typed into the search dialogue box), are what makes search engines like Google or Yahoo work effectively and efficiently.

#### What are the benefits of a sitemap?

- faster and easier tracking and crawling of spiders on your website directing users to it.
- easier navigation for web users
- potential advertising and networking value
- greater website traffic

#### How do you format a sitemap?

First of all, sitemaps come in three major types. These are indexed (appears as an alphabetical listing or directory), full categorical (displays all links classified into categories), and restricted categorical (displays all links listed in a chosen category).

The full categorical sitemaps are the most preferred since they make topic search in a website and category comparison easier.

#### Tips:

- a. Do not exceed 30 pages in your sitemap. Having more means an overcrowding of links that could be tiresome to view.
- b. Test your sitemap by clicking all the links in every page to make sure that all are linked to the right page.
- c. Give keyword-rich titles to the links in your sitemap for the additional advantage of being searched in the right category.
- d. Provide short descriptions for the links in your sitemap to give users an idea of what it is about and save their time and energy on web surfing.

## 2.4 Plan page and design elements

When it comes to creating a website, there is such a thing as site specification. This is like the roadmap, the compass and the to-do list all rolled into one. It reels in your “team” when they get carried away with new ideas since it contains your website’s ultimate goals, budget, schedule, content scope and technical details of the site.

Since you already determined the purpose and target audience earlier, here are the rest of the questions you have to answer to create the site specifications.

- What is your budget for the site?
- Who are the members of the development team and what are their responsibilities?
- How many pages do you want it to have?
- What is the production schedule including dates and important milestones?
- What are the special technical and functional requirements needed?
- How can the site’s success be measured?
- How will the finished site be maintained?

Remember, the more carefully planned you are before creating the website, the better off the development process and corresponding result will be.

Now we move on to the design.

First and foremost, every web page needs:

- An informative title that can also bookmark all the pages
- The creator, author or institution’s identity, usually a logo or brandname
- The date it was created or last revised
- Link to a local home or menu page
- The “home page” URL on other menu pages in the website

Other basic elements include:

- a. User-centered design-** Armed with information on the needs and demographics of your target audience, you should make sure that you meet their technological expectations and not require them to conform to a new interface. Try creating sample scenarios of different users looking for information on your website. Get feedback on your design ideas; it is the best way to see if they will work.
- b. Clear navigation aids-** You need to place clear, consistent icons, graphic identity schemes and graphic or text-based summary screens so your user will feel confident enough to find what they are looking for in the least amount of time.

One criterion is that users should be able to return to the home page and other main site navigation points easily. These basic elements, as already pointed out earlier, should be present in the same location every page.

- c. No dead-end pages-** Again, make sure that all web pages and links have, at the very least, a link back to the home page. A lot of web pages opened one after the other without any way of going back will only confuse the user all the more.

- d. **Direct access-** It is important that the design of the website elements allows the user to get to the information he or she wants in the fewest possible steps, therefore said design must be efficient.

Studies consistently show how much users prefer menus with five to seven links so they can directly access information, as well as a condensed list of choices than many menus. Real content must only be a click or two away from the home page of your site.

- e. **Bandwidth and interaction-** Research shows that users are only willing to wait a maximum of ten seconds for website delays. So with this in mind, don't put huge bitmap graphics on your web pages especially since the general web surfer browses the Web using only dial-up modem connections instead of the high-speed DSL (digital subscriber line) or cable modems.
- f. **Simplicity and consistency-** Designing a website is one situation where in simplicity is very much appreciated, especially if your regular user depends on your site for timely and accurate work-related information.

Websites with “creative” and highly unusual navigation always fail because the users are not familiar with its navigation. So basically, what your website should follow are general navigation and layout conventions of major websites.

Build your page and site design on a consistent pattern of modular units sharing the same basic layout grids, graphic schemes, hierarchies of organization and editorial conventions. This gives a continuous, “seamless” system of pages, especially with consistent layout of titles, subtitles, page footers and navigation links, giving the user a sense of context within the site.

- g. **Design integrity and stability-** Use high editorial and design standards with your website because users will not trust a site that looks hurriedly or sloppily built.

When it comes to stability, this refers to making sure that the site elements work reliably. This has two components: Get things right the first time the site is designed, and keep it functioning smoothly as time passes by. This is where checking links and occasional website retesting come in.

- h. **Feedback and dialog-** Your design must show the user where he or she is at that particular moment, either through graphic design, navigation buttons or uniformly placed hypertext links. Also provide direct links to the website editor (webmaster) so user feedback reaches them immediately.
- i. **Accessibility-** The Web should provide information to everyone. If your website is supposed to have large images, complex page layouts and exclusive media formats, then it is time to rethink that design. HTML (Hypertext Mark-up Language), from limited visual controls of years past, now offers more tools for the designer to create structured and navigable websites.

- j. **Alternates and fallbacks-** If your website has information in any medium aside from plain text, always give an alternative or fallback version.

For example, provide alternate text for visual content for users with text-only browsers or turned-off image displays. Or if you have videos of lectures or presentations in the website, then provide subtitles so deaf users can still access the materials.

- k. **Style sheets-** Cascading Style Sheets (CSS) are used to easily apply personalized formatting to Web documents. These are especially useful if, for example, your website has red text on green background and your user has red-green colorblindness. With CSS-styled pages, users can override your settings and transform web content into something they can access.
- l. **Accessibility guidelines-** All professionally designed websites must meet accessibility standards set by the World Wide Web Consortium guidelines (can be found at the W3C website).
- m. **Graceful degradation-** Consider how the website will look when accessed using hardware, software and Internet connection that are not the best, not current or not that fast.

Make sure your page designs are on typically sized display screens (800 x 600 pixels) so all content and navigation areas fit within the horizontal screen. This will limit your page layouts to a maximum of 760 pixels in width. Refrain from producing websites that depend on only one browser like “This site is optimized for Internet Explorer 5.5 and Macromedia Flash 5.” Inform them first of what they can achieve by downloading said browsers so they can make an informed decision.

- n. **Navigation-** Use predictable and consistent navigation buttons so users will immediately know what they stand for and so they won’t draw attention away from your content, which is the most important thing.

## 2.5 Resources

[10 Tips For Running Successful Focus Groups](http://www.groupsplus.com/pages/mn091498.htm) <http://www.groupsplus.com/pages/mn091498.htm>

[Six Steps to Better Interviews and Simplified Task Analysis](http://www.adaptivepath.com/publications/essays/archives/000295.php)  
<http://www.adaptivepath.com/publications/essays/archives/000295.php>

[Web site Analysis and MeasureMent Inventory. \(WAMMI\)](http://www.wammi.com)  
<http://www.wammi.com>

[But What Does It All Mean? Understanding eye-tracking results, Part 1](http://blog.eyetools.net/eyetools_research/2007/08/but-what-does-i.html)  
[http://blog.eyetools.net/eyetools\\_research/2007/08/but-what-does-i.html](http://blog.eyetools.net/eyetools_research/2007/08/but-what-does-i.html)

## 3. Develop Your Web Content

After conceptualizing the design to fit the website's purposes and suit the target audience's expectations, you now think of what the website will actually contain.

When you say web content, it refers to the textual, visual and audio content encountered by users in websites. This includes text, images, sounds, videos and animations, among others. Since this is entirely different from magazines, newspapers and televisions, it is important to remember that writing and preparing graphics for the web is an entirely different matter altogether.

### 3.1 Text

If you focus on the basics, you basically revolve around text and graphics.

Writing website text is different because, first, reading on the screen is unpleasant for the eyes if done for a long time. Some readers even only scan websites, and print pages for reading. And second, most users simply surf pages looking for content they need before moving on.

So for website writing, here is a clear picture of how not to write and how to write:

**Wrong**      Developing websites is a very complex process, involving steps and tasks like budgeting and design and evaluation. The first thing to do, of course, is to define the project's scope and find out the budget for the site development. Afterwards, it is important to survey and map the information structure before establishing the site's look and feel. It is only after this that you actually construct the site, and make sure people know it exists and how to find it. The last step is evaluating the website's effectiveness.

**Right**      Developing a website follows these steps:

1. Site definition and budgeting
2. Information architecture
3. Site design
4. Site construction
5. Site marketing
6. Tracking and evaluation

You should always assume that what you write for a website is not entirely read by your Internet audience. Unless the text is for journal articles or teaching materials (most users will print this out and read offline), online information should be in short segments of texts, clearly and concisely written and with editorial landmarks.

The pyramid style used in journalism (the most important information is placed in the beginning) works well for websites.

Here are some good techniques and characteristics of website text:

**Hypertext links**- directs the user to related links used to supplement their content. All the user has to do is click on the blue, underlined text to find out more about a topic or issue. This is very advantageous since explanations and background information does not have to be included in the main text anymore. However, if the links are broken and outdated, users will no longer trust the website and move on. Moreover, they disrupt the content flow since readers will have to leave the site. The best way to go is use links only occasionally to reinforce your message, not clutter the page.

**Titles and subtitles**- breaks long blocks of text and helps the user navigate your website easier. This is very much recommended.

**Bold text style**- could be used for titles, references to other websites, subheads, figure titles and list titles to make them stand out in the website page.

**Italics**- should only be used for emphasis.

When it comes to the writing itself, be guided by the following:

- **Your information must be useful and specific.** Most users check out websites looking for information they need. General overviews are also helpful, but if the user wants to act on the information you provide (like order a product or subscribe, etc), there must also be details on how to do that.
- **Users must know understand what your website can do for them.** If this is not obvious the minute they click on the home page, then they will move on. What are you there for? What do you have to offer that can interest them?
- **Direct it at them.** Web-based content has a “personal” aspect to it since they can access it in their homes or at work.
- **Write in a conversational manner.** To make the content more personal, your writing style should also be casual. This is not only friendly, it’s also easier to read.
- **Don’t write nonsense.** Writing for the web is not a matter of who can publish the longest article. In fact, it’s very important to get to the bottomline immediately. Stick to the point. Don’t ramble. Don’t add useless sentences to your text. Everything the user reads must have a purpose.
- **Think international.** Your website is going to be read and accessed by people all over the world. Use contexts and formats that are generally understood. Avoid jokes, metaphors and puns that can only be understood by your language and culture.
- **Use coordinating colors.** Reading onscreen is hard enough. Make it easy for the user to understand the text by linking colors so he or she won’t get distracted by colors all over the page.
- **Proofread.** Spell check, proofread and edit text before transferring it to HTML.
- **Use standard HTML-supported text.** Bullets, ligatures, typographer’s en and em dashes are not supported by the standard HTML text, so they won’t appear on the screen.
- **Condense everything into the headline.** Everyone reads headlines so encapsulate your most important point into a one- to two-line headline. For lists and important points, condense them into bullets.

### 3.2 Graphics

Web graphics depend on the (a) user's display monitor and (b) bandwidth capacity. For example, most web users access the Internet through a modem, while some view websites on monitors displaying only 256 colors. This limits the size of files and number of colors that can be included in the graphics you upload.

#### Graphic file formats

There are different kinds of formats for graphic files. The most popular are .gif and .jpeg. A third format, .png, is not really used because it has poor browser support.

- i. GIF (Graphic Interchange Format)- was adopted by World Wide Web designers for its widespread familiarity and efficiency. It is supported by most Web browsers, and has a compression scheme to keep .gif file sizes at a minimum. They are limited to 8-bit (256-colors) color palettes.
- ii. JPEG (Joint Photographic Experts Group)- are fully colored images (24-bit) popular with photographers, artists, and others who place value on image quality.
- iii. PNG (Portable Network Graphic)- designed for web pages featuring a full range of color depths, and support for sophisticated image transparency, among others. However, most browsers do not support the .png graphic format.

