

COMPUTER SCIENCE DISCOVERIES

UNI 02 - Web Development - Review Packet

Chapter 01 - HTML

❖ Websites :

- ❑ **Website:** A collection of interlinked web pages on the World Wide Web
- ❑ **WWW:** World Wide Web
- ❑ **Top Websites in the US:**

The following are some of the most frequently visited websites in the United States. Each includes a brief description of the website's core function.

- **Google.com** - Search engine for websites, pictures, videos, and other media
- **Youtube.com** - User-submitted video site with ratings and comments
- **Facebook.com** - Social media community that allows users to share information with friends
- **Amazon.com** - Online shopping sites for all kinds of goods
- **Yahoo.com** - A search engine, email provider, and news source
- **Wikipedia.org** - A free encyclopedia with content generated by users

- ❑ **Website Content:** The raw text, images, and other elements included in a web page

❖ About HTML:

- ❑ **How do I use the Inspector Tool?**

The Inspector Tool is a great way to learn more about unfamiliar code in Web Lab. To turn on the Inspector Tool, click . You will know that the Inspector Tool is on because the button will turn white and say "Inspector: On". Once you turn on the Inspector Tool, you can hover over anything in the preview area and Web Lab will highlight the code that is making that part of the page appear.

- ❑ **HTML:** Hypertext Markup Language, a language used to create web pages

- ❑ **What is HTML?**

- In order to display a web page a computer needs to know a lot more than just what words or images should be on the screen. It needs to know where to place the content, what size to make it, what fonts and colors to use, and lots of other information that turns ordinary text and images into a full web page.
- To solve this problem computer scientists have created languages that communicate this extra information. HTML, short for Hypertext Markup Language, is one language that helps solve this problem. Using a system of tags HTML lets a programmer indicate the purpose

of different parts of a web page. This lets the computer know how it should display these different elements.

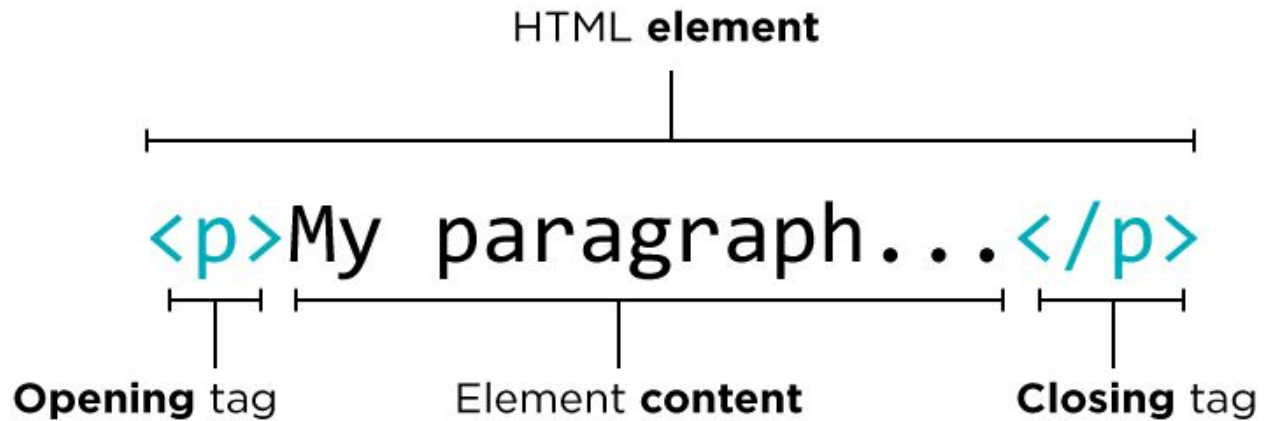
❑ **More about HTML:**

- HTML is the standard markup language for creating Web pages.
 - HTML stands for Hyper Text Markup Language
 - HTML describes the structure of Web pages using markup
 - HTML elements are the building blocks of HTML pages
 - HTML elements are represented by tags
 - HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
 - Browsers do not display the HTML tags, but use them to render the content of the page
- ❑ **HTML Element:** A piece of a website, marked by a start tag and often closed with an end tag

❖ HTML & Tags:

- ❑ **HTML Tag:** The special set of characters that indicates the start and end of an HTML element and that element's type.

