Notes

Making a website, Unit 3

The Website House

The foundation – HTML. This is the content, withought content your site can be as flashy as it wants, no one will want to see it. Everything else is built around this.

Electrical and plumbing – JS. This is built into the walls, once the walls go up on no one will want to see this working behind the scenes but withought them your house will not function. This is the second thing to be done and should only be visible while interacting with the site.

Paint and furniture – CSS. This is the part that people see and judge you for, while the JS is working in the back the CSS covers it up and makes your site pleasing to look at. Not required for a functional house but makes it better.

Elements

Any HTML is created using elements. Elements come in three parts, opening tag, content, closing tag. Ex. <p> My cat is very DANK </p>.

Something to note on Elements

HTML is not case sensitive. Element aren't magic and do not create magic letters. Elements just tell your computer how the content will be displayed. You can overwrite every part of it. You can create any element you want, it just won't make your text different.

Nesting Elements

Nesting is an element is the same as putting 1 element inside of another. For example, the most recently opened tag must be closed first.

Ex. <p> I <lol> Have </lol> The High Ground </p>

Nesting Elements P2

When you try to add nested elements over a longer area make sure that they are indented in. Indents are consistent in any coding language.

Empty Elements

Some elements do not need opening and closing tags and instead are just a single opening tag. For example, <img> is just a single tag that you can add information to.

Ex. <img src=" https://trolololo "">

Attributes

Attributes are additions to the opening tag that contain extra information that is not visible in the content. You can have as many attributes as you want in a single tag. Most attributes require an equal sign and a value.

Ex. <p class = "editor note" > My cat is very grumpy </p>

A tag

The <a> tag is an empty element that stands for anchor. It allows you to link to a hyperlink and it has several attributes. <a href = "URL "> will let you link a website to your page. <a title = "title"> Will show a subtitle when you hover over the link. <a target = "_blank"> will open the link in a new tab, if you want to display the linked content in the current tab you can leave this out.

Boolean Attributes

These are attributes that only have 1 value, for example the disabled attributed can only have the value "disabled". When this is the case you can write it in shorthand.

Ex. Long = <disabled = "disabled> Short = <disabled>

Important parts of an html

<!DOCTYPE html> . This is an old relic left over since the early days of html. Just type this at the beginning of your html you don't need to know more than that.

The <html> tag. This element is the whole page, it covers everything and is the base element.

The <head> tag. This element is a container for all the information that is not visible content. Keywords, page descriptions, CSS, char sets, etc.…

The <meta charset="UFT-8"> tag. This tag specifies the character set for your document. UTF-8 is a comprehensive set that includes most characters from the majority of the human written language.

The <body> tag. This tag contains all of the visible content that you want to show the user, text, images, videos, games, etc.…

Head breakdown

There are only 3 important parts that you need in the <head>. What languages you are using (utf-8), The title of the page, the link to the CSS doc

More important Metadata

Meta name and content. There are a ton of different things you can do with name and content. There are 2 important ones you should know: author and description.

Search Engines + Signing your work

```
  <meta name="author" content="Cleveland H. Williams III">

  <!-This is how you do comments in HTML, also author is important for grades.-->

  <meta name="description" content="This is a test site">
```

Name = description, Content = what your site is about. This is important because it is the text that is displayed underneath your site on search engines. Name = author, Content = your name. This will allow people to look up your name when people try to cite your work.

Link Tags

The little pictures at the top by the title are called favicons and they can be changed with a link tag. This is the same tag that is used to link the CSS to the page.

Makeup of a link tag

Rel is the relationship that the file has to the page stylesheet, icon, ect… href is the hyperlink reference to the image. This can be a URL but it can also be a file name if it is saved on the local server. Type is usually not required but it should be what you are posting.

Ex. <link rel=”relation” href=”filename” type=”image”>

Favicon link

In order to link a favicon you will need to find a small image or gif. These pics will be visible on bookmarks as well and can make your website much more recognizable.

Ex. <link rel=”shortcut icon” href=”favicon.ico” type=”image/x-icon”>

One more thing

Even though UTF-8 CAN run every language you could encounter you should always tell the site what language you plan on using. There are a lot of these and if you are going to change up the language you should change up the lang as well.

Ex. <htm lang=”en”> <p> English example: <span lang=”en””> Hello There </span>.</p>

Why we use tags

<h1> changes the words to have a specific style. This is the same as saying… <span style=”font-size: 32px; margin: 21px 0; display: block;”>

Text layout

As with most forms of reading there are headers and paragraphs. By using proper layouts, you can make the reading experience much more enjoyable.