### 3.3 Intellectual Property

With the “cut and paste” generation, it is sometimes overlooked to cite sources for information posted on the Internet, and quite possibly on your website. But bear in mind that copyright issues are a big deal, especially since the rest of the world can access the information you post.

So, as a reminder, any invention, literary and artistic work, symbol, name, images and designs used for commercial purposes are called intellectual properties.

There are two kinds:

- a. Industrial property- includes inventions (patents), trademarks, industrial designs, geographic indication of source
- b. Copyright- includes literary and artistic works like novels, poems and plays, films, musical works, artistic works and architectural designs.  
-it is a legal term for the rights given to creators of literary and artistic works

Always remember that if you are not using original works, words, thoughts and ideas, there should always be a citation, reference or source for it.

### 3.4 Tips and guidelines

For both graphics and text, what is important is that you are able to clearly communicate your message with smoothly flowing text and efficient supporting visuals.

- a. Navigation graphics, buttons and graphic design elements should be in .gif format, using colors from the browser-safe color palette.
- b. Allow your graphic editing software to choose which of 256 colors to use when converting a fully colored image into an 8-bit .gif file.
- c. Make it standard practice to have a backup copy of original graphics files.
- d. Website content should center on your goal for the website.
- e. Always remember who you are writing and creating graphics for—your target audience. Writing for the world will not make you stand out.
- f. Present ideas in a natural, engaging order. This can be shown in united and cohesive headlines and web text framework.
- g. Give visitors a reason to keep on reading your text with action verbs and quality writing and graphics.
- h. Provide teasers at the end of the web page to keep them from leaving your website. Due to short attention spans, you should also guide users to the next page.
- i. Use appropriate language. All capital letters is equal to shouting and screaming.
- j. Choose the information you put in the site. It can be seen by criminals, employers, alumni and governments. Everything can be traced back to you.
- k. Obey copyright laws by citing sources and asking for permission before using others' information or work.

## 4. Create Your Site Design

How you design your site determines its organizational framework. Do you remember your target audience? Well, you have to center your site design on their needs and expectations.

### 4.1. Organizing information

With the influx of information we have today, it is very difficult to categorize and organize all of them. But when it comes to websites, it is a must. Without a solid organizational foundation, the website will not function well.

In organizing your information, there are five basic steps:

#### Divide content into coherent units.

This is because, first, very few read long passages of text onscreen.

Second, users generally expect to find a specific “chunk” of relevant information, not a really long page of general content. The maximum size of a good “chunk” is one-two pages long, but don’t overly subdivide your information as this will only frustrate your readers.

And third, concise information is just the right size for the computer screen. Really long web pages only disorient the user.

#### Determine the hierarchy of importance among the units.

Hierarchical organization is very much needed in websites because they depend on it. Websites move from the home page (the site overview) to the specific submenus and content pages, after all.

Information “chunks” should be ranked in importance to serve as the guide for building the hierarchy from the most important (general) to the most specific (detailed).

#### Find out how the units are related based on the hierarchy.

You can determine the site’s logical organization if the users can make successful predictions about they could find information. Since most users build mental models in the face of new or complex information systems, they assess the relationships between information and guess where to find what they are looking for.

#### Construct a site based on the created information structure.

#### Evaluate how successful, functional and visually appealing the site is.

The user must feel at ease and be able to naturally navigate the menus and pages of your site. A balance between the home page and individual content pages equals efficient website design.

### 4.2 Design standards

After you have organized the information you want to put in the website, start designing it with the user in mind.

Let us first tackle some elements of page design.

- a. Visual logic- is the balance between having the visual impact of shape, color and contrast, and still being able to interest and motivate the audience. In seeking this, take into account the restrictions of HTML and the bandwidth limitations on user access, whether they have slow or high-speed modems and connections.
- b. Visual hierarchy- emphasizes the most important elements, and logically and predictably organizes content. When it comes to graphics, hierarchy also refers to how page layout, typography and illustration leads the audience's eye through the page.
- c. Contrast- is the graphic balance and page organization that draws the reader to the content. Solid text repels the reader, while poorly designed graphics distract them.
- d. Consistency- builds rhythm and unity across all website pages. This can be done by establishing a layout grid and text and graphics style, and using it repeatedly in all pages. The audience will remember this consistency and that creates your graphic identity.
- e. Page length- is a balance of the content, bandwidth of the audience, screen size and whether the content will be accessed online or printed for later reading.

### 4.3 CSS

**CSS (Cascading Style Sheets) is a style language defining the layout of HTML documents.**

This covers fonts, colors, margins, height, width, lines, and background images, among many others.

While Hypertext Markup Language (see Chapter 5) can also be used to add layout, CSS has more options and is more accurate and sophisticated to give your website a great look. Styles saved in external .css files are supported by all web browsers.

Benefits of CSS:

- One single style sheet controls the layout of many documents so it saves time and effort
- There is more precise control of the layout
- You can apply different layout to different media types
- It offers numerous advanced and sophisticated style techniques
- It can be easily maintained, has better usability and increased accessibility

<p><b>HTML</b> is used to structure content. <b>CSS</b> is used for formatting structured content.</p>
--

To apply CSS formatting, you can create an embedded style sheet on a page, link a page to an external style sheet, or apply inline styles to individual page elements.

### 4.4 Tips

To make things easier for your audience, here are some suggestions worth considering:

- Create shorter web pages for home pages, documents to be browsed and read online, and pages with large graphics.
- Long documents meant for users to download and print should not be divided into “chunks” to make it convenient.
- Have consistent and predictable design grids for a balanced design scheme to increase user confidence in your site.
- For a basic layout grid, gather all your text, graphics and illustrations so you can predict how various page elements can be arranged.

- Create a “signature graphic” and page layout so your audience will immediately know that it's yours, how it can help them and how it is related to the rest of the web pages.
- Make sure that the header in every page contains a prominent title, logo or institution name. Each page must also contain a title, author, institutional affiliation, revision date, copyright information and home page link.
- For the footer, on the other hand, add when the website was last modified and a set of links to other web pages that could supplement your website content.
- Use space wisely. The most important space in your web page is the first four inches of the page because it is the only visible thing on the typical display screen.
- Choose nature-based, pastel or subtle shades as color for your background and minor elements.
- Check your website display on different browsers before marketing it to make sure they are compatible and work reliably.
- Text on your website must create strong contrast and distinctive patterns to make it very easy to read.
- Utilize the concept of “white space” effectively in your web page design.
- Let go of the Times New Roman typeface because they are too small and the shapes look irregular onscreen. Try Georgia and Verdana (with font size 12pt) which were specifically designed to offer excellent legibility for web pages.
- Avoid using italics for large blocks of text because this is harder to read.
- Use boldface text only for contrast and emphasis, and not for large blocks of text.
- When using colored text, choose darker shades so it can contrast with the web page background.

#### 4.4 Useful Resources

Web Style Guide- one of the best complete guides to website design  
<http://www.webstyleguide.com/index.html?/contents.html>

Web Design- contains information from the University of Minnesota Duluth  
<http://www.d.umn.edu/itss/support/Training/Online/webdesign/accessibility.html>

The basics and the latest on HTML- has guidelines on how to use HTML  
<http://www.w3.org/MarkUp/>

Pegasus Web Design Resources- has tutorials on web design, graphic design and Adobe Photoshop  
<http://www.pegaweb.com/>

Top Ten Mistakes in Web Design  
<http://www.useit.com/alertbox/9605.html>  
Alexa- shows traffic data and website ranking  
<http://www.alexa.com>

HTML Tidy- contains tutorials in Photoshop and Javascript  
<http://cgi.w3.org/cgi-bin/tidy>

Site design and graphics- has instructions on illustrations and effects  
<http://webdeveloper.com/design/>

## 5. Construct Your Web Pages

Now that the content and design are prepared, it is only now that you construct your website. This leaves less room for mistakes and does not waste time and effort.

### 5.1 HTML

In constructing web pages, the first concept to grasp is HTML or the hyper text markup language. Previously mentioned in this primer, HTML is a text file containing small markup tags that tell the web browser how to display the image, text and scripts (see 5.3). It is either in .htm or .html file extensions that can be created through simple text editors.

Now, all web pages are made up of the easy to learn HTML because it provides browsers with the content and page structure, and says where images should be.

**A website is created by creating one or more HTML pages and linking them together.**

Parts of every HTML page

- a. Head section- contains the title, stylesheet settings and other web page information
- b. Body section- is where all the visible content goes.

Just for a sample of html codes, the following text illustrates a possible HTML test run using Notepad available in Windows:

```
<html>
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage. <b>This text is bold</b>
</body>
</html>
```

Save the file as “mypage.htm” (the file name should be in lowercase letters), then open up the internet browser and open the file.

Here is an explanation of the typed text, and what you can expect to see when you open up the file.

**<html>** tells your browser that this is where your HTML document begins.

**<head>** signals the beginning of your header information, which will not be displayed in the browser’s caption.

**<title>Title of page</title>** contains the document title to be displayed in the browser caption.

**<body> This is my first homepage. <b>This text is bold</b>**

**</body>** is the text of the website

**</html>** tells your browser that the HTML page has ended.

This kind of “writing” is called writing HTML markup tags in a plain text file, something that can be skipped by beginners. That’s because they can easily edit HTML files with a WYSIWYG (what you see is what you get) editors like Adobe Dreamweaver, or Microsoft Frontpage which will be discussed later in the chapter.

*However, if you’re serious about the website developing, begin learning HTML tags and shortcuts. For full control over web pages, write HTML tags (also known as coding) by hand, instead of using WYSIWYG editors.*

## 5.2 XML

Although XML (Extensible Markup Language) is much like HTML, the former was designed to describe data and focus on what data is, while the latter was made for displaying data, and focusing on how the data looks.

**XML is a cross-platform, software and hardware independent tool used in transmitting information.**

XML tags are not predefined so you must define your own tags. An example is this note from JJ to Michelle, stored as XML:

```
<note>
<to>Michelle</to>
<from>JJ</from>
<heading>Reminder</heading>
<body>Don't forget the practice this weekend!</body>
</note>
```

*Unlike HTML where markup tags used should be included in the HTML standard, XML is free and extensible, allowing the author to invent tags and document structure.*

*Currently, the XML standard is being adopted by more and more software vendors who foresee XML as being the most common tool for all data manipulation and data transmission.*

## 5.3 Server-side scripting

As previously mentioned, HTML can contain text, markup tags and scripts, which can be executed on the Web server.

**Server-side scripting programs the server’s behavior. When a browser requests for an HTML file with a server-side script, the script gets executed first before returning to the browser as plain HTML.**

Uses:

1. Edit, change or add any content to a web page
2. Respond to data submitted from HTML forms and user queries
3. Provide security since the server code cannot be viewed from a browser
4. Access data and databases and return the results to a browser
5. Customize a webpage to be more useful for users



## 5.4 Proprietary tools

Proprietary tools are licensed software used to design and construct web pages. This includes:

### For HTML Authoring:

- a. **Macromedia Dreamweaver**- is a WYSIWYG editor for HTML that can also manipulate pixel-perfect designs, and craft complex codes.
  - It has complete CSS support, making it easy to view, edit and move styles within and between files, and accelerating workflow with new CSS layouts and browser compatibility checks.
  - It supports HTML, XHTML, CSS, XML, JavaScript, Ajax, PHP, Adobe ColdFusion®, ASP, ASP.NET, and JSP.
- b. **Microsoft FrontPage**- another WYSIWYG editor for HTML created by Microsoft.