HTML indicates the purpose of different parts of a web page by surrounding them with pairs of opening and closing tags, like in the example below.



HTML Tag	Tag Name	What it does
<code><p></code>	Opening Paragraph Tag	Start of a paragraph. Paragraphs are just blocks of text in your web page.
<code></p></code>	Closing Paragraph Tag	Marks the end of a paragraph. An end tag is always just the opening tag with a <code>/</code> at the beginning.

❑ Use Paragraph Tags

The `<p>` `</p>` tags or "paragraph" start and end tags are placed around text to indicate that it is part of a paragraph. Placing text between paragraph start and end tags lets the computer know that it should be displayed differently, usually just by spacing it out from other text.

❑ What is a paragraph element?

Paragraphs are marked by opening(`<p>`) and closing(`</p>`) tags. Paragraphs in HTML can be any length of text from one word to a bunch of sentences.

Paragraphs group together sets of sentences and put some space between that group of text and the next group of text.

❑ How do I make multiple paragraphs?

Here's an example of several paragraph tags in a row. This code would be placed inside of the body of your web page. `<p>This is a paragraph. It has two sentences.</p> <p>This is another paragraph.</p>`

❑ Why does HTML seem to work even when it's broken?

HTML is read by your web browser to generate web pages. Since people often make little mistakes when writing their web pages, browsers are programmed to make a best guess of what you intended to do. Sometimes different browsers are even programmed to make different guesses! The only way to ensure your code looks like you intend is make sure you're always using tags correctly.

❑ Why does the code sometimes turn pink?

Web Lab is programmed to automatically detect some mistakes in HTML. When it notices a mistake, it turns that code pink. The mistake might be in pink, or it might be somewhere before the pink code. You'll need to carefully debug to find your mistake.

❑ HTML Default Tags:

All HTML pages include a common set of tags. They're so common, in fact, that all Web Lab projects will start with them added already.

HTML Tag	What it does
<pre> 1 <!DOCTYPE html> 2 <html> 3 <head> 4 5 </head> 6 <body> 7 8 </body> 9 </html> </pre>	<p>This starter code is included in each Web Lab project. The different tags are explained below.</p>
<code><!DOCTYPE html></code>	Tells the computer that this is a document written in HTML
<code><html></code>	Indicates the beginning of your code written in HTML
<code><head></code>	Contains information (sometimes called "metadata") about your web page
<code><body></code>	Contains all the main contents of your web page

◆ HTML Structure:

❑ **Website Structure:** The purpose of different pieces of content in a web page, used to help the computer determine how that content should be displayed.