Headers

When creating headers, you will use <h1> - <h6>. <h1> is the most important header, larger than the rest. <h6> is the least important header, almost as big as regular text.

Text Sections

Now that you have a header you need content text with it to keep the reader interested. <p> - paragraph. Used for basic text. <aside> - Used for side text or nav or ads. Usually contains <p>. <article> - used for the main block of the paper usually contains <p> tags.

Lists

There are two types of lists. <ol> - ordered lists. These are number lists. <ul> Unordered lists. These do not order your lists.

Emphasis-Italics

In the past the <i> tag was used for italicization but that has since been deprecated. Now we use <em> for emphasis. This will not only italicize the word but also make and text readers use emphasis to show importance.

Strong bold

We used to use <b> for bold but that’s is deprecated. Now we use <strong> for text readers.

Underline

In the past we used <u>. That has also been deprecated so now we use inline style editing. <u style =”text-decoration-line: underline”>This is fancy</u>

GitHub Pages

This is how you publish a website for free. GitHub will host a small website for you for free. You will have to use the GitHub address with it but it is a real and functional static website that people can visit.

Lots of little things with HTML

Description lists <dl>: These are used to create a list of items <dt> and a small description under them <dd>

Ex. <dl>

<dl>hey<dt>

<dd> that ment hey<dd>

</dl>

Links: In order to create a link that someone can click on you need to use an <a> tag. This stands for anchor tag. An anchor tag looks like this <a href="West-Mec.org"> the west me homepage</a>

Email links. You can create links that will open to an email, The default mailer will be outlook on PC. The name that you type into the href will be automatically put into the send address. When you create your href add the mailto: qualifier. Ex. <a href=mailto: Kylepeck@west-mec.org >Hey</a> You can also add body and subject.

%20 is Unicode for a space. Ex Hey%20How%20Are%20You?

Abbriviations. When you want to shorten a word you use the abbr tag. This tells the user using code that the word is short for something and add the full word as an attribute. Ex <abbr title="Hyperlink Markup Language'> HTML </a>

Address. The <address tag is used to distinguish that you are listing address information. Works similar to body in practice.

Superscript and subscript. Tf you want your words above or below then use <sup> and <sub>. Ex My birthday is on December 25 <sup>th</sup>

To quote something, use blockquotes. Ex. <blockquote> Hey </blockquote>

Typing code in your html

<code> Formats your code to look like coding font. <pre> Retains whitespace, useful for indents when typing code. <var> Signifies it is a variable name. <kbd> For marking keyboard inputs. <samp> For marking the output of a computer program.

Times and Dates

< time datetime = ""> There are many ways to do time.

Ex. <time datetime="2016-01-20">20 January 2016 </time>

To get more specific change the datetime.

Basic Parts of a Webpage

Header <header>/ <h1>. The header is a large strip at the top of the page. Usually this includes the logo, a search bar, the name of the company or site, and the motto. This also includes the part of the site with the most colors and sets the theme for the rest of the website.

Nav bar <nav>. This is usually a smaller bar, usually under the header or included with the header. This is a list of all the places you could go to and gives organization. The nav bar should be consistent with all pages on the site.

Article. The main content of your work. This is usually the center of the page and takes up the most space in the layout. This can be almost everything depending on what the focus of your website is.

Sidebar. Referred to as the <aside> tag, it appears on the edge of the screen. This runs along the side of the article. Holds links to related content, recently visited links, or ads that run. Usually has different colors or font. Can be used as a secondary navbar in some sites.

Footer. A small strip on the bottom of the page. This contains copyright and info. Its usually a smaller font and should be regarded as an afterthought. The footer can also be used in search engine optimization.

Non-Specific Tags

There are two tags you can use for anything. <div> should be used for tags that don't exist. Block level, to be used in huge amounts of text.. Ex. <div id="copyright">@Copyright 2050 by me.</div>

<span>. Is used for smaller changes that you want to apply within the text. <span style="font-style: larger;">@Copyright</span> 2050 by nobody.

Horizontal rule.

You can add a long line across your page that will help you section off your work. It is a great way to separate your sections. Ex

<p> Dank </p>

<hr>

<h3> subsection <h3>

Unicode

Unicode is the reserved code that the computer has for symbols and text. When creating unicode use &#; and the code. Ex. &#123456; is a smile emoji.

Web Forms

Web forms are the most basic way to collect information from the user. Forms allow the user to enter data and allows the coder to format the data, you can qualify what can go where. Normally this information is then sent to storage on a server.

