**Important Concepts**

**How the Web Works**

The web is a bunch of computers that communicate with each other. When a person goes to a web page like www.google.com, their computer sends a *HTTP Request* to a *server*. The server finds the appropriate HTML document and sends it back to the user's computer where a *web browser* interprets the page and displays it on the user's screen. [This video](https://www.udacity.com/course/viewer#!/c-ud721/l-3508959201/e-48329854/m-48480496) does a good job of explaining.

The web is comprised of HTML, URL, HTTP, PDF,TEXT, Videos, Music, Images, Web Applications – HTML is the main type of document on the web.

**HTML**

HTML stands for *Hypertext Markup Language.* HTML documents form the majority of the content on the web. HTML documents contain *text content* which describes "what you see" and *markup* which describes "how it looks". [This video](https://www.udacity.com/course/viewer#!/c-ud721/l-3508959201/m-48724340) gives a good overview.

**Tags and Elements**

HTML documents are made of HTML **elements**. When writing HTML, we tell browsers the type of each element by using HTML **tags**. [This video](https://www.udacity.com/course/viewer#!/c-ud721/l-3508959201/m-48723444) explains the distinction well.

**Why Computers are Stupid**

Computers are stupid because they interpret instructions literally. This makes them very unforgiving since a small mistake by a programmer can cause huge problems in a program.

**Inline vs Block Elements**

HTML elements are either **inline** or **block**. Block elements form an "invisible box" around the content inside of them.

2 big picture topics we discussed in this lesson.

1. **Overview of the Internet**: How the internet works and important internet terms like **servers**, **browsers**, **the internet**, and **HTTP**.
   1. **You + Computer + Browser + HTTP = You use your computer to run internet web browsers such as Chrome or IE to make request using HTTP which uses protocol to communicate with server.** 
      1. **HTML – the main protocol of the web**
      2. **Servers – computers that hosts the files that make up the web**
      3. **Internet- a bunch of computers that communicate with each other**
2. **Introduction to HTML**: HTML tags (like <b>, <p>, and <em>) though these tags aren't visible to users of a web page, they still carry meaning that is meaningful to web browsers.

The five most important things to take from this lesson are the following:

**1 - What a Web Page is**

A web page is a text document written in a language called HTML. Web browsers read these documents, and then interpret and display them.

**2 - How Coding Works**

Coding happens when programmers write text in a language that a computer can understand. The computer can then follow the instructions the programmer wrote. For example, the computer might do this by making text like this:

I'm <b>learning</b> to code!

look like this:

I'm **learning** to code!

**3 - Computers are Stupid**

Programmers need to write exactly the way a computer understands (also known as writing with correct "syntax").

For example, if you forget to close a <b> tag, the computer won't be able to figure out what you had intended to make bold. This "stupidity" can be very frustrating, but it also gives programmers incredible power: if you know how to talk to a computer than you can tell it to do anything you want.

**4 - Programmers Can't Remember Everything**

There are too many details to keep everything in your head. And that's okay. If you forget how to make text italic in HTML, you can always just look it up.

**5 - Basic HTML Vocabulary**

You will be using HTML in the next few lessons, so it will be helpful if you're comfortable with the jargon.

* **Tag**: An HTML tag is always contained within angled brackets. Most tags have an opening tag (<p> for example) and a closing tag, (</p>). Some tags (called "void" tags) do not require a closing tag (like the <br> tag).
* **Element**: An HTML element refers to everything within a set of opening and closing tags.
* **Attribute**: This is a property of an HTML element. For example, to set the href attribute of an anchor tag to the Udacity URL, you would write <a href="www.udacity.com">

**HTML Markup**

**BOLD** B tag: <b> contents <b/> bold tag

**ITALICS** EM tag: <em> contents <em/> emphasis tag

**ATTRIBUTES**

**ATTRIBUTE** tag ATTR: <tag attr = “value”> contents<tag/> attribute tag

**IMAGE**  IMG tag: <img src = “url” alt = “text”>

**INLINE**  <br> - break (void)

**BLOCK** <p> content </p> (not void)