



















HTML Hypertext Markup Language





Activity: What is HTML?



HTML

HTML or Hypertext Markup Language can be thought of as a programming language that is used to place text, images and other contents on a webpage. It is the foundation of almost any page you visit on your browser.



HTML

- HTML describes the structure of Web pages using markup.
 Markup languages are designed for the processing, definition and presentation of text.
- 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 - Did You Know?

HTML - although not a true programming language it's a great place to start if you want to get involved with computers, primarily because it's exciting and you can see the results of your learning almost instantly.





Activity: Fill The Blanks



Activity: Fill The Blanks Solution

HTML or HyperText Markup Language, can be thought of a programming language. It is used to place text, images and other contents on a webpage. It is the foundation of almost any page you visit on your browser. HTML describes the structure of web pages using markup. Mark up languages are designed for the processing, definition and presentation of text.

HTML elements (or tags) are the building blocks of HTML pages.

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.



Software for HTML

Simple text editors can be used such as 'Notepad' for Windows or 'TextEdit' for Mac OS, as long as you save your files as a .html file i.e. "MyFirstDocument.html".







What Does HTML Look Like?

This is a Heading

This is a paragraph.



Activity: DOCTYPE

Add the <!DOCTYPE html> and <html> tags to your HTML document.

<head>, <title>, <body>

The **<head>** tag is a container for all the head elements. The <head> tag can include a title for the document, styles, and meta information.

The **<title>** tag should be used in all HTML documents. The <title> tag:

defines a title in the browser toolbar.

It provides a title for the page when it is added to favourites.

The **<body>** tag defines the document's body.



Activity: <head>, <title>, <body>

Copy and execute the HTML code:

Your output should look like this:



This is a Heading

This is a paragraph.

```
<!DOCTYPE html>
      <html>
          <head>
4
              <title> My First HTML </title>
5
          </head>
          <!-- Insert Comments Here -->
6
7
          <body>
8
              <h1> This is a Heading </h1>
9
              This is a paragraph. 
          </body>
11
     </html>
```

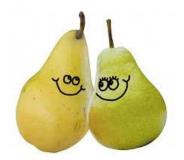


Activity: Blog

Throughout the day you will be learning new HTML tags.

Each time you learn a new tag, if you have time add it onto a html page called "____Blog" e.g. CaseyBlog.html







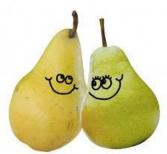
Pairwise Tags

Important! Tags comes in pairs. A start tag and end tag is necessary.

```
<html> ... </html>
<head> ... </head>
<title> ... </title>
<body> ... </body>
<h1> ... </h1>
 ... 
<i>> ... </j>
<b> ... </b>
```

Notice the "/" to differentiate from the start tag and end tag.

Note: There are exceptions to this rule such as the <!DOCTYPE html> tag and later on we will see the <hr>> and tag.



Headings: <h1> - <h6>

The <h1> to <h6> tags are used to define HTML headings.

h1 defines the most important heading. h6 defines the least important heading.

Note: Use h1 to h6 tags only for headings. Do not use them just to make text bold or big. Use other tags for that.

Headings.html

Google

This is heading 1

This is heading 2

This is heading 3

This is heading 4

This is heading 5

This is heading 6

Headings: <h1> - <h6>

```
<!DOCTYPE html>
     <html>
          <body>
4
              <h1>This is heading 1</h1>
5
              <h2>This is heading 2</h2>
              <h3>This is heading 3</h3>
6
              <h4>This is heading 4</h4>
              <h5>This is heading 5</h5>
8
              <h6>This is heading 6</h6>
          </body>
10
      </html>
```



Activity: Headings <h1> - <h6>

Using the tags <h1> to <h6> create a HTML document that output an Eye Test as shown below:

E B

A O K

LMN

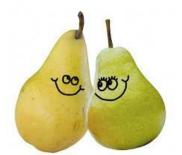
QPN

ELMZ

AMQLE

Activity: Headings <h1> - <h6> Solution

```
<!DOCTYPE html>
     <html>
 3
          <body>
               < h1 > E B < / h1 >
               < h2 > A 0 K < / h2 >
 5
               <h3> L M N </h3>
 6
               < h4 > Q P N < /h4 >
 8
               < h5 > E L M Z < /h5 >
 9
               <h6> A M Q L E</h6>
10
          </body>
     </html>
11
```



Paragraph:

The tag defines a paragraph.

Browsers automatically add some space (line spacing) before and after each tag.

Activity: Paragraphs

Using the tag create your HTML code to output:

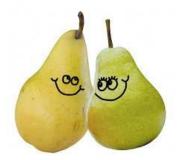
Haikus are easy

But sometimes they don't make sense

Refrigerators



Activity: Paragraphs Solution



Commenting: <!-- comment -->

Commenting in HTML is done by surrounding the desired comments with "<!--" and "-->".

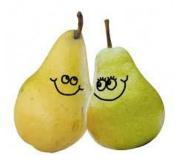
The comments are only seen by those who are editing the HTML file.