### For Graphic Editing

- c. **Adobe Photoshop**-
- d. **Macromedia Fireworks**- optimizes graphics, has selective .jpeg compression and filter effects, and can retain hierarchical layers and effects
  - You can organize and manage your prototypes with a new hierarchical layer structure that can enable you to easily organize web layers and pages.
- e. **CorelDRAW**- it is easy to use, and helps users create logos, brochures, print ads, newsletters, garment designs, graphics, engraving and awards.

## 5.5 Open source tools

Also tools used to design and construct web pages, open source tools are software that can be used and edited by anyone to suit their needs.

- a. **SeaMonkey**- is a community effort to develop an all-in-one internet application suite (containing an internet browser, email and newsgroup client, HTML editor, chat and web development tools).
  - It is built on the open source Mozilla Gecko engine, so it can benefit from cross-fertilization with projects like Sunbird, Miro and Songbird by gaining new features and security updates.
- b. **Gimp**- *is a versatile graphics manipulation package with a customizable interface, and photo enhancement and digital retouching capabilities.*
  - It is ideal for advanced photo retouching techniques.*
  - *It can support file formats like .jpeg, .gif, .png, .tiff, with platforms like Linux, Microsoft Windows, Mac OS X, and open source platforms Sun OpenSolaris and FreeBSD supporting it.*

## 5.6 Resources

Basic HTML tags

<http://webdesignfromscratch.com/introduction-to-html.cfm>

Complete XML Tutorial

<http://www.w3schools.com/xml/default.asp>

How to format text with HTML tags

[http://www.w3schools.com/asp/showasp.asp?filename=demo\\_formatting](http://www.w3schools.com/asp/showasp.asp?filename=demo_formatting)



Introduction to HTML and basic tags

<http://webdesignfromscratch.com/introduction-to-html.cfm>

Macromedia Fireworks

[http://www.images.adobe.com/www.adobe.com/products/fireworks/pdfs/fireworks\\_data\\_sheet.pdf](http://www.images.adobe.com/www.adobe.com/products/fireworks/pdfs/fireworks_data_sheet.pdf)

Scripting Tutorials

<http://www.w3schools.com/asp/default.asp>

The Basics of Making a Web Page

<http://webdesignfromscratch.com/how-html-css-js-work-together.cfm>

## 6. Add Supporting Web Tools

Seeing as websites are becoming more and more interactive these days, with a lot of possibilities as to what it can do and have, you come to supporting web tools in this chapter.

### 6.1 Dynamism

- a. Javascript- is a programming language to make interactive web pages. Running on your visitor's computer, Javascript support is built right into web browsers, most of which support the language.

This is different from Java, a different computer language. And to be able to use it, you don't have to learn Javascript at all since there are already plenty of Javascripts made available to plug straight into your web page. All you have to do is paste the supplied code into your web pages' required places.

However, if you do want to write one, the only thing you need is any plain text editor such as Notepad. Save them on .js extension files to identify them as Javascript, and link it to your HTML by inserting a <script> tag. This extension file can now be also added to other pages just by inserting the appropriate tag into each page to link it.

- b. Databases- give users an organized mechanism for storing, managing and retrieving their information through the use of tables.

These tables are composed of a column which has a different type of attribute, and a row which contains a record. Much like the commonly used Microsoft Excel's spreadsheets, database tables are just more powerful because it allows you to manipulate data.

Uses:

- Perform complex aggregate calculations
- Retrieve records matching a criteria
- Update records in large numbers
- Cross-reference records found in other tables

Microsoft Access and FileMaker Pro are good examples of database management systems (DBMS), with the former being an entry-level database that makes use of Microsoft Office interface, and the latter being a desktop-based relational database management system. Microsoft's SQL Server and Oracle are larger-scale enterprise databases.

DBMS has two categories:

- i. desktop databases- reside on standard personal computers
  - are an inexpensive solution to complex data storage and manipulation needs.
  - examples are Access, FoxPro, Paradox, and Lotus Approach

**HTML-** is a markup language defining static web page content  
**CSS-** is used to apply all visual styles

**Javascript-**is used for interactive functionality

*Web pages are a combination of structure, style and interactivity.*

### **How does HTML, CSS and Javascript work together?**

If there's a paragraph in HTML, CSS tells the browser how to display it. Javascript then tells the browser what happens when that paragraph is clicked.

- are user-friendly and enables you to publish your data either as static or dynamic information on the Internet.
- ii. server databases- geared toward multi-user applications
  - examples are Microsoft SQL, Oracle, Postgres, MySQL.
  - allows you to manage large amounts of data efficiently
  - are flexible, powerful and scalable

### How do you choose which database system to use?

Define your requirements by doing a careful needs analysis before committing to a database solution because server databases can get expensive.

Answer the following questions:

- Who are the database users and what tasks will they perform?
- Who will modify data and how often will this be done?
- Where will the database's IT support come from?
- What are the available hardware, and is there a budget for it?
- Who will maintain the data?
- Will users be able to access data over the Internet? What level of access will be supported?

After you answer these questions, evaluate specific DBMS and find the one that meets your needs and is compatible with your budget.

## 6.2 Multimedia

Multimedia, the visual or moving elements in a page, reached the web slowly because of bandwidth limitations, but there are new solutions coming out everyday for that. Here are just samples of the many possibilities you can put in your web pages.

- a. Audio- is an efficient method of delivering information because it can be captured and optimized easily and compresses well.
  - when recording audio, do it right because background noises like the hum of the air conditioner will never be separated from your audio track. And if you compress the audio track, any flaws will be emphasized. So again, do it right.
- b. Slide shows- synchronizes audio with still images, which compress more efficiently than video
- c. Video- is the hardest multimedia content to deliver on the web because it takes up too much space, unless compressed efficiently. As much as possible, tailor video content specifically for the web to avoid compression problems.
- d. Animation- is a series of still images shown in sequence
  - except for the animated .gif format, most web animation requires special plug-ins for viewing. GIF files are easy to work with and are automatically recognizable to most web browsers.
  - simple animation is best done on a website's home page to provide visual interest for users to explore your materials.

**Compressing-** the process of simplifying information composing an image to decrease the file size.

**Streaming-** refers to the player displaying content before the entire file gets downloaded.

- e. Java Applets- programs created by Java, a network-oriented programming language.
  - needs Java-enabled browsers, a plug-in that need to be installed to your browser, and is used to recognize the Java language and translate it for the user's computer system.
  - is particularly suited for interactive animations and combining animation with other web page elements.
- f. Plug-ins- are small pieces of software programs that work with the browser to read and play a particular kind of file.
  - are used for streaming web video through video player applications such as QuickTime and Media Player.
  - the most common animation plug-ins are vector-based (described by authorware programs as lines and shapes or mathematical values instead of pixels) 2-D animation viewers from Macromedia: Flash and Shockwave
- g. Animation- using Javascripts, it is easy to add animations to your pages like typewriter text, analog clocks, vertical scrollers, fireworks and bubble effects, among many others.
- h. RSS (Rich Site Summary) feed- is the delivery format for regularly changing web content, mostly news-related websites, weblogs and other syndicated content.
  - saves users time by letting them retrieve the latest content from favorite sites without having to visit them individually.

### 6.3 Other web tools

- a. Newsletter- is your organizational or institutional publication that updates newsletter subscribers about latest news. It also allows you to promote your site by repeatedly exposing your service to your target market.

b. Blogs (or web log)- is a frequently updated web page containing web links and personal insights. They are usually used as online journals; source of news feeds; hourly, daily, weekly updates of websites; product updates; among others. Blogs can also be made using WYSIWYG applications like Blogger.com or Livejournal.com.

### 6.4 Tips

- For JavaScripts: Keep HTML, CSS and JavaScript codes in separate files.
- For video: Shoot original video so you can make sure that it is compressed efficiently. Shoot close-ups so even if its low resolution it can still be understood. Shoot against a simple monochromatic background

#### The most common animation plug-ins:

**Flash-** is the standard format for rich Web animation since it can quickly transmit fluid, attractive animation

**Shockwave-** for presenting complex animated content since it recognizes user input and controls how the browsers respond.

*How else are they different?*

- Shockwave's software application called Director has been originally built for CD-ROMS, making it older, while Flash was built for use on the web.
- Flash files load faster than Shockwave files.
- You can use more types of files, and even be able to import Flash files in the more versatile Shockwave. It does not work the other way around.
- 90% of web users already installed Flash plug-ins making it more universal than Shockwave's 60%.
- Flash is in an open-source format, while Shockwave's Director is difficult to modify.

the

for compression efficiency. Use a tripod when shooting, and avoid zooming and panning. Avoid transitional effects between shots because they do not play smoothly on the web.

- For audio processing: Normalize (finding the highest peak in an audio file and amplifying the entire file to make that peak's volume 100%) so you're sure you're working with the loudest possible audio signal. Use software with an equalizer function to boost midrange frequencies. Reduce file size by reducing frequency and depth to 8-bit samples.
- For video processing: Trim clips (first and last frames) to make sure they make sense as still images. Crop out unwanted noise from the movie image. Most web video is sized to quarter-screen (320 x 240 pixels), with a frame rate of 10-30fps.
- For newsletters: First collect the subscribers through a form in your website, then write a monthly article according to your field. Give updates on the products and services you can offer, or introduce a new line, then use a standard format for your newsletter for this text.

## 6.5 Resources

[Javascript 101 Prebuilt Scripts Learn Javascript](http://javascript.about.com/od/reference/a/js101.htm)  
<http://javascript.about.com/od/reference/a/js101.htm>

[Moving Javascript out of the Web Page External Javascripts How to attach JavaScript into Your Page. Unobtrusive JavaScript Javascript 101](http://javascript.about.com/library/blunobtrusive.htm)  
<http://javascript.about.com/library/blunobtrusive.htm>

[How 3-D Graphics Work](http://computer.howstuffworks.com/3dgraphics.htm) <http://computer.howstuffworks.com/3dgraphics.htm>

[Webmonkey's animation section](http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://hotwired.lycos.com/webmonkey/multimedia/animation/index.html) <http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://hotwired.lycos.com/webmonkey/multimedia/animation/index.html>

[Flash and Shockwave Explored](http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://webreview.com/pub/2000/01/07/feature/index2.html) <http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://webreview.com/pub/2000/01/07/feature/index2.html>

[The Art of Animation \(for the Web\)](http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://www.webreference.com/dlab/9904/)  
<http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://www.webreference.com/dlab/9904/>

[GIF Animation Tools, Techniques, Examples and Resources](http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://www.wdvl.com/Multimedia/Animation/GIF/)  
<http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://www.wdvl.com/Multimedia/Animation/GIF/>

[Macromedia](http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://www.macromedia.com)  
<http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://www.macromedia.com>

[Animation in Java Applets](http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://www.javaworld.com/javaworld/jw-03-1996/jw-03-animation.html) <http://computer.howstuffworks.com/framed.htm?parent=web-animation.htm&url=http://www.javaworld.com/javaworld/jw-03-1996/jw-03-animation.html>

[Web Design Path](http://webdesign.about.com/library/beginning/bl_begin.htm)  
[http://webdesign.about.com/library/beginning/bl\\_begin.htm](http://webdesign.about.com/library/beginning/bl_begin.htm)

## 7. Test the website

Different browsers like Microsoft Internet Explorer and Mozilla Firefox read web pages differently as well. Therefore, after uploading your website and adding animation and interactive elements to it, you should test how your website can be viewed on any browser.

