What is **http**??

When you tell your browser to go to a website, you may enter http://www.udel.edu**,**

 http tells your computer that you wish to get the document via the **h**yper**t**ext **t**ransport **p**rotocol, It works through your network according to the established communication standards for http. There are other protocols such as **ftp** file transfer protocol for exampe- ftp://ftp.info.apple.com. It is used to download (transfer) files such as software updates, or to upload files such as all those pictures and html documents you will use to make your web site. **SMTP** (Simple Mail Transfer Protocol) and **POP** (Post Office Protocol) are protocols used in e-mail routing.

Your computer then communicates with another computer called a **Domain Name Server (DNS)** to find out how to get to udel.edu. The Domain Name Server is a computer that tells your computer where udel.edu is in terms of an address made up of a unique series of numbers (the numbers are called an **"IP address,"** where **IP** stands for **Internet protocol**). This unique series of numbers (or IP address) is registered with a central governing body such as Network Solutions. Think of the DNS as the phone book, where you look up a name to find a phone number.

The DNS tells the computer you're using to surf the web that udel.edu's IP address is 192.168.2.1. The dots (periods) divide up this IP address much like a street address is organized by country, state, street, number. Your computer then "hops" around the Internet from the router for 192.X.X.X to the router for 192.168.X.X to the router for 192.168.2.X, until finally it gets to the server that the domain name's specific IP address is registered to (see below for the definition of a router). The domain name udel.edu is hosted on a computer with the Internet address of 192.168.2.1, and that computer then serves up the page you specified.

Note that websites don't always have to begin with **www**. Take http://www.yahoo.com and http://mail.yahoo.com, for example. The computer (server) that hosts the domain name (e.g. yahoo.com) will direct you to the appropriate page, depending on what you enter before the domain name (e.g. www or mail).

Sometimes a specific page will follow the web site's name. For example, the "How You Can Help" page at http://www.udel.edu/how_you_help.htm. If no page is specified (in the case of just http://www.udel.edu), then the browser will open a document named **index.html**.

The server can actually be set to look for a file of any given name as the default web page, but **index.html** (or index.htm) is by far the most common, with **default.html** a distant second. If you name the main page in each folder of the web site that you create **index.html** (i.e. the default name), then the person looking for your web site will just have to type the folder name (e.g. udel.edu/library) without having to bother with typing in the name of the page itself e.g. udel.edu/library/page1.html. In other words, each section of your web site should be kept in a separate folder that contains a file called index.html, which will be the "home page" for that section.

Finally, your browser reads the document (in this case, an HTML document, but there are other types) and translates or displays it according to the type of file specified by the file extension (e.g. **.html**).

Note that even though HTML is supposed to be standardized, different web browsers and different versions (e.g. Microsoft Internet Explorer versions 2, 3, 4, 5, etc. and Netscape Navigator versions 2, 3, 4, 5, 6, etc.) will display pages with subtle differences. When designing a web site, always preview it in each of the browsers that you think your audience may be using before putting a final version on the internet. This adds some work, but allows you to reach a greater audience. If visitor to your site uses Netscape version 3.0 and your web site doesn't work with that browser version, then you've lost a potential customer, sponsor, etc. You will probably

have to make some changes so that Netscape looks the same as Internet Explorer because the browsers each have their own way of doing things. As of the writing of this document, I'd recommend that you check your pages with at least Internet Explorer, Mozilla Firefox and Netscape versions 4 and above. Older versions (e.g. Netscape 2.0) are rarely used by anyone anymore. Your target audience may vary, so design your pages with their computer hardware and software in mind. Other browsers becoming popular are Google Chrome and Apple Safari.

The World Wide Web is truly an accurate term for the interconnected information exchange system that runs on the Internet. Picture the strands of this web as the cables that connect everything together and imagine that each junction in this web passes through a network device such as a hub, router or server. At the end of each strand is a client.

Definitions:

Node: Each intersection on the network is called a node. Any of the following machines or devices can be connected at a node.

Client: A client is the end user connected to the network. When you dial up and connect to America Online, you establish yourself, or your computer, as a client. Clients can both send and receive files, although they are optimized for receiving files.

Server: The machine that serves the files (e.g. web pages) that are exchanged across the network. Servers can both send and receive files, although they are optimized for sending (serving) files. Any computer can be a server, but more expensive, more powerful machines are generally used to handle anything more than a few clients connected at any given time.

Router: Can be either a computer running specialized software or a specialized hardware device that routes network information to the appropriate destination on the network.

Hub or Switch: Both of these devices allow a single line on a network to be split into many lines to support many clients. These can be connected almost limitlessly to each other in series (i.e. "cascaded") or in a star configuration to support more machines on the network. The difference between the two is that the switch moderates and controls the traffic that flows through it to reduce traffic, while a hub passes all information on to every machine connected to it.

TCP/IP: The Transport Control Protocol/Internet Protocol. All other protocols, such as http (for web pages) and ftp (for files), rely on TCP/IP to control the low-level details for the reliable transport of information. Every strand of the above web passes various types of information along with TCP/IP.

Original sources include:
    howstuffworks.com
    htmlgoodies.com/
    www.udel.edu