❑ **A Simple HTML Document:**

```

<!DOCTYPE html>
<html>

```

```
<head>
<title>Page Title</title>
</head>
<body>

<h1>This is a Heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

❖ Headings:

- ❑ **Heading:** A title or summary for a document or section of a document.

Syntax: <h1></h1>

- ❑ **What are headings?**

Headings are the different sized section titles throughout a web page. Headings add structure to your web page by breaking it up so its easier for a user to read.

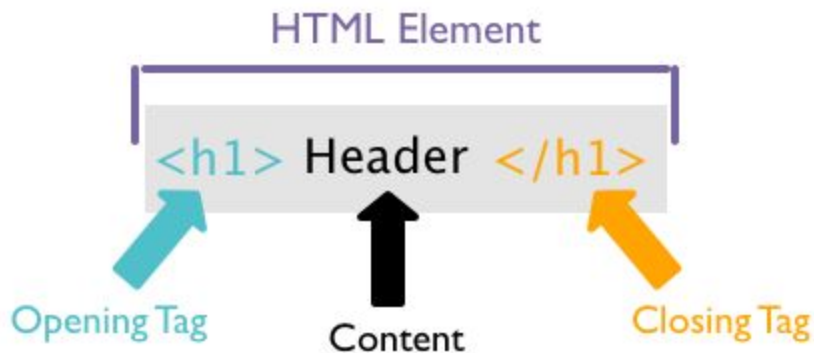
- ❑ **How do I make different sized headings?**

Headings come in 6 different sizes. So far you have primarily used the biggest one: <h1>. The number '1' in the HTML tag designates that this is the biggest heading. The smallest heading is <h6>. You can also try the <h2>, <h3>, <h4>, and <h5> tags, which get smaller as the number gets larger.

- ❑ **What is an HTML element?**

An HTML element is a piece of a website that is marked by a start tag and sometimes closed with an end tag. The element also includes the content

inside the tags. For example:



❑ Making Headings

There are six different heading tags: `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>` and `<h6>`. The most common type of heading is `<h1>`. To use it, you put the the text you want to display inside between the opening tag (`<h1>`) and closing tag (`</h1>`).

The code for a heading will look like `<h1>My Heading Text</h1>`.

❑ Size of Headings

There are different sized headings which are marked by the number next to the h in the heading tag. They go from `<h1>` to `<h6>`.

Example	Result
<pre><h1>Shoulders</h1></pre>	Shoulders
<pre><h2>Knees</h2></pre>	Knees
<pre><h3>Toes</h3></pre>	Toes

❖ Digital Footprint:

❑ **Digital Footprint:** The collected information about an individual across multiple websites on the Internet.

Some of the best practices for when publishing information online.

Possible checks include:

- Could someone identify me with this information?: for example name, address, phone number, etc.
- Do I want everyone to see this?: Don't publish anything you don't want to possibly be published to the world.
- Do I want this to be permanent?: You lose control of information once it's published and it could be around for your entire life.

❖ Lists:

HTML has two types of lists, ordered and unordered.

❑ **Ordered Lists:** An ordered list is a set of numbered items.

Example	Result
<pre> Step 1 Step 2 Step 3 </pre>	<ol style="list-style-type: none">1. Step 12. Step 23. Step 3

- An ordered list element has the tag `` . This is an abbreviation for Ordered List. Each item in the list is marked by a list item element ``. This is an abbreviation for List Item. The list item element is a child element, which means that it goes inside of its parent element, the ordered list (``).
- Making an ordered list has two steps: making the list and adding the list items. To make the ordered list, write the ordered list tags `` ``. Next, add your list items inside the ordered list tags. To make each list item, use the list item tags `` `` and write the list item inside the tags.
- It can be helpful to indent your `` tags so it's clear they are contained in the `` tag.

❑ **Unordered Lists:** An unordered list is a set of bulleted items.