Comments are used to notify others who will be using the HTML file of any important information regarding the HTML code.

My First HTML Google

This is a Heading

This is a paragraph.



Italic: <i>Bold:

The **<i>** tag defines a part of text in an alternate tone. The content of the <i> tag is displayed in *italic*.

The **** tag specifies **bold** text.



Activity: Italics

Using the tags <i> and create and execute HTML code to output:

There once was a man named *Legend*, because his story was legendary.

Activity: Bold

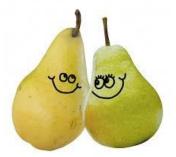
Using the tags and create and execute HTML code to output:

I am not shouting - I AM SHOUTING!.



Activity: Italics Solution

Activity: Bold Solution



Centre-Align: <center>

The **<center>** tag is used to center-align text.



Activity: Centre-Align

Using the tag <center> create and execute HTML code to output:

This is the title of the story

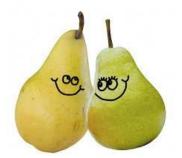
Story info goes here...

This is the first chapter of the story

Chapter 1 info goes here ...



Activity: Centre-Align Solution

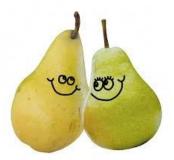


Anchor: <a>

In HTML, links are defined with the <a> tag: the <a> Anchor is often associated with an attribute. For example, the 'href' attribute is used to specify the destination of the link, whereas the 'name' attribute specifies the name of the link. When clicked it will go to that specified destination.

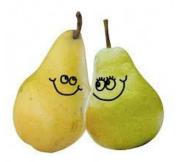
< a href= "#..."> combined with can be used for a lot of things, for example to create a shortcut to texts in the same web page. Note the "#..."

or on its own can even link to a different website.

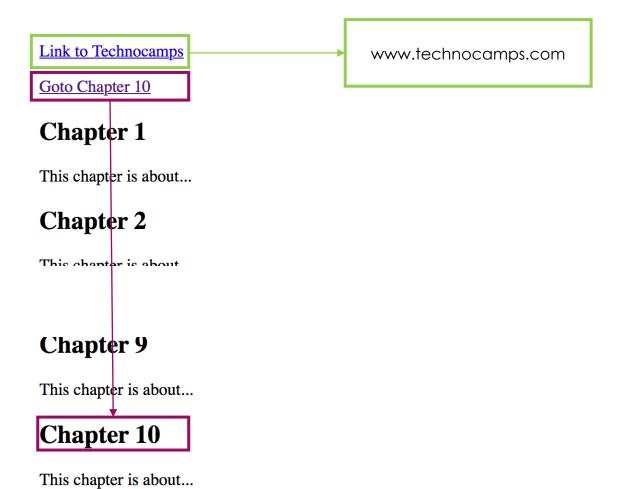


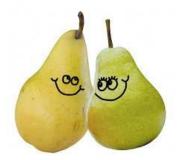
Anchor: <a>

```
<!DOCTYPE html>
1
     <html>
         <body>
4
             >
                 <a href="https://www.technocamps.com">Link to Technocamps</a>
5
6
             >
                 <a href="#C10">Goto Chapter 10</a>
8
             9
10
11
             >
                 <h2>Chapter 1</h2>
12
                 This chapter is about...
13
14
                 -h2-Chanter 2-1/2>
35
36
                 <h2>Chapter 9</h2>
37
                 This chapter is about...
38
                 <h2><a name ="C10">Chapter 10</a></h2>
39
                 This chapter is about...
40
             41
42
         </body>
     </html>
43
44
```



Anchor: <a>





Activity: Anchor <a>

Using the tag <a> copy and execute HTML code on the previous slide. Afterwards click on the links "Goto Chapter 10" and "Link to Technocamps". What is different between the two links?



Activity: Anchor <a> Solution

The "Goto Chapter 10" link keeps the user in the same webpage but scrolls down to where the text Chapter 10 is.

The "Link to Technocamps" link opens a new browser page and takes the user to the internet web link.



Horizontal Rule: <hr>>

The <hr>> element is used to separate content in an HTML page.

HTML

HTML is a language for describing web pages.

CSS

CSS defines how to display HTML elements.

Activity: Horizontal Rule: <hr>>

Run and execute the code above. Afterwards change the code so that it displays a horizontal line above the heading HTML and another at the end of the last CSS sentence.