### 7.1 Conducting the tests

First up is testing your website's load stress by simulating multiple users.

**Load stress testing is any kind of website testing where simulated workloads put the system under a test.**

In load stress testing, the main objective is to expose bugs that are likely to exist when under stress (like data corruption, buffer overflows, poor handling of resource depletion, deadlocks, race conditions, etc.). This can only be done by breaking down the application with extreme loads.

The workload being tested can either be no load, minimal, normal, above normal or extreme. There are three main terms for it: performance, load and stress testing.

- a. **Performance testing-** is the overall process
  - implements and executes tests to characterize and evaluate performance-related characteristics of the target-of-test. This includes timing profiles, execution flows, response times, operational reliability and limits.
- b. **Load testing-** checks that the system can handle the expected conditions
  - this verifies the acceptability of the target-of-test's performance behavior when put under different operational conditions. These conditions can depend on the number of users or number of transactions, for example, while there is a configuration that remains constant.
- c. **Stress testing-** tries to break the system by going past the expected conditions
  - on the other hand, verifies the acceptability of the target-of-test's performance behavior upon encountering abnormal or extreme conditions (like diminished resources or extremely high number of users).

Other kinds of tests include *benchmark testing*, which uses minimal loads to estimate user experience. On the other hand, *background testing* uses normal loads to exercise the system under test to test the functionality in more realistic conditions.

### 7.2 User test

When you first started brainstorming for the website, you had an image of the target market. Now, we have to test a sample of this target market by gathering a small number of users, around five of them, to perform set tasks using the site one by one. This is observed by a person sitting in the room who can take notes, or by a group of people from behind a two-way mirror.

The earlier testing can be done in any stage of your website development, the better it is. It is more convenient and efficient to test early prototypes so problems can be fixed immediately, as compared to finishing the website and doing a big test at the end.



Why do you have to go through all these trouble? Well, most web developers have their own ideas on what users will like, want or need. But some of those ideas are proven wrong with actual user feedback. In a user test, at least one user will use your website in an unexpected manner.

### **How accessible is your website?**

There are a lot of possible ways to determine how easy your website is to navigate. But the most important of them all is user testing.

To assess the accessibility or usability of a website, you have to plan, define, recruit test users, conduct and analyze the test, and write up the results. The results could be figures on the website's catastrophes (something that prevents the user from completing a task), serious usability problems (something that slows users down significantly before completing a task), and cosmetic problems (something that delays or annoys users).

Categories of web usability problems:

- **Site-level usability**- deals with the general website elements like the home page; information architecture, navigation, and search; linking strategy; internally vs. externally focused design; overall writing style; page templates, layout, and site-wide design standards; graphical language and commonly used icons
- **Page-level usability**- refers to specific issues related to the individual pages: understandability of headlines, links, and explanations; intuitiveness of forms and error messages; inclusion or exclusion of specific information; individual graphics and icons

A usual user test of five people will unearth 80% of site-level usability problems and 50% of page-level usability problems. It is also a good idea observe these tests just to see how users interact with your web pages.

Aside from user tests, here are other ways to find your website's accessibility:

- Conduct user surveys
- Form focus groups to determine what users remember about your site (also a marketing tool)
- Solicit feedback from users and views from a self-selected user group (note that the more visitors comment on the site, the more people love it. Those who experience minor problems and provide feedback means they love the website and want to improve it.
- Rely on mechanical aids and automated testing services

To have a good website, be SMART: Small, Meticulous, Accessible, Regular, Template.

### **7.3 Website standards**

There are a lot of invalid websites in the web because they do not conform to W3C standards. W3C or the World Wide Web Consortium is the organization that manages the standards for the World Wide Web. They take into account how users with disabilities and basically all potential audiences can access your website.



By testing a website according to W3C standards, you can benefit because a) websites following accessibility guidelines are easier to maintain, b) website traffic will increase, and c) more kinds of browsers can access your website content.

This also prevents the usual struggle web developers have with double-coding just to solve problems encountered with different browser versions. Moreover, it gives everyone access to the same information, from people using different browsers to people with disabilities.

With simple web standards like HTML 4 or CSS, visually impaired people can use computers to read web pages for them or magnify standard web pages.

## 7.4 Tools

### Bug reports

Amaya - <mailto:www-amaya@w3.org>

Dreamweaver - <http://www.macromedia.com/support/dreamweaver/>

FrontPage - <http://www.microsoft.com/frontpage/support/default.htm>

GoLive - <http://www.adobe.com/support/feature.html>

Macromedia - <http://www.macromedia.com/support/homesite/>

Netscape Composer - <http://channels.netscape.com/ns/help/default.jsp>

Microsoft FrontPage - <http://www.microsoft.com/frontpage/>

Adobe - <http://www.adobe.com>

### HTML Validity

W3C HTML validator - <http://validator.w3.org>

WDG HTML Validator - <http://www.htmlhelp.com/tools/validator/>

Doctor HTML - <http://www.doctor-html.com/RxHTML/cgi-bin/single.cgi>

### Link Validity

W3C Link Checker - <http://validator.w3.org/checklink>

Site Analysis - for testing and validating internal and external links, domain names. It is ideal for dynamic sites requiring frequent link checking <http://webmetrics.com>

Link Checker Pro – for Windows platforms only, can produce the website's graphical site map <http://www.link-checker-pro.com/>

### Web Document Validity

Log Validator - <http://www.w3.org/QA/Tools/LogValidator/>

Site Check - for stylesheet validators, accessibility assessment, link check, load time check, among others <http://uitest.com/>

### Load and performance stress tools

Testing Master – from Novosoft for Internet protocol spoofing, multiple simultaneous test cases and website testing features for sites with dynamic content.

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

Test Perspective Load Test – a do-it-yourself testing service for conducting realistic load and stress tests

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

Microsoft Visual Studio Team Edition for Software Testers -

<http://msdn2.microsoft.com/en-us/teamsystem/aa718823.aspx>

SiteStress – from Webmetrics for performance reporting, analysis and optimization recommendations

<http://www.webmetrics.com>

Microsoft WCAT load test tool- for testing of MS IIS servers and other MS stress tools

<http://support.microsoft.com/default.aspx?scid=KB;en-us;q231282>

IBM Rational Performance Tester - <http://www.ibm.com/products/us/>

Radview's WebLoad – for viewing global or detailed account of transaction successes/failures on individual Virtual Client level, among others

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

#### Java test tools

JavaNCSS – a simple command line utility collecting source code metrics for Java

<http://www.kclee.de/clemens/java/javancss/>

CMTJava - complexity measurement tool from Verifysoft GmbH for maintainability index, lines-of-code metrics, among others

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

Java Development Tools – from Semantic Designs for Java coverage, metrics, profiler, and clone detection tools

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

Open Source code analyzers listing -<http://www.java-source.net/open-source/code-analyzers>

Open Source code coverage tools listing- <http://www.java-source.net/open-source/code-coverage>

Open Source Java test tools listing- <http://www.java-source.net/open-source/testing-tools>

#### Other web test tools

Internet Explorer Developer Toolbar -

<http://www.microsoft.com/downloads/details.aspx?FamilyID=e59c3964-672d-4511-bb3e-2d5e1db91038&displaylang=en>

Firefox Add-ons - Web and Developer Tools –

<https://addons.mozilla.org/en-US/firefox/browse/type:1/cat:4/sort:popular>

HTML2TXT – converts HTML in MS Internet Explorer into ASCII text  
<http://www.hdse.org/html2txt/>

## 8. Upload the website

After making sure that the website works according to your site's objectives and your target market's usability, then it's time to upload the website.

### 8.1 File Transfer Protocol (FTP)

Basically, if you already have to working web pages that are linked together, you have already created a website. But for other people to view our site, it has to be hosted on a server connected to the World Wide Web.

This is commonly done by using File Transfer Protocol or FTP software. It makes transferring files very easy, since even whole directories can be made available to be accessed by users.

**File Transfer Protocol (FTP) is a program used to upload a website from the program it was created in to a server. But it's basically a method of transferring files over a network or the Internet.**

#### Uploading

With an FTP program and a web browser, you can upload your website, either through your browser or using an FTP client so other people can access and view your website. You have to log in using an ID or username and a password, so find these out first from your web host, along with your FTP location (<ftp.yoursite.com>)

- a. Through your browser- you should know your own web address (where you want the files uploaded), your ID or username and password before uploading to the server of your Internet Service Provider.
- b. Through an FTP Client- After opening the FTP client, input web address, ID and password. The last two are provided by the ISP. Locate and select the web pages to be uploaded to the ISP's web server.

### 8.2 Domain names

Consider the following guidelines before choosing your domain name

- a. Your website name and domain name should be the same. This way people will remember your website easier. If a user wants to go to the Cebu Pacific Air

You can use the built-in FTP client used through Internet Explorer, in Windows XP.

To do this, just type the address of the FTP server into the Internet Explorer address bar.

Example:

<FTP://67.68.255.65>

IP address of the server computer, 'FTP://' informs Internet Explorer that it is looking to connect to an FTP site.

website, they already know that the URL or website address is

[www.cebupacificair.com](http://www.cebupacificair.com).

- b. For commercial purposes, the domain name should match the brand name, not be paired with a generic one. People don't search cars.com for a brand they want. They go to generalmotors.com.
- c. There is a maximum of 67 characters in domain names, so the question of having a long or short domain name depends on you.
- d. Leave out the hyphens.
- e. If you are going to use plurals, 'the,' or 'my,' market the website with its complete name, don't leave out anything.

### 8.3 Paths

There are two important paths to take note of, the file path and the directory path:

- The 'file path' is simply a list of all the folder/directory names containing the files named.
  - Take note that slashes '/' are always used to separate folder names, and that the outermost directory comes first
- The 'directory path' specifies the directory paths for your website and corresponding URLs to those paths.

### 8.4 Resources

[Tips on Choosing a Good Domain Name](http://www.thesitewizard.com/archive/domainname.shtml)

<http://www.thesitewizard.com/archive/domainname.shtml>

[Important Precautions to Take When Buying a Domain Name](http://www.thesitewizard.com/gettingstarted/precautions-to-take-when-buying-domain-names.shtml)

<http://www.thesitewizard.com/gettingstarted/precautions-to-take-when-buying-domain-names.shtml>

[How to Choose a Good Web Host](http://www.thesitewizard.com/archive/findhost.shtml)

<http://www.thesitewizard.com/archive/findhost.shtml>

[Which Web Host Do You Recommend?](http://www.thesitewizard.com/archive/webhosting.shtml)

<http://www.thesitewizard.com/archive/webhosting.shtml>

[Changing Web Hosts: How to Minimize Your Search Engine Losses When Moving](http://www.thesitewizard.com/archive/movinghosts.shtml)

<http://www.thesitewizard.com/archive/movinghosts.shtml>

[Annotated List of Budget Web Hosts](http://www.thefreecountry.com/webhosting/budget1.shtml)

<http://www.thefreecountry.com/webhosting/budget1.shtml>

[Should I Use a Temporary Domain Name Till My Preferred Domain Becomes Available?](http://www.thesitewizard.com/domain/temporary-domain-name.shtml)

<http://www.thesitewizard.com/domain/temporary-domain-name.shtml>

[Should I Display an Email Address on My Site or Use a Contact Form?](http://www.thesitewizard.com/webdesign/email-address-or-contact-form.shtml)

<http://www.thesitewizard.com/webdesign/email-address-or-contact-form.shtml>

## 9. Promote Your Website

Having a useful and nicely-designed website is not enough. You also have to let your target audience know that it exists. This chapter covers positioning your website to generate more user traffic, as well as the more commercially-inclined marketing and advertising on the web.