The form element. When you use <form> to create a form there are 2 important attributes that you need to keep in mind.

Action =”URL”. This defines where the forms collected data should be stored when it is submitted.

Method=”post”. This defines which HTTP method to send the data with, usually equals “get” or “post”.

Label unit. When creating from inputs it is good to always include labels on al of your form inputs. The label will have a for attribute that will associate with an id attribute in the prompt. This should also be where you add the header for the input area. <lable for=”name”>Name:</label>

Input element. The input element will create a small line where you are able to input code. List of attributes that are always included:

Id=”” This this is the same as the for in the label

Type=””This has a few values but should match the expected input

Name=”” How you will identify this input

Ex. <lable for=”name”>Name:</label> <input type=”text” id=”name” name=”user.name”>

<textarea>. This will create a large area that someone can enter paragraphs or longer messages. Required attributes

Id=”” That matches the for

Name=””That is unique to the input

Non required attributes

Cols=”#” rows=”#” will increase the size of the box

<label for=”body”>Message:</label>

<textarea name=”user.message” id=”body” cols=”30” rows=”10”></textarea>

<button> element

This will create a small button on the page that the user can interact with.There is only 1 attribute we care about right now and that is the type.

Type=”” can be submit reset or button

Submit will send the information to the action attribute of the form element.

<li class=”button”>

<button type=”submit”>Submit your work</button>

</li>

Fieldset and legend

When creating any kind of widget on HTML you should always use feildset and legend. <feildset> signifies that the content between will be in a single group. <legend> titles the feildset and helps screen readers.

Adding More Pages

You can create a multi-page project by using your tags to link to new pages. All you need to do is have he href relative to the file you are linking from. Ex. <a href=”aboutUs.html>About Us</a>

Images

<img src=URL> how you post a picture that is associated with that address. The URL can also be a file in your directory if you have id downloaded and saved. Ex. <img src=”images/face.png”>

When you are defining images you should also create an alternate text that will display incase the image breaks, isn’t supported or doesn’t exist anymore. To do this you will need to use the alt=”description” attribute. This also works with screen readers.

You should also define the width and height for the images. This can be in pixels or percent but pixels are better. This can be done with width=”size number” height=”size number”.

Images also need titles, a short description of the image. Screen readers cant see this. Title=”description”

Background Images

You can also add backround images at any time by using CSS. Ex.

```
<style>

html{

Backround-image: url(pic in folder or url);

}

</style> or

<body style="background-image: url(url or file);">
```

Video element

To add a video to your page you can use the <video> tag. Just like images and eanything else that uses another file in the system you need to use the attribute src. Ex. <video src=”rabbit320.mp4”></video>

Videos are different from images because we need to stop, start, rewind ect. In order to do this we need controls. Ex. <video src=”video.mp4” controls></video>

When creating videos you can add text incase it breaks. This should be done for browsers that cant handle it, and is usually done with a p tag. Ex.

```
  <video src="rabbit320.mp4" controls></video>

  <p>

    Your browser doesnt support this video, please follow this link.

    <a href="rabbit320.mp4"> Here is the video </a>

  </p>
```

Different devices and software can acces the videos in different ways so it is best mix in multiple formats with the video to service all the different browsers. This can be done with a source tag. Ex.

```
  <video controls>

    <source src="rabbit320.mp4" type="video/mp4"><source>

    <source src="rabbit320.webm" type="video/webm"><source>
```

There are many other additions for video. Autoplay, loop, muted, poster=”url for poster(beginning image of vid)”, width and height, preload. (that has =”none”, “auto” and “metadata” Some Ex.

```
  <video controls loop preload="auto">
```

This is the ideal video

```
  <video controls width="400" height="400" loop muted poster="poster.png" preload="auto" autoplay>

    <source src="rabbit320.mp4" type="video/mp4"><source>

    <source src="rabbit320.webm" type="video/webm"><source>

    <p>

     Your browser doesnt support this video, please follow this link.

     <a href="rabbit320.mp4"> Here is the video </a>

    </p>

  </video>
```

Ignore the borders, those are from the poster

Audio

Audio doesn’t support width/height or poster but it supports everything else from video.

Here is the ideal audio

```
<audio controls loop muted preload="auto" autoplay>
    <source src="viper.mp3" type="audio/mp3"><source>
    <source src="viper.ogg" type="audio/ogg"><source>
    <p>
        Your browser doesnt support this audio, please follow this link.
        <a href="viper.mp3"> Here is the video </a>
    </p>
</audio>
```