

Basic HTML

Introduction to basic HTML web pages

- Web Terminology
- What is HTML?
- Writing your own web pages

Web Terminology

Internet vs. World Wide Web

- People use the two terms interchangeably but they actually different things.
- The Internet is a huge international network, made up of computers and the physical connections (wires, routers, etc.) that allow them to communicate.
- The World Wide Web (WWW or “the Web”) is a collection of software and documents that is hosted on the Internet and enables the linking of documents/resources.
- Provides a way of accessing information on the Internet.
- For more information:

https://en.wikipedia.org/wiki/World_Wide_Web

Web Terminology

Web Servers and Clients

- A Web server is a computer that sends files to browsers on other computers connected to the Internet.
- The Web browser, such as Firefox, Chrome or Internet Explorer, is the client that sends a request for a Web page.
- The Web server answers the request and delivers the requested page to the browser so you can view it.

Web Terminology

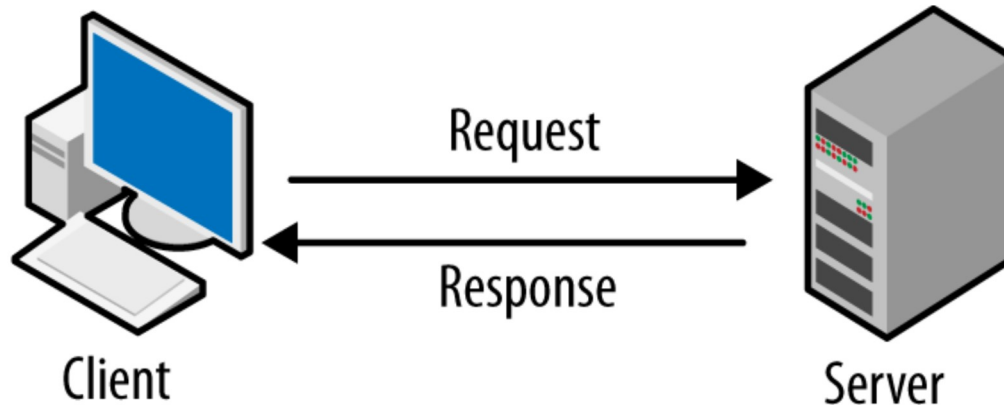
HTTP

- Stands for HyperText Transfer Protocol
- Allows computers on the WWW to communicate with one another.
- Encapsulates the “request” sent to the Web server and the “response” received from the Web server.

Web Terminology

Web Client/Server Diagram

- The web client (Your browser) sends an HTTP request to a web server asking for a web page or other data.
- The web server sends back an HTTP response containing the requested data, or an error message.



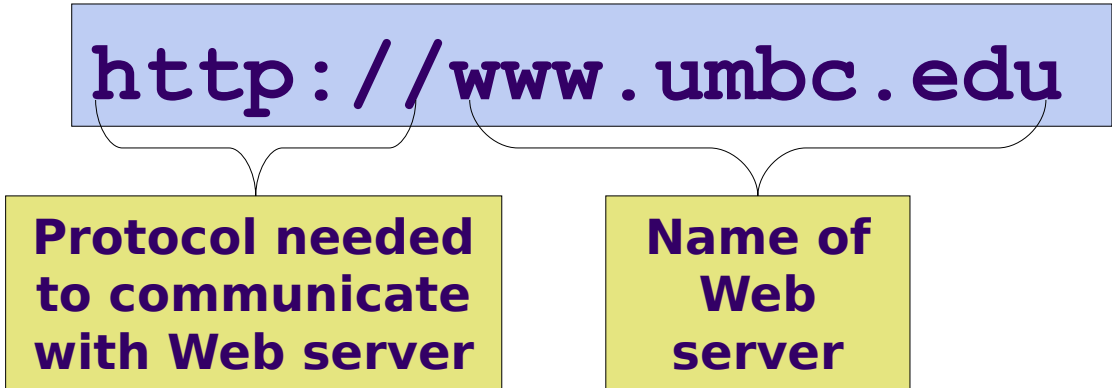
- For our setup the web server is the camera board on the robot.

Web Terminology

URLs

- Stands for Uniform Resource Locator
- AKA the Web page's address
- You typically type it into your Web browser's location bar when you want to view a Web page. (The browser automatically adds the "http://" if needed)

http://www.umbc.edu

A diagram showing the breakdown of the URL 'http://www.umbc.edu'. The URL is displayed in a light blue box. Two curly braces are drawn below the box: one under 'http://' and another under 'www.umbc.edu'. These braces point to two separate yellow boxes below. The first yellow box contains the text 'Protocol needed to communicate with Web server' and the second yellow box contains the text 'Name of Web server'.

**Protocol needed
to communicate
with Web server**

**Name of
Web
server**

What Is HTML?

HTML

- Stands for HyperText Markup Language
- Used to create a Web page
- A markup language is not “code”. It describes the document to be displayed, how it is formatted, what stuff is included, etc..
- Made up of “tags” that specify the structure of the document (this section is a heading, this section is a paragraph, etc..)

What Is HTML?

Basic HTML Document

- An HTML doc is nothing more than a simple ASCII text file with the file extension being .htm or .html.
- It can be created using any text editor you like, Notepad, Notepad++, Geany, etc..

What Is HTML?

Basic HTML Document

- The doc is made up of different sections using “tags”.
- HTML Tags
 - Tags are within angle brackets. It has text used to describe an element so the browser knows display its contents. e.g. the `<b>` tag indicates bold text .
- HTML tag types
 - Paired Tags: Has a start and an end. The end adds a “/” before tag type. The tag applies to the text between the two. An example is the tag for bold: `<b>This text is bold</b>`
 - Unpaired Tags: Is a stand alone item. An example is a line break tag `<br>`

What Is HTML?

Common HTML Tags

- Division: `<div></div>`
- Paragraph: `<p></p>`
- Bold: `<b></b>`
- Line Break: `<br>`
- Hyperlink: `<a></a>`
- Button: `<button></button>`
- Table tags: `<table><tr><td></td></tr></table>`

What Is HTML?

Common HTML Attributes

- Attributes adjust behavior/display of HTML elements
 - attribute="Value"
- href: Link pointed to by an anchor tag.
- align: center, left, right
- valign: top, middle, bottom
- id: name of element

What Is HTML?

Basic HTML Document

- The simplest HTML doc looks like the following:

```
<!DOCTYPE html>
<html>
  <head>
    <title>Test Document</title>
  </head>
  <body>
    This is just a basic HTML test doc!
  </body>
</html>
```

Writing your own web pages

Create the HTML Document

- Using a text editor, create an empty document and then copy the example text from the previous page into it.
- Save the file with the name Test.html
- Open it using the web browser of your choice.
- That's it!

Writing your own web pages

For additional reference

- W³ schools: <https://www.w3schools.com/>
- Mozilla HTML tutorials: <https://developer.mozilla.org/en-US/docs/Web/HTML>