But first, answer the following questions:

- Can your URL (website address) be seen in all communications sent within and outside the company, institution or organization?
- Are you a member of any social networks?
- Do you know how many access your site, even with just a few days of existence?
- Have you checked all search engine portals and see how your website ranks?
- Do you link other credible, related websites, and do they link you back?

If you answered no to any of these, then there is a lot of work to do when it comes to promoting your website.

### 9.1 SEO: Search Engines and its Optimization

**Search engines use spiders to crawl all over the Web to follow links, organize data and evaluate the text in web pages.**

The information gleaned by these spiders helps the search engines to organize a list of websites, using propriety ranking algorithms, centered on the search term.

Google, the top search engine, has a top secret ranking algorithm for coming up with quality content and links in their search results page. But what is known about Google include the following:

- Google's spider only evaluates the page's visible text.
- The more your website is linked, especially by quality websites, the higher your Google ranking. The search engine was designed to emphasize page content and link popularity.
- It uses PageRank to examine the link structure, and hypertext-matching analysis to determine relevant search pages. Their search results depend on more than 100 factors.

### Search Engine Optimization

People use search engine to direct them to the answers to their questions. Therefore, your website's visibility, and how easily it can be found in search engines contribute greatly to your success.

### 9.2 Positioning

Website positioning refers to taking into account how your website ranks in search engine results and directing website content to elevate the said ranking. After all, few URLs get recalled instantly from memory; most users still depend on search engines for the websites they want.

Some user-unfriendly SEO techniques are 1) **Meta tag spamming** and 2) **Alt tag stuffing**. The former repeats the search term in the meta tag so the search engines think that there is more relevant content in the page when there is only few. The latter repeats the search term on the alt tag.

a. Sticky content

One way to elevate search engine ranking is to provide more content that users will access and use. Another is to constantly update your website to keep reeling in said users. This can be done by posting:

- Original or free reprint relevant articles from other websites
- Quotes and jokes
- Games and puzzles
- Forums
- Feedback box, guestbook or testimonials
- Reviews of books, software, hardware, shows, among others
- Case studies and success stories
- Newsfeeds via news websites for current and recently updated information

b. Keyword-rich pages

Aside from the content, another important factor in position is developing **Keyword Rich Pages** or KRPs, which are pages interspersed with a consistent keyword repeated in the page.

You have to be careful with using keywords, however, as blatant repetition and illogical insertion of it to website content only annoys readers and decreases website quality. Just make sure that keywords are handled constructively and proactively.

### 9.3 Marketing

More than half of the Fortune 500 companies did not only launch, but also totally embraced having a presence in the web. And it's all primarily because of self-defense and the need to be part of the information highway. More and more users/consumers check out a product on the internet before buying it, so if the company does not have a website, the company does not get that part of the market.

Web marketing success is tied to visibility and user traffic. No matter how exceptional your school is, it will not matter if no one knows it exists. If you want to put your brand or institutional identity on the web and sell it, you have to properly promote it, even in the web.

### 9.4 Advertising

Advertising on the web is much more interactive, even like a real time one-on-one communication with the user/consumer. Aside from that, web advertising can also ask questions, collect answers and print results.

HotWired ([www.hotwired.com](http://www.hotwired.com)) started paid advertising on the World Wide Web on October 27, 1994. Before that, what usually happened were simply links to other interesting sites, so the banners on HotWired were the first ones. With fourteen advertisers, HotWired president Andrew Anker gave a price and reeled in buyers in a snap.

Since then, major companies pay for web advertising to sites like Yahoo!, which asks for approximately \$100,000 every month for a banner on its home page.

In web advertising, there are companies buying space and companies selling space on the World Wide Web. True, there is a potential market to having your advertisements (either for your educational institution or for your website) in other websites with more user traffic, and to selling space in your website to companies who want to target the audience you are also targeting. But this might come a little later, when the website has been maintained and the website itself gets enough user traffic.

## 9.5 Credibility

Word of mouth can also be an important and effective marketing tool for your website. But for people to talk about it, your website must consistently meet their expectations, and have relevant content and credibility.

To boost web credibility, here are some guidelines to follow:

- c. Provide third-party support (citations, references, source materials) for your website content.
- d. Include a physical address of your educational institution, company or organization in your website to show that the one behind it is real.
- e. Emphasize expertise in the content you provide. If an article was written by a professor with good credentials, make that clear.
- f. Link only to credible sites because you lose credibility by association otherwise.
- g. In order to show the people behind the website, post staff biographies and pictures.
- h. Show clear contact information (phone number, physical address and email address).
- i. A professionally designed layout helps boosting credibility since most people quickly evaluate a site by how it looks. Of course, design should match the site's purpose to be consistent.
- j. Make sure your website can be used with ease, and can be of use to your audience.
- k. Constantly update and review your website, and post when it was last updated.
- l. Minimize advertisements in your site and avoid having pop-up ads.
- m. Spell-check, proofread and edit content to avoid typographical errors. Moreover, continuously test links to make sure they are not broken.

## 9.6 Tips

In order to promote your website, make sure that it is part of your all the institutional marketing campaigns, and the URL be part of every piece of letter sent and brochure handed out by the school.

Aside from this basic rule, try the following tips:

- a. Choose a suitable search item for your website.
- b. Allocate one or two of them to each suitable page within the site. (Smaller pages are better because there is less text to scan for the search term, so split some long pages.)
- c. Organize internal links and on-page elements to suit target search terms.
- d. Concentrate on optimizing your website for Google. A site that searches quality of content and links in a website, Google has an Add URL tool so you can submit your website and brings it to the search engine's attention.
- e. Make sure spiders can find or crawl on all of the website's pages.

- f. All of your web pages should be linked to at least one other page.
- g. Make sure your URL is publicized where the residents in your locality can see it, if you want to tap into the local market, or in nearby towns with residents interested in what you have to offer.
- h. Cross-promote your site with affiliated business, organizations, media, information agencies and local directories. Feature a local nonprofit, charitable event in the school in your website to generate media mileage for your URL and boost its awareness.
- i. Make sure the URL is accommodated in print and broadcast advertisements and commercials, in posters in high-traffic areas like libraries, malls and restaurants, business cards, bills and statements, publications and promotional materials, press releases and billboards.
- j. Develop keyword-rich pages so your site appears in search engines. Insert your keyword in your link for higher page ranking in search engines.
- k. Your content should draw readers in even if they just read the first few lines of text.

## 9.7 Resources

Bruce Clay's [Search Engine Relationship Chart](http://www.bruceclay.com/searchenginereationshipchart.htm)- tackles how all search engines are related  
<http://www.bruceclay.com/searchenginereationshipchart.htm>

Gene DeFazio's "Keywords are the Keys to the Internet"  
[http://www.rocketface.com/archive/keywords\\_the\\_keys\\_to\\_the\\_internet.html](http://www.rocketface.com/archive/keywords_the_keys_to_the_internet.html)

[GOOGLE analytics](http://www.google.com/analytics)- offers free executive, marketing and webmaster analyzing services  
<http://www.google.com/analytics>

Google's own [metric reports](http://www.google.com/ads/metrics.html)- how the target audience uses Google  
<http://www.google.com/ads/metrics.html>

[Google PageRank](http://www.google.com/corporate/tech.html)  
<http://www.google.com/corporate/tech.html>

Jakob Nielsen's Alertbox [The Power of Defaults](http://www.useit.com/alertbox/defaults.html)- discusses how search engine users only click the top of the search engine results page (SERP) entry  
<http://www.useit.com/alertbox/defaults.html>

Jakob Nielsen's Alertbox [When Search Engines Become Answer Engines](http://www.useit.com/alertbox/20040816.html)- to find out how people use search engines to answer questions  
<http://www.useit.com/alertbox/20040816.html>

Jakob Nielsen's Alertbox [Information Foraging: Why Google Makes People Leave Your Site Faster](http://www.useit.com/alertbox/20030630.html)- tackles how users spend less time on one website  
<http://www.useit.com/alertbox/20030630.html>

Jill Whalen's [High Rankings](http://www.highrankings.com/)-for advice on SEO  
<http://www.highrankings.com/>



ODP criteria- for submitting and listing websites into the most comprehensive directory of the World Wide Web

<http://www.dmoz.org/add.html>

Search Engine Colossus- international dictionary of search engines

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

Search Engine Marketing, Inc.- for tips on how to get into the search index, and other steps to direct traffic into your site

<http://www.mikemoran.com/searchmarketinginc/index.htm>

Search Engine Optimization

[http://www.bruceclay.com/web\\_rank.htm](http://www.bruceclay.com/web_rank.htm)

Search Engine Promotion Tactics

[http://www.bruceclay.com/web\\_pt.htm](http://www.bruceclay.com/web_pt.htm)

Search Engine Relationship Chart- for an excellent illustration of ODP's central role

<http://www.bruceclay.com/searchenginerelationshipchart.htm>

Search Engine Watch- for detailed and technical information on search engines

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

The IBM Accessibility Center- resources for learning about building accessible applications

<http://www.ibm.com/able/>

## 10. Monitor Your Website

Website production does not end once you have seen it running on the computer screen. In fact, there are a lot of websites (called static websites) that merely end up as online brochures for companies and organizations instead of being an interactive portal that can benefit its owners.

Monitoring websites are important because users easily lose interest when they see content and experience slow loading. Moreover, the website's quality is improved and continues to be useful and functional if the website designers continue to find ways to make it better.

### A website needs:

1. Constant attention and grooming
2. A person or team responsible for coordinating the new content stream and maintain graphic and editorial standards
3. Regular backup of files in a reliable storage medium

### 10.1 Monitoring and tracking services

a. Google Analytics- so you can track and compare ads, email newsletters, campaigns, links and keywords on Google and other search engines, trace transactions, and see traffic and conversion information for every link as you browse your website

b. host-tracker.com- monitors access errors, has several monitoring points all over the world so they can immediately zero in on your location, focuses on operation stability and accessibility, and can monitor every 1/5/15/30/60 minutes.

c. InternetSeer- is a free monitoring service that detects anytime your website can't be reached, and will provide weekly performance emails with detailed statistics

d. Server Check Pro- monitors the availability of your HTTP server every 15 minutes, 24 hours a day, with the ability to customize testing and create custom notifications

### 10.2 Server traffic

In Chapter 2, the target audience was one of the important things to determine before constructing the website. But now, since it's already up and running, you have to find out if your successful in attracting your target audience.

Web statistics can give better understanding as to what visitors think of your website; what they like and not like can be seen in the view and click counts and visitor counter, among others. Through it, the website can be approved and success can be measured.

You can ask about your site and server logs and analysis services from your web browser and the people who maintain your server.

### 10.3 Tips

- a. Promote the website all the time to ensure an increasing number of visitors in the future.