Example	Result
<pre> Red Green Blue </pre>	<ul style="list-style-type: none"> • Red • Green • Blue

- An unordered list element has the tag `` . This is an abbreviation for Unordered List. Each item in the list is marked by a list item element ``. This is an abbreviation for List Item. The list item element is a child element, which means that it goes inside of its parent element, the unordered list (``).
- Making an unordered list has two steps: making the list and adding the list items. To make the unordered list, write the unordered list tags

`` ``. Next, add your list items inside the unordered list tags. To make each list item, use the list item tags `` `` and write the list item inside the tags.

- It can be helpful to indent your `` tags so it's clear they are contained in the `` tag.

❖ Intellectual Property

- ❑ **Citation** - A quotation from or reference to a book, paper, or author, especially in a scholarly work.
- ❑ **Copyright** - the exclusive legal right to print, publish, perform, film, or record literary, artistic, or musical material, and to authorize others to do the same
- ❑ **Creative Commons** - A collection of public copyright licenses that enable the free distribution of an otherwise copyrighted work, used when an author wants to give people the right to share, use, and build upon a work that they have created
- ❑ **Intellectual Property** - A work or invention that is the result of creativity, such as a piece of writing or a design, to which one has rights and for which one may apply for a patent, copyright, trademark, etc.

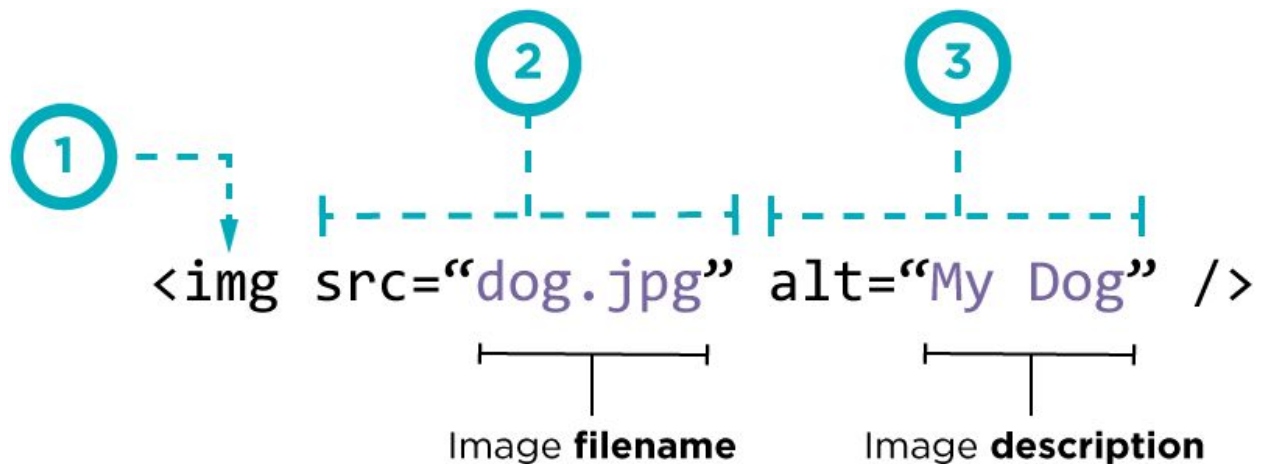
❖ Images

❑ **Images in HTML**

The image tag allows you to add images to your page. You might notice that this tag looks a little different than those you've seen before. Unlike paragraph, header, or list tags, the image tag doesn't require a closing tag. All of the information needed to display your image is contained within the tag itself.

❑ Image Source and Alternate Text

In order to tell the browser which file to use, extra information, called an attribute, is added to the image tag inside the brackets. The attribute `src` stands for source and tells the name of the image, and the attribute `alt` describes the image.



Create an image tag using the abbreviation `img`. This is considered a self closing tag, since it doesn't need to wrap text as many other tags do. The `/right` before the ending `>` is optional, but helps remind us that this tag doesn't need a closing tag.

1. The `src` attribute is short for source. This tells the tag which image to load. In this case, the page will look for an image with the filename `dog.jpg` in the same directory as the page. Image file names include extensions that tell the computer which type of image they are working with. Common extensions are `.jpg`, `.jpeg`, and `.png`. Make sure to put quotation marks around your image filename.
2. The `alt` attribute is short for alternative text. While you won't see this text on your web page, it provides a backup in case your image doesn't download properly or for visually impaired users.

3. In this example, if your browser failed to load the image you

would see 

❑ How do I add images?

The `` tag allows you to show images on your web page.

Example:

```

```

- In order to tell the browser which file to use, extra information, called an attribute, is added to the `` tag inside the brackets. The attribute `src` stands for source and tell the name of the image. Image files names include extensions which tell the computer which type of image they are working with. Common extensions are `.jpg`, `.jpeg`, `.png`.
- In addition to have the `src` attribute, image elements also have the `alt` attribute which describe the image. This is important in case the image doesn't load or for people who have trouble with their eyesight.
- An `` tag is an example of a self-closing tag because it starts and closes in one tag. To mark this we put the `/` which usually goes in the close tag at the end of the image tag.

❑ Why does an image tag not have a closing tag?

An image tag doesn't need a closing tag because there is no text content which must be wrapped in tags. The content that shows on the screen is specified through the tags attributes.

❑ What is an attribute?

- Attributes are extra information included in a tag. Attributes have names and values. The name tells what type of information is being provided and then the value gives the specific information for that tag.

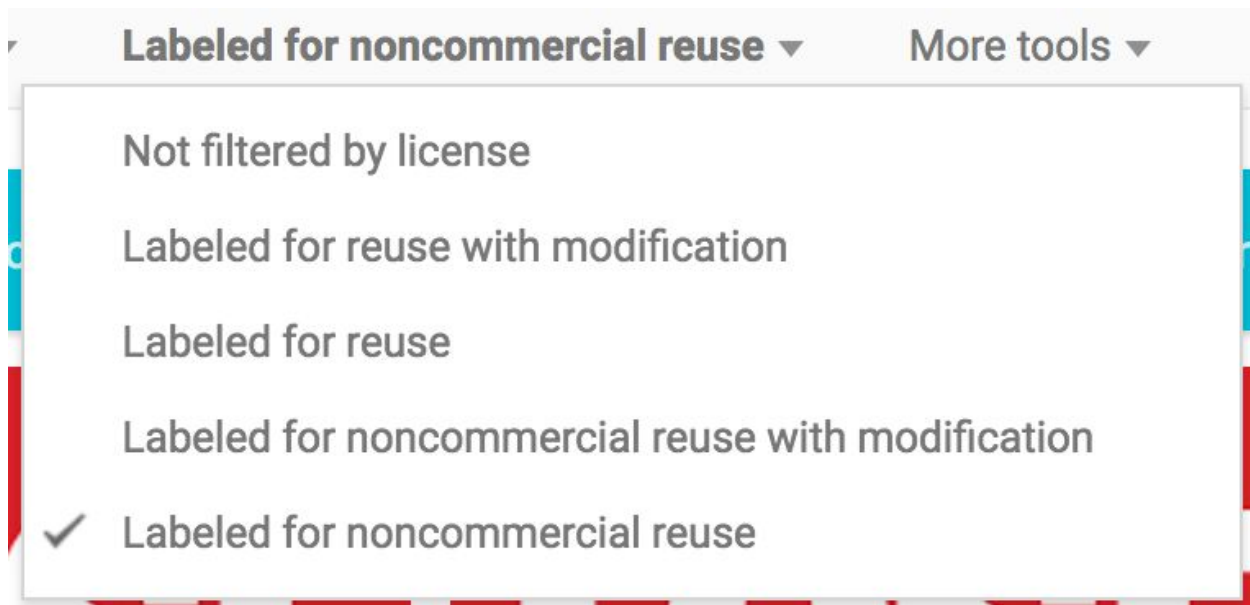
- For example `` tags have two attributes, `src` and `alt`. `src` specifies the name of the image file and `alt` tells the browser in readable text what the image is.

❖ [Creative Commons Search](#)

- Because the Creative Commons provides such a simple way to know what media you can and can't use, a lot of search engines have integrated Creative Commons filtering to ensure they only give you results you can use.
- When using a search engine that supports Creative Commons filtering, you usually just need to check a few boxes to make sure the media you find are licensed for your use.

📄 [Search Settings](#)

When using a Creative Commons friendly search engine, you'll want to look for a setting that controls the license of the search results. For example, Google Image search has a dropdown that lets you select from a handful of different Creative Commons licenses.



In general you should look for media that is licensed for non-commercial use. If you plan to make any changes to the media you find (such as adding text to an image) you'll also need to make sure you have the right to modify, adapt, or build upon your search results.

Giving Credit

When you find an image or other media file you like, make sure that you not only get a copy of the file, but that you also keep track of the information you'll need to give credit to its creator. For every file you want to use, follow these steps:

1. Download a copy to your computer (so that you can upload it to your website in the next step)
2. Write down all information you can find about the author, such as:
 - Name, or screen name
 - URL of website (not URL of the image itself)
 - Title of image

❖ Clean Code and Debugging

- ❑ **Bug** - Part of a program that does not work correctly.
- ❑ **Comment** - A note in the source code of a computer program that helps explain the code to people who read it
- ❑ **Debugging** - Finding and fixing problems in an algorithm or program.
- ❑ **Indentation** - The placement of text farther to the right or left of the surrounding text, making it easier to understand the program's structure
- ❑ **Whitespace** - Any character that shows up as a blank space on the screen, such as a space, a tab, or a new line; helps separate different parts of the document to make it easier to read

❑ **What is a bug?**

Bugs are mistakes in code which causes it not to work as planned.

❑ **What is debugging?**

Debugging is the process of finding and fixing bugs. Debugging is a problem solving process so use your problem solving steps as you try to debug.

❑ **What are some examples of bugs?**

Bugs can be anything that causes code not to work as planned. Some examples are misspelling, putting code in the wrong place, using the wrong tag, or forgetting to close a tag.

❑ **Why does the inspector sometimes stop working?**

Sometimes there are so many bugs in the HTML that the inspector cannot read the code properly and it stops working completely, even

on the parts of the code that are correct. Once the bugs are corrected, the inspector will work again.

❏ What is formatting?

Formatting is arranging text in a way that makes it easier to understand. HTML is usually formatted using indentation. That means that elements that are inside other elements are further to the right in code. Here is an example:

```
<body>  
  <p>This paragraph is inside the "body" element.</p>  
</body>
```

When you write your web page, you should organize your code in a way that makes it easier to read. This is called formatting. When you format your code, you'll have an easier time finding and fixing bugs.

❏ Whitespace

Whitespace refers to any character that shows up as a blank space on the screen, such as a space, a tab, or a new line. Whitespace helps separate different parts of the document to make it easier to read. For example, in HTML code new elements are usually put on a new line, even though it doesn't make any difference in how the page is displayed.

```
<body>  
  <h1>Here's my list</h1>  
  <ol>  
    <li>Item 1</li>  
    <li>Item 2</li>
```

```
</ol>  
</body>
```

```
<body><h1>Here's my list</h1><ol><li>Item  
1</li><li>Item 2</li></ol></body>
```

Both will display the same web page, but the code in the top box is much easier to read. It's best to start off new elements in a new line.

□ Indentation

A very common type of formatting in HTML is indentation. Indentation is the placement of text farther to the right, or left, to separate it from surrounding text. Indentation helps to convey the program's structure. In HTML, elements that are inside other elements are usually indented.

Here is an example:

```
<body>  
  <p>This paragraph is inside the "body" element.</p>  
</body>
```

Indentation can help you remember whether or not you've closed a tag, and it also makes it clear which tags are inside others.

□ Commenting

As your web pages get more complicated, you'll want to use comments. Comments explain the different parts of the code and what it should create. Comments can help you to debug, and will also help other people who are trying to understand your code.

```
<!-- this is a comment -->
```

Chapter 02 - CSS

- ❑ **CSS** Cascading Style Sheets; a language used to describe how HTML elements should be styled
- ❑ **CSS Selector** - the part of a CSS rule-set that defines which HTML elements the style should be applied to
- ❑ **What colors can I use in CSS?**

CSS includes most common color names (red, blue, green, etc.), and many uncommon ones. You can still use colors that are not included in the named list, but you will need to use their RGB values. You can read more about using colors in CSS at [W3Schools - CSS Legal Color Values](#)

- ❑ **How does the code work?**

Here is the code that is making the h1 heading red:

```
h1 {  
    color: red;  
}
```

h1 is the selector. It specifies which elements will have to follow the rules inside the curly braces. color: red; is the rule that makes the text inside the h1 tags red. color is the property. It explains what the rule is about, in this case the text color. red is the value. It explains how the rule should be applied, in this case making the text red.

❑ Why do I need all the punctuation?

The punctuation, such as the curly braces {}, the colon :, and the semicolon ; help the computer to understand the rules in the style sheet. The curly braces hold all the rules for a particular selector. Each rule should end in a semicolon, and the properties and values are always separated by a colon.

❑ What is a style sheet?

A style sheet is a document that controls how a web page will appear. External style sheets are separate files that are linked to the HTML page.

❑ What is CSS?

CSS is a language that controls the way content on a web site appears. It uses rule-sets to change the look of a page. Each rule set has a selector, which specifies which elements on the page will be affected, and the rules, which explain how to display the elements. Each rule consists of a property and a value for that property. Here's an example of a rule-set that makes the text in an h2 tag blue and cursive:

