Introduction to the Web

The World Web Wide was invented in 1989 as a way for academics to share information, the idea was very simple - that a server would allow a viewer (a browser) to read text documents, these documents could be kept on computers in different universities. The documents had the ability to link to each other through something called Hyperlinks.

In 1990 there were only around 20 web sites in the world - but by June 2011 that number had reached 361 million. The web as we know it now is the basis for a huge amount of what we do - and while the technologies have evolved (back in 1990 there was no way to put an image on a page for example) they are still the very similar.

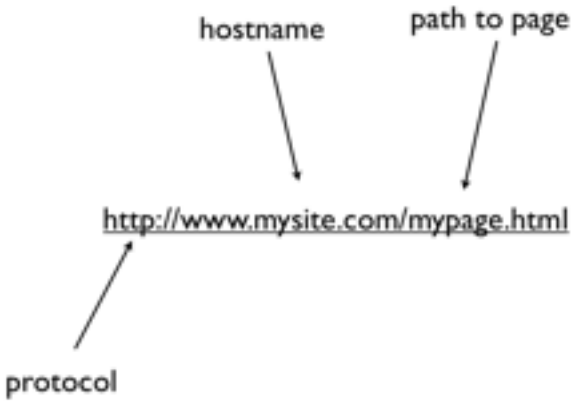
Lets take a look at how the web works

Basically there is a **Browser** (nowdays we have Firefox, Internet Explorer, Safari or Chrome for example) - when it wants to get a page we give it a URL.

A URL means a **Uniform Resource Locator** - in simple terms basically that means that we tell it where we what to go to get a page. We use URL's all the time - with things like

http://www.facebook.com or http://mysite.com/mypage.html

We can actually see fairly easily how a URL is made up.



Lets break down each of these:

Protocol

A protocol is what is computing we call an agreement on how two computers can talk to each other. Since the computer we are going to talk to needs to understand how we are going to talk to it we tell it the protocol. HTTP stands to Hyper Text Transfer Protocol - which is a very fancy way of saying its a protocol for transferring web pages. We will dig into HTTP a little more later on.

Hostname

Remember in the history we learnt that in the mid-80's a thing called DNS (Domain Name Services) came to be - well hostnames are the names we give computers through a central service of the internet called DNS.

So the hostname is a way of identify a computer on the internet.

Path

The last bit is the path - in fact this bit is passed to the computer using the HTTP protocol once we have found the computer using its hostname - the web server on that computer then decides based on the path what page you want to see.

Request and Response

Basically when we put the URL in our browser is makes a request to the web server - what is gets back is a response, that response is usually in the form of HTML.

HTML stands for Hyper Text Markup Language. Though interestingly it is not a programming language. It is a language for describing a web page.

HTML gives us a framework to build web pages using a set of defined tags - these tags have specific meanings and we call the process the browser uses to turn the tags into a web page as rendering.

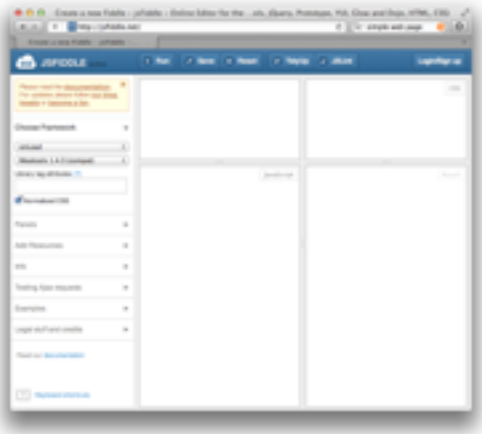
Rendering

So how to we make HTML pages?

Well the best way is to simply start. HTML is fairly simple, so lets get going with a very simple page.

We are going to use a website called JSFiddle.net

You will type your HTML in the top left box and then press



Exercises

1/ Lets say Hello World

Using the html and body tags get the words "Hello World" to appear on your web page.

2/ Lets make that a header 1

3/ Lets add a header 2 under it saying "Learning at Labs on 15th"

4/ Lets add a paragraph under that which says "Just getting started building web pages"

5/ Change the getting started to be strong (which makes it bold)

6/ Next up lets put a picture above the header 1, the URL for the image is

http://www.w3.org/html/logo/downloads/HTML5_Logo_512.png

7/ Try and add a list under the paragraph which has the following entries

*** History of computing**
*** Introduction to Terminal**
*** Introduction to Web**

8/ Add a link to http://www.cnn.com as another entry in your list

9/ Turn the list of items into a table with the first column being the title of the part and the second column being a tick - you can use

http://upload.wikimedia.org/wikipedia/commons/thumb/0/03/Green_check.svg/600px-Green_check.svg.png

Also make the img 50px by 50px