- b. Check for abandoned or modified external links.
- c. Know your statistics from page counts and views to visitor demographics.
- d. Update yourself on the current software and technology for the improvement of your site.
- e. Review your website for grammatical and spelling errors, as well as illogical concepts in articles. In fact, proofread and edit all content twice before updating your website.
- f. To protect your visitors, come up with a privacy policy applicable to everyone.
- g. Provide new content once a week or so. This does not only keep interested visitors but also encourages linkages to (and have more spiders crawling on) your website.
- h. Establish linkages with reputable and related websites.
- i. Check out search engine results pages (SERPs) to find out where your website ranks.
- j. Get feedback on your websites functionality and review your website design accordingly.
- k. Add features to enhance visitor experience on your website.
- l. Have a “What’s New” feature to keep visitors updated on your website’s changes.
- m. Always have a backup copy of the website on both hard drives and external memory devices.
- n. Win an award for additional credibility and prestige.
- o. Look at your website objective and goals again. If they have changed from your original website plans, just make sure the website content supports it.
- p. Make sure the key message in your website does not get marred by distracting and useless features. Delete the latter.
- q. Your text should be divided into scannable mini-paragraphs.
- r. Update graphics, charts and photos. New images are available in many search engines.
- s. Accelerate loading time to a maximum 15-20 seconds.
- t. Convert all PDF files on your website to web pages to make it easier to your visitors.
- u. Ask for detailed visitor logs from the people who maintain your server, and archive them for long-term analysis.

## 10.4 Resources

Online:

[eXTReMe](http://www.extreme-dm.com/tracking/?home)- for advanced features like all numbers, percentages, statistics, totals and averages  
[www.extreme-dm.com/tracking/?home](http://www.extreme-dm.com/tracking/?home)

[Hitslink](http://www.hitslink.com)- tracks visitor statistics, analyze visitor behavior, sets up email alerts  
[www.hitslink.com](http://www.hitslink.com)

[Opentracker](http://www.opentracker.net)- monitors real-time and online visitors  
[www.opentracker.net](http://www.opentracker.net)

[Realtracker](http://www.realtracker.com)- free online homepage statistics  
[www.realtracker.com](http://www.realtracker.com)

[Websitetracker](http://www.websitetracker.com)- tracks the number of people who visit the site, how they found the site and which search engine they used, among others  
[www.websitetracker.com](http://www.websitetracker.com)



Books:

Friedlein, Ashley. 2001. Web project management: Delivering successful commercial Web sites. San Francisco: Morgan Kaufmann.

Siegel, David. 1997. Secrets of successful Web sites: Project management on the World Wide Web. Indianapolis, Ind.: Hayden Books.

Spainhour, Steven, and Robert Eckstein. 1999. Webmaster in a nutshell: A desktop quick reference, 2d ed. Sebastopol, Calif.: O'Reilly.

## Appendix 1: Sources

### Chapter 1

*“Internet basics.” Retrieved March 22, 2008 from*  
<http://www.usd.edu/trio/tut/start/internet.shtml>

*“Website.” Retrieved March 22, 2008 from* <http://www.answers.com/topic/website?cat=technology>

*“What are the benefits of a website?” Retrieved March 22, 2008 from*  
<http://www.weblinkindia.net/web-articles/website-benefits.html>

Alexander, Jan and Tate, Marsha. *“Eight basic types of website purposes.” Retrieved March 1, 2008 from*  
<http://www.studygs.net/evaluate.htm>

Vigil, Diane. *“What do you need to make a website.” Retrieved March 22, 2008 from*  
[http://dianev.com/web-design-help/web\\_design\\_basics/what\\_need\\_to\\_make\\_a\\_website.html](http://dianev.com/web-design-help/web_design_basics/what_need_to_make_a_website.html)

*“Getting started.” Retrieved March 1, 2008 from*  
<http://www.webstyleguide.com/process/index.html>

### Chapter 2

Popoola, Jonathan. *“Define Your Audience Before Creating A Website.” Retrieved March 1, 2008 from*  
<http://ezinearticles.com/?Define-Your-Audience-Before-Creating-A-Website&id=1024573>

*“Developing a site specification.” Retrieved March 1, 2008 from*  
<http://www.webstyleguide.com/process/before.html>

Foster, Jane. *“Sitemaps: Benefits and Tips on Designing a Sitemap.” Retrieved March 1, 2008 from*  
[http://www.articlealley.com/article\\_78345\\_62.html](http://www.articlealley.com/article_78345_62.html)

*“The site development process.” Retrieved March 1, 2008 from*  
<http://www.webstyleguide.com/process/develop.html>

### Chapter 3

*“Characteristics of web graphics.” Retrieved March 1, 2008 from*  
<http://www.webstyleguide.com/graphics/character.html>

*“Communicating clearly on the Internet.” Retrieved March 1, 2008 from*  
<http://www.dtcc.edu/cs/rfc1855.html>

Cox, Jessica. *“Ten Tips For Creating Website Content That Flows.” Retrieved March 24, 2008 from*  
<http://www.isedb.com/db/articles/1574/1/Ten-Tips-For-Creating-Website-Content-That-Flows/Page1.html>



"Editorial style." Retrieved March 1, 2008 from <http://www.webstyleguide.com/style/index.html>

"Editorial style." Retrieved March 1, 2008 from <http://www.webstyleguide.com/style/index.html>

"Graphic file formats." Retrieved March 1, 2008 from <http://www.webstyleguide.com/graphics/formats.html>

"What is intellectual property." Retrieved March 1, 2008 from <http://www.wipo.int/about-ip/en/>

Will-Harris, Daniel. "Writing for the web." Retrieved March 24, 2008 from [http://www.efuse.com/Design/web\\_writing\\_basics.html](http://www.efuse.com/Design/web_writing_basics.html)

## Chapter 4

"Design standards." Retrieved March 1, 2008 from <http://www.webstyleguide.com/site/standards.html>

"Site design." Retrieved March 1, 2008 from <http://www.webstyleguide.com/site/index.html>

"Page design." Retrieved March 1, 2008 from <http://www.webstyleguide.com/page/index.html>

"What is CSS." Retrieved March 27, 2008 from [http://www.w3schools.com/web/web\\_css.asp](http://www.w3schools.com/web/web_css.asp)

"CSS." Retrieved March 27, 2008 from <http://www.html.net/tutorials/css/lesson1.asp>

"FrontPage 2003 and CSS - Information about CSS." Retrieved March 27, 2008 from <http://accessfp.net/frontpage-2003/tutorials/information-about-css.htm>

"Creating CSS." Retrieved March 27, 2008 from <http://accessfp.net/frontpage-2003/tutorials/creating-css.htm>

## Chapter 5

"About SeaMonkey." Retrieved March 27, 2008 from <http://www.seamonkey-project.org/>

"Dreamweaver Top Features." Retrieved March 27, 2008 from <http://www.adobe.com/products/dreamweaver/features/>

"Feature overview." Retrieved March 27, 2008 from <http://www.gimp.org/features/>

"How to make a website." Retrieved March 27, 2008 from <http://webdesignfromscratch.com/how-to-make-a-website.cfm>



"HTML." Retrieved March 27, 2008 from [http://www.w3schools.com/web/web\\_html.asp](http://www.w3schools.com/web/web_html.asp)

"Macromedia fireworks." Retrieved March 27, 2008 from <http://www.adobe.com/products/fireworks/features/>

"Production." Retrieved March 27, 2008 from <http://webdesignfromscratch.com/production.cfm>

"Server-side Scripting Primer." Retrieved March 27, 2008 from [http://www.w3schools.com/web/web\\_scripting.asp](http://www.w3schools.com/web/web_scripting.asp)

"Who Uses CorelDRAW Graphics Suite?" Retrieved March 27, 2008 from <http://www.corel.com/servlet/Satellite/us/en/Product/1197911899027>

"XML Tutorial." Retrieved March 27, 2008 from [http://www.w3schools.com/web/web\\_xml.asp](http://www.w3schools.com/web/web_xml.asp)

## Chapter 6

"All about multimedia." Retrieved March 27, 2008 from [http://www.webdeveloper.com/multimedia/multimedia\\_qa.html](http://www.webdeveloper.com/multimedia/multimedia_qa.html)

"HTML Tutorial." Retrieved March 27, 2008 from <http://www.w3schools.com/html/default.asp>

"Introduction to Javascript." Retrieved March 27, 2008 from [http://www.w3schools.com/js/js\\_intro.asp](http://www.w3schools.com/js/js_intro.asp)

"Introduction to Multimedia." Retrieved March 27, 2008 from [http://www.w3schools.com/media/media\\_intro.asp](http://www.w3schools.com/media/media_intro.asp)

"SQL Tutorial." Retrieved March 27, 2008 from <http://www.w3schools.com/sql/default.asp>

## Chapter 7

"My website is standard! And yours?" Retrieved April 6, 2008 from <http://www.w3.org/QA/2002/04/Web-Quality>

Nielsen, Jakob. "Cost of user testing a website." Retrieved April 6, 2008 from <http://www.useit.com/alertbox/980503.html>

"Website test tools and site management tools." Retrieved April 6, 2008 from <http://www.softwareqatest.com/qatweb1.html#SECURITY>

"What is load stress testing?" Retrieved April 6, 2008 from <http://www.siteloadtesting.com/whatisloadtest.shtml>



*"Why You Need to Test Your Web Site with Real Users."* Retrieved April 6, 2008 from <http://www.webreference.com/authoring/design/usability/testing/>

## Chapter 8

*"Beginners Guides: Setting up a FTP Server in WinXP."* Retrieved April 5, 2008 from <http://www.webdiner.com/webadv/begin/paths.htm>

*"Creating Login Page."* Retrieved April 5, 2008 from [http://www.webdesigntutorials.net/tutorials/html\\_tutorials/html\\_tutorial\\_Creating\\_Login\\_Page.php](http://www.webdesigntutorials.net/tutorials/html_tutorials/html_tutorial_Creating_Login_Page.php)

*"Create secure password or login."* Retrieved April 5, 2008 from <http://www.cezeo.com/tips-and-tricks/create-password/>

*"Directory path."* Retrieved April 5, 2008 from <https://www.google.com/webmasters/tools/docs/en/sitemap-generator.html>

*"File path."* Retrieved April 5, 2008 from [http://www.cs.williams.edu/~cs105s00/outlines/CS105\\_73.html](http://www.cs.williams.edu/~cs105s00/outlines/CS105_73.html)

Heng, Christopher. *"Tips on Choosing a Good Domain Name."* Retrieved April 5, 2008 from <http://www.thesitewizard.com/archive/domainname.shtml>

*"How to make a website."* Retrieved April 5, 2008 from <http://webdesignfromscratch.com/how-to-make-a-web-site.cfm>

*"How to Password Protect a Directory on Your Website."* Retrieved April 5, 2008 from <http://www.thesitewizard.com/apache/password-protect-directory.shtml>

*"How to Upload Web Pages to an Internet Service Provider."* Retrieved April 5, 2008 from [http://www.ehow.com/how\\_10031\\_upload-web-pages.html](http://www.ehow.com/how_10031_upload-web-pages.html)

*"Log in name."* Retrieved April 5, 2008 from <http://www.learnthenet.com/english/glossary/login.htm>

*"Strong passwords: How to create and use them."* Retrieved April 5, 2008 from <http://www.microsoft.com/protect/yourself/password/create.msp>