```
h2 {  
    color: blue;  
    font-family: cursive;  
}
```

In this example, h2 is the selector, color and font-family are properties, and blue and cursive are the values for those properties.

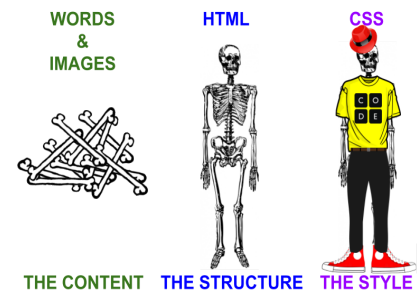
❏ Style Sheets

Web Developers intentionally separate content and style to make their code easier to maintain. HTML is the language used to structure the content of a web page, and CSS is a language that adds style to a web page.

❏ Content-Structure-Style

Often the relationship between the content on your page, the way the HTML organizes the content, and the way CSS displays the content is referred to as content-structure-style.

Developers use HTML to organize the different types of content on page, indicating how it should be structured. If you don't use CSS to style that content, then the web browser will apply default styles based on the way the HTML has structured it. As you learn CSS style rules, you'll have more control over the style applied to different types of content on the page.



❑ Adding A Style sheet



1. To add CSS style rules to an HTML page, you need to create a style sheet document.
2. This is the style sheet.
3. Link to your style sheet. The link goes inside the head tag and looks like this: `<link rel="stylesheet" href="style.css">`

❑ CSS Rule-sets

CSS rule-sets consist of two main parts: the selector and the rules.

❑ Selector

The selectors can be any part of the web page you want to style. One way you can identify parts of the web page is using the names of the element type. Selecting an element type will make all elements of that type have the given styling. The selector name for HTML element types is the name of the tag with the brackets

removed. In the below example the selector is h1 and it will style all the h1 elements with the rules inside the curly braces ({ }).

❑ Rules

The rules describe how the elements identified by the selector should change. Each rule consists of a property name and a value, separated by a colon (:). The property name describes what the rule is about, such as color or size, and the value how the property should change. For example, the rule-set below will make all the h1 headers on the page have blue text that is underlined.

```
h1{  
  color:blue;  
  text-decoration: underline;  
}
```

The punctuation in the rule-set is very important, because that's the way the computer knows where each rule starts and stops.

❑ How does the code work?

Here is the code that is controlling the paragraph text size:

```
p {  
  font-size: 14px;  
}
```

p is the selector. It specifies which elements will have to follow the rules inside the curly braces. The p stands for paragraph. font-size:

14px; is the rule that makes the text inside the p tags a particular size. font-size is the property. It explains what the rule is about, in this case the text size. 14px is the value. It explains how the rule should be applied, in this case making the text 14 pixels big.

❑ What does px mean / What is a pixel?

Pixel, which is abbreviated px, is how elements are measured in CSS. It's the size of a single point of light on the screen.

❑ Why do I need all the punctuation?

The punctuation, such as the curly braces {}, the colon :, and the semicolon ;, help the computer to understand the rules in the style sheet. The curly braces hold all the rules for a particular selector. Each rule should end in a semicolon, and the properties and values are always separated by a colon.

❑ Text Properties

There are many CSS properties available that allow you to style the text on your page. Here's a review of some of the more common ones

Property	What it Changes	Example
color	The color of your text	<code>color: maroon;</code>
text-align	The alignment of your text	<code>text-align: center;</code>

text-decoration	Additional style	<code>text-decoration: underline;</code>
font-family	Which font to use	<code>font-family: fantasy;</code>
font-size	The size of your text	<code>font-size: 20px;</code>

❑ Styled Text Example

If we put this all together, you might get some text like this:

```
p {  
  color: maroon;  
  text-align: center;  
  text-decoration: underline;  
  font-family: fantasy;  
  font-size: 20px;  
}
```

This is my styled text! It's so cool!!!

❑ Specifying Fonts

You might notice when using CSS like `font-family: fantasy;` that your text looks different on different computers. This is because we're only telling the browser what kind of font to use, not which specific font.

❑ What does the `body` selector do?

Because the content of the web page is all inside the `body` tag, the `body` selector gives style rules for everything on the web page.

❑ What does the `border-style` property do?

The `border-style` property determines what kind of border (solid, dotted, dashed, etc.) the element has.

❑ What does the `border-radius` property do?

The `border-radius` property determines the radius of the curves at the corners of the element. A bigger radius makes a bigger, softer curve, and a smaller radius makes a smaller, sharper curve. A radius of zero makes a regular corner.

❑ What does the `float` property do?

The `float` property makes an element "float", meaning that the elements that come after it all flow around it. If the float value is `left`, the element will float to the left, and the elements after it will show up on its right. If the float value is `right`, the element will float to the right, and the elements after it will show up on its left.

❑ What does the background-color property do?

The background-color property determines the color of the background of an element.

❑ What if an element inside the page has a different background color from the body?

You can see the answer to this question by adding a background-color rule to the p tag. The paragraphs will have the background color in the rule for the p tag, and the rest of the page will follow the rule for the body tag.

❑ The Body Element

The <body> element is a special element that wraps all of the visible content on a web page. Because everything that you see is inside this tag, any rule-set that you create for the body element will apply to every element on page, unless the element itself has a rule that contradicts it. This is useful for establishing a baseline style for everything on your page.

Example

This rule-set would make all text in your web page blue and centered.

