HTML

Hypertext Markup Language early 1990's
it used to have a Document Type Declaration (DTD)
HTML4 had 3 possible doctypes: Strict, Transitional, and Frameset

```
<DOCTYPE HTML PUBLIC
"-//W3C//DTD HTML 4.01//EN"
"http://www.ow Borg/TR/html4 /strict, dtd">
```

the other 2 are just as long

html user agents (parsers, web browsers, search engines) have extremely lenient error handling. Many technically illegal constructs like mis-nested tags or bad attribute names, are allowed or safely ignored. Which is why you should always validate your document.

It is also why Xhtml (Extensible html that combines XML with html) was created in 2000 by W3C. It had much more strict rules that the parsers are required to fail catastrophically if they encounter even the simplest syntax errors. You can imagine how frustrating that would be. Most browsers didn't really process Xhtml and other issues led to the creation of html 5

HTML 5 combined the best of both (or tried to).
You no longer reference a DTD and it simplified the declaration to just

```
<! DOCTYPE html>
```

doctype doesn't need to be caps but is the convention

all tags (element names) should be lower case, use the correct tags and always validate your pages.

html5 removed several tags that were duplicates
or similar tags and created several new ones to alleviate
the over use of div tags with common class attributes - header, footer, aside, etc.

There are 6 kinds of html elements:

- void elements – they do not require closing tags
  - area (map), base (URL), br (linebreak), col, embed, hr, img, input
  - link (resources css), meta (data), param (plugins), source (for img), track, wbr
- template element
- raw text elements - script (JS), style -> will not use
- escapable raw text elements - textarea, title
- Foreign elements - Math ML or SVG, name spaces
- Normal elements - are all other html elements and will have a closing tag

validator.w3.org
wave.webaim.org

Html is broken into two parts:

the head – it is the part of the Tab section of the browser, it will contain:

any meta data (browser info) used in search engines

<meta charset="utf-8">

a title

link - tags to CSS - the order does matter as some CSS over writes other CSS rules must be defined here before the page begins to load

Sometimes script depending on what they do (*see the info below for body)

Favicon data – the little images seen in the tab

the body - contains all of the content (text, images, etc.) shown on the page,

JavaScript scripts – that deal with user interaction or Dom manipulation should always be at the bottom of the body! unless it is being injected into the html, pages stop rendering when a script tag is encountered causing slow page load.

href's can use

relative links/Paths -> only point to a file on the computer

absolute paths -> point to other sites. will always contain http://

or

-> this points back to the top of page (used in page that are excessively long so the user doesn't have to scroll back to the top of the page.

The DOM - document Object model - it is the outline, the relationships between the elements we'll talk more about this later.

Just because an image is displayed on Google doesn't mean it doesn't have a copyright!
Use Google's advanced image search or

https://stocksnap.io/

https://unsplash.com/

For free for use images, you still need to check them to see if you need to cite the owner.

Always include an alt text for images

```
<img class="fit-picture"
    src="/media/cc0-images/grapefruit-slice-332-332.jpg"
    alt="Grapefruit slice atop a pile of other slices">
```

You shouldn't hotlink aka embed an image using its absolute URL, it makes the browser do more work. You should almost always keep the images on the same server as the HTML

Talk about figure and fig caption vs img

Video and audio

- You can provide multiple sources: the browser will use the first one it understands

```
<video controls>
    <source mp4
```

<source webm

both have a fallback content <p> tag that will be displayed if the browser can't play them. Many times, containing a direct link to the video or audio. The <p> is not the same as alt text, since the fallback content is not read by a screen reader. You should include captions for audio & video.

I did read that if the screen readers are set to verbose, if you include a <title> it can read that

Support formats
Webm - mainly Firefox & chrome
MP4 - mainly Safari and Inet Explorer, but Firefox & chrome will run
Ogg - older and basically replaced by WebM

MP3
ogg

Containers – are used extensively in HTML, these include div, header, footer, section, main, aside, etc. Many times, a single container will contain multiple other containers. These containers are used by CSS to arrange the other elements (text, images, etc.) in specific location on the page.

You can inspect any webpage hosted on the net. You can even make adjustments to other pages to see how those changes affect the page. These changes are only seen on your machine and do not affect the sites actual code.