## Chapter 9

*"Web Marketing."* Retrieved March 1, 2008 from [http://www.bruceclay.com/web\\_mktg.htm](http://www.bruceclay.com/web_mktg.htm)



Fogg, B.J. *"Stanford Guidelines for Web Credibility."* Retrieved March 1, 2008 from [www.webcredibility.org/guidelines](http://www.webcredibility.org/guidelines)

*"Making your website popular."* Retrieved March 1, 2008 from <http://www.studygs.net/websearch.htm>

*"Site marketing."* Retrieved March 1, 2008 from [www.webstyleguide.com](http://www.webstyleguide.com)

Davis, Bonnie Jo. *"Sticky Sites Rule The Internet."* Retrieved November 17, 2007 from [http://www.rocketface.com/archive/sticky\\_sites\\_rule.html](http://www.rocketface.com/archive/sticky_sites_rule.html)

DeFazio, Gene. *"The Importance of Website Content."* Retrieved November 17, 2007 from [http://www.rocketface.com/archive/importance\\_of\\_website\\_content.html](http://www.rocketface.com/archive/importance_of_website_content.html)

Roy, Sumantra. *"Creating Keyword Rich Pages."* Retrieved November 17, 2007 from [http://www.rocketface.com/archive/keyword\\_rich\\_pages.html](http://www.rocketface.com/archive/keyword_rich_pages.html)

*"Search Engine Optimization (SEO) - the basics."* Retrieved March 28, 2008 from <http://www.webworkshop.net/search-engine-optimization-basics.html>

Banks, L. Jennette. *"Search engine optimization basics, Part 1: Improve your standing in search engines."* Retrieved March 28, 2008 from <http://www.ibm.com/developerworks/web/library/wa-seo1.html>

## Chapter 10

*"Google Analytics Features."* Retrieved April 7, 2008 from <http://www.google.com/analytics/features.html>

Lavigne, Dru. *"DNS 101."* Retrieved April 9, 2008 from [http://member.dnsstuff.com/rc/index2.php?option=com\\_alphacontent&section=8&cat=17&task=view&id=18&pop=1&Itemid=43](http://member.dnsstuff.com/rc/index2.php?option=com_alphacontent&section=8&cat=17&task=view&id=18&pop=1&Itemid=43)

*"Product overview."* Retrieved April 7, 2008 from <http://host-tracker.com/overview/>

*"Server Check FAQs."* Retrieved April 7, 2008 from <http://www.netmechanic.com/products/servercheckFAQ.shtml>

*"User Skills Improving, But Only Slightly."* Retrieved March 1, 2008 from <http://www.useit.com/alertbox/user-skills.html>

Wanounou, Rafi. *"Four steps to DNS success."* Retrieved April 9, 2008 from [http://member.dnsstuff.com/rc/index2.php?option=com\\_alphacontent&section=8&cat=17&task=view&id=22&pop=1&Itemid=43](http://member.dnsstuff.com/rc/index2.php?option=com_alphacontent&section=8&cat=17&task=view&id=22&pop=1&Itemid=43)



*“What is InternetSeer?” Retrieved April 7, 2008 from <http://www.internetseer.com/help/faq.xtp>*

## Appendices

*“Free Tools for webmasters.” Retrieved April 8, 2008 from <http://www.scriptol.org/webtools.html>*

*“Glossary.” Retrieved April 7, 2008 from <http://www.how-to-build-web-sites.com/glossary.html>*

*“Improve traffic with Google Webmaster Tools.” Retrieved April 8, 2008 from <https://www.google.com/webmasters/tools/siteoverview>*

*“The Advanced Webmaster's Tools Catalog.” Retrieved April 8, 2008 from <http://webmasterengine.com/>*

*“Website glossary.” Retrieved April 6, 2008 from [http://www.w3schools.com/site/site\\_glossary.asp](http://www.w3schools.com/site/site_glossary.asp)*

*“Webmasters tools.” Retrieved April 8, 2008 from <http://free-webmaster-tools.com/>*



## Appendix 2: Glossary

### A

#### **Animation**

A set of pictures simulating movement when played in a series

#### **API (Application Programming Interface)**

An interface for letting a program communicate with another program

#### **ASCII (American Standard Code for Information Interchange)**

A set of 128 alphanumeric and special control characters used for computer storing and printing of text. Used by HTML when transmitting data over the web.

#### **ASP (Active Server Pages)**

A Microsoft technology allowing the insertion of server executable scripts in web pages.

#### **AVI (Audio Video Interleave)**

File format for video files. Video compression technology developed by Microsoft.

### B

#### **Banner Ad**

A (most often graphic) advertisement placed on a web page, which acts as a hyperlink to an advertiser's web site.

#### **Bandwidth**

A measure for the speed (amount of data) you can send through an Internet connection. The more bandwidth, the faster the connection.

#### **BMP (Bitmap)**

A format for storing images.

#### **Body**

The body section of a web page, in HTML terms. Unlike the Head section, everything in the body is shown on the page.

#### **Bookmark**

In web terms: A link to a particular web site, stored (bookmarked) by a web user for future use and easy access.

#### **Broken Link Checker**

A tool that checks each link on a website to ensure its links, both internal and external are available and still current.

#### **Browse**

Term to describe a user's movement across the web, moving from page to page via hyperlinks, using a web browser.

#### **Browser**

The program that displays websites on your computer. Examples are Microsoft's Internet Explorer, Netscape, and Mozilla's Firefox

#### **Byte (Binary Term)**

A computer storage unit containing 8 bits. Each byte can store one text character.

### C

#### **Cache**

In web terms: A web browser or web server feature which stores copies of web pages on a computer's hard disk.



### **Case Sensitive**

A term used to describe if it is of importance to use upper or lower case letters.

### **Click**

In web terms: A mouse click on a hyperlink element (such as text or picture) on a web page which creates an event such as taking a visitor to another web page or another part of the same page.

### **Clickthrough Rate**

The number of times visitors click on a hyperlink (or advertisement) on a page, as a percentage of the number of times the page has been displayed.

### **Compression**

A method of reducing the size (compress) of web documents or graphics for faster delivery via the web.

### **Cookie**

Information from a web server, stored on your computer by your web browser. The purpose of a cookie is to provide information about your visit to the website for use by the server during a later visit.

### **CSS (Cascading Style Sheets)**

A W3C-recommended language for defining style (such as font, size, color, spacing, etc.) for web documents. Cascading Style Sheets are an extension of HTML used for editing. They provide a way to make one change on a web page that automatically changes other pages

## **D**

### **Database**

Data stored in a computer in such a way that a computer program can easily retrieve and manipulate the data.

### **Database System**

A computer program (like MS Access, Oracle, and MySQL) for manipulating data in a database.

### **Dial-up Connection**

In web terms: A connection to Internet via telephone and modem.

### **Directory**

A directory is a human-compiled search. Most directories rely on submissions instead of spiders

### **Domain Name**

The name that identifies a web site. (like: Smartschools.com)

### **Download**

To transfer a file from a remote computer to a local computer. In web terms: to transfer a file from a web server to a web client

### **Dynamic**

Interactive elements of a site

## **F**

### **File**

Document or set of instructions

### **Flash**

A vector-based multimedia format developed by Macromedia for use on the web.

### **Frame**

In web terms: A part of the browser screen displaying a particular content. Frames are often used to



display content from different web pages. A section of a web page inside a frame, which stays the same, while other parts may change as a visitor navigates through the site

**FTP (File Transfer Protocol)**

Is a standard program used to upload your web site from the program where it was created, to a server. One of the most common methods for sending files between two computers.

**FTP Server**

A web server you can log on to, and download files from (or upload files to). Anonymous FTP is a method for downloading files from an FTP server without using a log-in account.

**G**

**Gateway**

A computer program for transferring (and reformatting) data between incompatible applications or networks.

**GIF (Graphics Interchange Format)**

A compressed format for storing images developed by CompuServe. One of the most common image formats on the Internet.

**Graphic**

Is an image or picture used on a web page

**H**

**Head**

Only visible in the top section of an HTML page, is information (including metatags) about the page

**Hits**

The number of times a web object (page or picture) has been viewed or downloaded

**Home Page**

The top-level (main) page of a web site. The default page displayed when you visit a web site.

**Host**

Stores web pages on its server to make them available to internet users

**HTML (Hypertext Markup Language)**

HTML is the language of the web. HTML is a set of tags that are used to define the content, layout and the formatting of the web document. Web browsers use the HTML tags to define how to display the text.

**HTML Document**

A document written in HTML.

**HTML Editor**

A software program for editing HTML pages. With an HTML editor you can add elements like lists, tables, layout, font size, and colors to a HTML document like using a word processor. An HTML editor will display the page being edited exactly the same way it will be displayed on the web (See WYSIWYG).

**HTML Tags**

Code to identify the different parts of a document so that a web browser will know how to display it.

**HTTP (Hyper Text Transfer Protocol)**

The standard set of rules for sending text files across the Internet. It requires an HTTP client program at one end, and an HTTP server program at the other end.



### **HTTP Client**

A computer program that requests a service from a web server.

### **HTTP Server**

A computer program providing services from a web server.

### **Hub**

A website which acts as a hub or directory on one topic, and indexes links to other websites of the same topic

### **Hyperlink**

A pointer to another document. Most often a pointer to another web page. A hyperlink is a synonym for a hotlink or a link, and sometimes called a hypertext connection to another document or web page.

## **I**

### **Image**

Is a picture, photograph or graphic used on a web page

### **Index**

When a search engine searches and catalogues a web site, for later retrieval for keyword searches.

Also the name given for a home page of a website

### **Internet**

A world wide network connecting millions of computers.

### **Internet Explorer**

A browser by Microsoft. The most commonly used browser today.

### **Intranet**

A private (closed) Internet, running inside a LAN (Local Area Network).

### **IP Address (Internet Protocol Address)**

A unique number identifying every computer on the Internet (like 197.123.22.240)

## **J**

### **Java**

A programming language developed by SUN. Mostly for programming web servers and web applets.

### **JavaScript**

The most popular scripting language on the internet, developed by Netscape. A scripting language that provides a simplified method of applying dynamic effects to web pages

### **JPEG (Joint Photographic Expert Group)**

The organization that promotes the JPG and JPEG graphic formats for storing compressed images.

### **JPEG format**

Joint Photographic Experts Group Format. An image format used on the web, best for photographs or graphics with lots of colours

## **K**

### **Keyword**

Search terms people type into a search engine to find what they are looking for. Essential for search engine optimization. In web terms: A word used by a search engine to search for relevant web information. In database terms: A word (or index) used to identify a database record.

**Keyword Density**

The number of times a keyword or keyword phrase appears on a web page

**L****Layout**

A drawing that shows the general appearance of a web page design, indicating position of text, images, form regions etc

**Link**

A piece of text, or an image, with a URL embedded in it, which takes the user to another location of the same or different web site by clicking on it

**Link Exchange**

A system whereby websites swap links with each other, usually displayed on a dedicated Links Page. Also known as Reciprocal Links

**Link farm**

In SEO, a link farm is a page full of links that have very little to do with each other and exist just as links without any real context. People who practice black hat SEO use link farms to increase the number of links to a page in hopes of fooling Google™ into thinking the page is more link-worthy than it actually is.

**Linux**

Open source computer operating system based on Unix. Mostly used on servers and web servers.

**Loading**

The speed at which a web page loads from the server to the user's browser

**M****Meta Search**

The method of searching for meta data in documents.