```
body {  
    text-align: center;  
    color: blue;
```

}

- ❑ Why does using a width and height rule at the same time sometimes stretch out the image?

When the width of an images changes, the height must change by the same percentage, otherwise the image will stretch. For example, if you double the width of an image, you must also double the height, or the image will be stretched horizontally. When you only define the width or the height, the computer will automatically change the other property so that the image looks the same.

- ❑ What does the margin property do?

The margin property determines how much space will be around the image. Most of the time, you will define in the margin in pixels. You can read more about this property.

- ❑ Layout Properties

There are many properties that help set the styles of your web pages.

Property	Description	W3 Schools Lin
<u>background-color</u> <u>or</u>	Sets the background color of the element	W3 Schools
<u>border-color</u>	Sets the color of the border	W3 Schools

<u>border-width</u>	Changes the border width of an element	W3 Schools
<u>border-style</u>	Changes the style of border	W3 Schools
<u>width</u>	Sets the width of an element	W3 Schools
<u>height</u>	Sets the height of an element	W3 Schools
<u>float</u>	Floats an element to one side of the page	W3 Schools
<u>margin</u>	Generates space around an element	W3 Schools

Sources and Search Engines:

- ❑ **Algorithm** A precise sequence of instructions for processes that can be executed by a computer
- ❑ **Relevant** Closely connected or appropriate to the matter at hand
- ❑ **Search Engine** A program that searches for and identifies items in a database that correspond to keywords or characters specified by the user, used especially for finding particular sites on the World Wide Web.
- ❑ **Trustworthy** Able to be relied on as honest or truthful

❖ RGB Colors and Classes

❑ RGB Colors

- RGB value short for Red-Green-Blue.
- RGB color values are supported in all browsers.
- An RGB color value is specified with: `rgb(red, green, blue)`.
- Each parameter (red, green, and blue) defines the intensity of the color as an integer between 0 and 255.
- For example, `rgb(0, 0, 255)` is rendered as blue, because the blue parameter is set to its highest value (255) and the others are set to 0.

❑ **CSS Class** An identifier that allows multiple elements in an HTML document to be styled in the same way

❑ How do I make a color lighter?

To make a color lighter, you need to add more light (increase the level of the slider). If you have already added the maximum amount of blue light, you will need to add more red and green light to make your blue lighter.

❑ Why do red and green make yellow?

When you mix paint, red and green make brown, but RGB color mixing uses light instead of paint, so the colors mix differently. RGB uses additive color mixing. In additive color mixing, red and green make yellow, red and blue make magenta, and blue and green make cyan. When you mix the three primary colors together (red, green, and blue), they make white.

❑ **How many colors can I make with RGB color mixing?**

- You can make over sixteen million different colors with RGB color mixing.
- An RGB Image Containing All Possible Colors. Here is an 8-bit per channel RGB image file containing exactly one pixel of each of the 16,777,216 possible color values.

R: 0-255= 256 colors

G: 0-255=256 colors

B: 0-255=256 colors

RGB=256*256*256=16,777,216

- The image is 16,777,216 pixels, arranged as 256 slices of the RGB color cube.
- The highest value of any RGB color is 255, the lowest is 0.
- The higher the value of the color the brightest it could get and darkest is when the value is low.

❑ **Binary:** A possible state of two possibilities either 0 or 1.

Example: True or False, On or Off, 0 or 1 etc.,

- A computer can only understand binary language.

❑ **More on RGB**

- In RGB, the color white is represented as (255, 255, 255), which equates to "all on." The full value for each of the red, green, and

blue color components is displayed, which creates such a high light intensity that we perceive the color as white.

- Conversely, the color black (0, 0, 0) is the "default" state of the display device—when no color light is displayed ("0"), the result is black, or the absence of color.

Red + Green = Yellow

Green + Blue = Cyan

Blue + Red = Magenta