**Meta Tags**

HTML codes that reside within the Head section of each web page's HTML. Metatags are used by search engines to locate information about the website. They generally include the site title, description, keywords, how often to index, language to display etc.

**Modem**

Hardware equipment to connect a computer to a telephone network Typically used to connect to the Internet via a telephone line.

**Monitoring**

Checking a web site for broken links, uptime, display elements

**MPEG (Moving Picture Expert Group)**

An ISO standard codec for computer audio and video.

**Multimedia**

In web terms: A presentation combining text with pictures, video, or sound.

**MySQL**

Free open source database software often used on the web.

**N****Navigation Bar**

A set of links that displays the names of different pages on a website eg Home, Contact, Products etc. It can be displayed across the top, down one side, or across the bottom of a web page



## **Netscape**

The browser from the company Netscape. It used to be the most popular browser for many years but is now overtaken by Internet Explorer.

## **O**

### **OS (Operating System)**

The software that manages the basic operating of a computer.

## **P**

### **PageRank**

PageRank is a measurement that the Google-obsessed use to test their rankings in Google. SEO and search engine marketing (SEM) professionals also use the term to describe your ranking in the SERPs and the ranking algorithm points given to your site by Google. No matter how you define it, PageRank is an important part of your SEO success

### **PDF (Portable Document Format)**

A document file format developed by Adobe. Most often used for text documents.

### **Pixels**

Picture Element, is a single dot of light on a computer screen, and can be displayed in different colours

### **Platform**

In web terms: The computer's operating system like Windows, Linux, or OS X.

### **Plug-In**

An application built into another application. In web terms: A program built in (or added) to a web browser to handle a special type of data like e-mail, sound, or movie files. (See also ActiveX)

### **PNG (Portable Network Graphics)**

A format for encoding a picture pixel by pixel and sending it over the web. A W3C recommendation for replacing GIF.

## **R**

### **Ranking**

A ranking is where your page is listed in the SERPs for your targeted keywords. The goal of SEO is high rankings for the keywords that your Web pages target.

### **Ranking algorithm**

A ranking algorithm is the set of rules that a search engine uses to evaluate and rank the listings in its index. The ranking algorithm is what determines which results are relevant to a specific query.

### **Resolution**

Of monitors, is the number of pixels across and down that will display the size of your web page on a browser's screen. The most common resolution at present is 800 x 600

### **RSS feeds**

Are headlines and news stories, usually from major newspapers, that can be fed onto any web site on any chosen topic

### **Screenshot**

An image taken of a web page



## **Scripts**

Sets of instructions to carry out actions or tasks on a web page, written in computer languages such as Perl, CGI, ASP, PHP or Java. A collection of statements written in a Scripting Language.

## **Scripting Language**

In web terms: A simple programming language that can be executed by a web browser or a web server. See JavaScript and VBScript.

## **Search Engine**

Computer program used to search and catalog (index) the millions of pages of available information on the web. Common search engines are Google and AltaVista.

## **Search engine marketing (SEM)**

SEM is used interchangeably with SEO, but SEM often refers more to marketing your website to the search engines through paid placement and ads, as well as using SEO techniques.

## **Search engine optimization (SEO)**

SEO is creating Web pages that are picked up by the search engines through optimizing your content for search engine attractiveness and visibility. SEO is mostly used to increase the rankings of your organic listings.

## **Search engine results page (SERP)**

SERPs are the listings, or results, displayed for a particular search. SERP is sometimes defined as search engine results *placement*.

## **Server**

The computer storage provided by a web host or web hosting company

## **Shareware**

Software that you can try free of charge, and pay a fee to continue to use legally.

## **Shockwave**

A format (technology) developed by Macromedia for embedding multimedia content in web pages.

## **Spamming**

Spamming is a method of SEO that attempts to trick a spider and scam loopholes in the ranking algorithm to influence rankings for targeted keywords. Spamming can take many forms, but the most simple definition for spam is any technique a Web site uses to misrepresent itself and influence ranking. The two methods of SEO are based on whether you want to spam or not.

- **Black hat SEO:** Spamming the search engines. Black hat SEO is lying, cheating, and stealing your way to the top of the SERPs.
- **White hat SEO:** Optimizing your site so it serves the user, as well as attracts spiders. In white hat SEO, anything that leads to a good user experience is considered also good for SEO.

## **Spider**

A spider crawls through the Web looking for listings to add to a search engine index. It is sometimes referred to as a Webcrawler, robot, or bot. When optimizing your page for organic listings, you are catering to the spider.

## **SQL (Structured Query Language)**

An ANSI standard computer language for accessing and manipulating databases.

## **SQL Server**

A database system from Microsoft. Mostly used on high traffic web sites running on the Windows platform.



### **Streaming**

A method of sending audio and video files over the Internet in such a way that the user can view the file while it is being transferred.

### **Streaming Format**

The format used for files being streamed over the Internet. (See Windows Media, Real Video and QuickTime).

### **Stickiness**

The length of time a user stays on the same website, whether on the one page, or on different pages

### **Subdomain**

A separate website, with its own URL, that belongs to a main domain. eg [www.subdomain.maindomain.com](http://www.subdomain.maindomain.com). Subdomains can have unlimited pages

## **T**

### **Tag**

In web terms: Notifications or commands written into a web document

### **Text Links**

A word or set of words that has a URL embedded behind it. When clicked on, it will take the user to a different part of the same page, a different page of the same web site, or a different web site

### **Thumbnail**

Is a small picture, image or photograph on a web page, used to make loading of a page faster than a large image would take. It can sometimes be linked to a larger picture on another web page for users if desired

### **Traffic**

The number of [hits](#) a web site receives

## **U**

### **Unix**

Computer operating system, developed by Bell Laboratories. Mostly used for servers and web servers.

### **Upload**

To transfer a file from a local computer to a remote computer. In web terms: to transfer a file from a web client to a web server

### **URL (Uniform Resource Locator)**

A web address. The standard way to address web documents (pages) on the Internet (like: <http://www.smartschools.com/>)

## **W**

### **W3C (World Wide Web Consortium)**

The organization responsible for managing standards for the WWW.

### **Web**

Short for World Wide Web

### **Web Address**

The same as an URL or URI.

### **Web Applet**

A program that can be downloaded over the web and run on the user's computer. Most often written in Java.



### **Web Browser**

A software program used to display web pages.

### **Web Client**

A software program used to access web pages. Sometimes the same as a Web Browser, but often used as a broader term.

### **Web Page**

A published HTML document that forms part of a web site

### **Web Safe Colours**

Not all browsers can display all colours, but most have a selection of standardised 256 colours available. Using web safe colours ensures your site will be displayed in the colour you intend. If a browser cannot display that colour, it will display a different colour

### **Web Server**

A server is a computer that delivers services or information to other computers. In web terms: A server that delivers web content to web browsers.

### **Web Spider**

A computer program that searches the Internet for web pages. Common web spiders are the one used by search engines like Google and AltaVista to index the web. Web spiders are also called web robots or wanderers.

### **Website**

Or website, is the address, location (on a server) and collection of documents and resources for any set of webpages linked by its main domain name.

### **Website Builder**

Software or program used to create a web page or web site

### **WWW (World Wide Web)**

A global network of computers using the internet to exchange web documents. (See also Internet)

### **WYSIWYG**

Short for 'What You See Is What You Get', and refers to a website building program or software where you can see results of actions and changes immediately. An HTML editor works in the background to convert the actions into HTML. In Web terms: To display a web page being edited exactly the same way it will be displayed on the web.

## **X**

### **XHTML (Extensible Hypertext Markup Language)**

HTML reformulated as XML. XHTML is the latest version of HTML. Developed by W3C.

### **XML (Extensible Markup Language)**

A simplified version of SGML especially designed for web documents, developed by the W3C.

## **Z**

### **ZIP**

A compressing format for computer files. Commonly used for compressing files before downloading over the Internet. ZIP files can be compressed (ZIPPED) and decompressed (UNZIPPED) using a computer program like WINZIP

## Appendix 3: Webmaster's Tools

To create and maintain a website, there are some tools that are absolutely necessary for any webmaster.

A lot of companies offer 'one-stop-shops' for programming tools, although investing in these commercial software is not recommended, especially if you're just starting out.

Instead, take advantage of the Internet first so you will have an idea as to what tools suit you. What's more, it is full of top quality free software (either freeware or open-source).

**Download Manager-** to speed up connections and reconnect interrupted transfers; essential for downloading files

GoZilla- <http://www.gozilla.com>  
StarDownloader- <http://www.stardownloader.com>  
Fresh Download- <http://www.freshdevices.com>  
LeechGet- <http://www.leechget.de/>  
DownloadAccelerator- <http://speedbit.com>

### Anti-virus

AntiVir Personal Edition- <http://www.free-av.com>

### Freeware

NONAGS- <http://www.nonags.com>  
FreewareHome- <http://www.freewarehome.com>  
Jumbo.com- <http://www.jumbo.com>  
Download.com- <http://www.download.com>  
DaveCentral- <http://www.davecentral.com>

### Webmasters' websites

WebMasterEngine.Com- <http://www.webmasterengine.com/>  
Free Webmaster Tools -<http://www.free-webmaster-tools.com/>  
WebmasterGate- <http://www.webmastergate.com>  
WebmasterEdge- <http://www.webmasteredge.com>  
StickySauce.com- <http://stickysauce.com>

### Google tools

Site status wizard- <https://www.google.com/webmasters/sitemaps/sitestatus>  
Analyze your visitors-  
[http://www.google.com/analytics/#utm\\_campaign=en&utm\\_source=en-webmaster\\_central&utm\\_medium=et](http://www.google.com/analytics/#utm_campaign=en&utm_source=en-webmaster_central&utm_medium=et)  
Gadgets for your web page-  
[http://www.google.com/webmasters/gadgets/foryourpage/#utm\\_campaign=gg4yp-us-webc&utm\\_source=EM&utm\\_medium=link](http://www.google.com/webmasters/gadgets/foryourpage/#utm_campaign=gg4yp-us-webc&utm_source=EM&utm_medium=link)



Earn money through Google AdSense-

<https://www.google.com/adsense/?sourceid=aso&subid=ww-en-wbmstr-WCmain&medium=et>

### ***Other tools***

SpiderSEO/Metatag generator- <http://seo.sourceforge.net/>

Sitemap generator- <http://www.scriptol.com/seo/simple-map.html>

Building a content management system- <http://www.scriptol.com/cms/>

Common RSS reader- <http://www.scriptol.com/rss/>

### **Links**

Flash- <http://www.webmasterengine.com/pseek/Flash/>

Animation- <http://www.webmasterengine.com/pseek/Flash/Animations/>

Games- <http://www.webmasterengine.com/pseek/Flash/Games/>

JavaScript- <http://www.webmasterengine.com/pseek/JavaScript/>

Ad Management- [http://www.webmasterengine.com/pseek/JavaScript/Ad\\_Management/](http://www.webmasterengine.com/pseek/JavaScript/Ad_Management/)

Audio and sound- [http://www.webmasterengine.com/pseek/JavaScript/Audio\\_038\\_Sound/](http://www.webmasterengine.com/pseek/JavaScript/Audio_038_Sound/)

Promotion- <http://www.webmasterengine.com/pseek/Promotion/>

Java- <http://www.webmasterengine.com/pseek/Java/>

Development tools- [http://www.webmasterengine.com/pseek/Java/Development\\_Tools/](http://www.webmasterengine.com/pseek/Java/Development_Tools/)