Activity: Tags and Uses

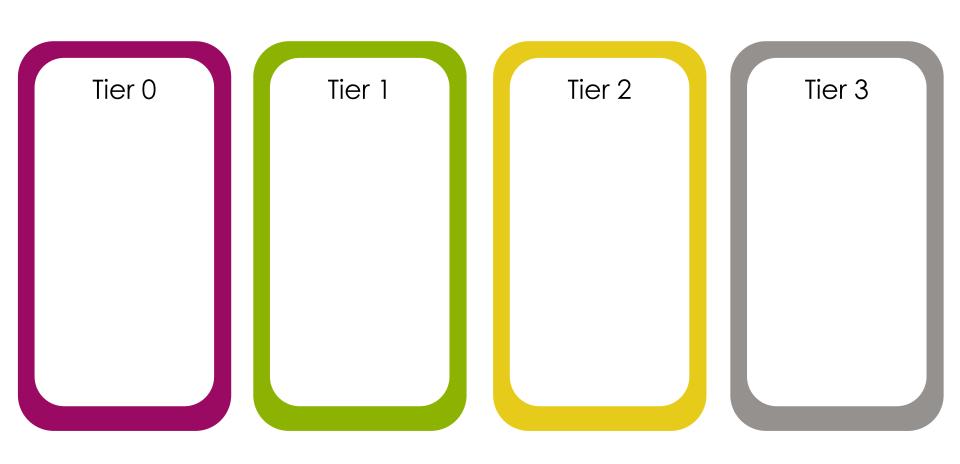
For each of the tags displayed below, write a small sentence to explain what each of them do and when you would use them:



Activity: Tag Levels

For each of the tags displayed below, group the tags according to their hierarchical order:

Activity: Tag Levels





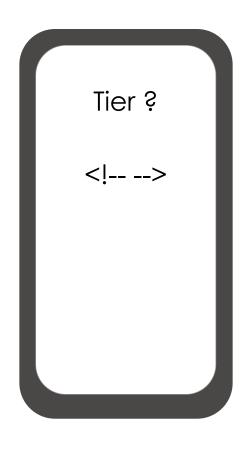
Activity: Tag Levels Solution

Tier 0
<!Doctype
html>
<html>

Tier 1
<head>
<body>

Tier 2 <title> > <h1> <center> <a> <hr> < h2 - h6 > Tier 3 <i>>

Tag Level Mystery





Blockquote:
 <blockquote>

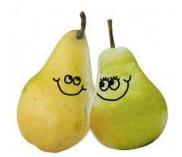
The **<blockquote>** tag specifies a section that is quoted from another source.

Browsers usually indent <blockquote> elements.

About Technocamps

Here is a quote from Technocamps's website:

Our mission is to inspire, motivate and engage people with computational thinking and promote Computer Science as underpinning all aspects of modern society.



Activity: Blockquote: <blockquote>

Using the <blockquote> tag and quote the Technocamps mission statement from www.technocamps.com. You may also quote someone famous that you like.



Images:

The **** tag defines an image in an HTML page.

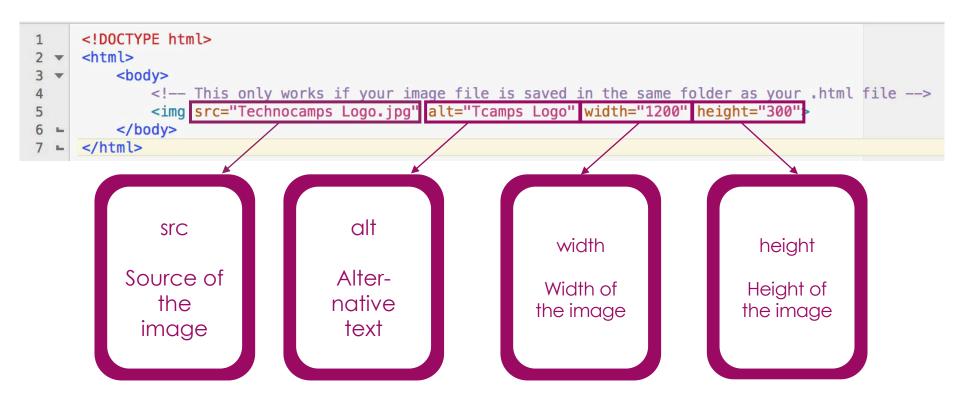
The tag has two required attributes:

- **src** attribute or the source of the image tag in this example is the filename of the image: "Technocamps Logo.jpg".
- alt attribute is the alternative text that will display when the image is unavailable.





Images:



Note: Images are not technically inserted into an HTML page, images are linked to HTML pages. The tag creates a holding space for the referenced image.



Activity: Images

Find a copyright free image of Alan Turing on the internet and save the image in the same location as your HTML files.

Using the tag shown in the previous slide, display an image of Alan Turing in your HTML document.



Images as a Link

To link an image to another document, simply nest the tag inside <a> tags.

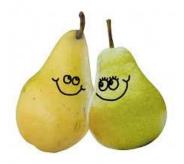
An image that is a link:





Activity: Images as a Link

Edit your HTML file so that when you click on the image of Alan Turing it takes you to the Wikipedia website of Alan Turing.



Lists: Ordered and Unordered Lists

Unordered List:

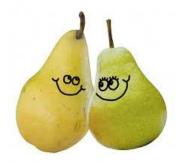
An unordered list starts with the
 tag. Each list item
 starts with the tag.

The list items will be marked with **bullets** (small black circles) by default.

Ordered List:

An ordered list starts with the tag. Each list item starts with the tag.

The list items will be marked with **numbers** by default.



Lists: Ordered and Unordered Lists

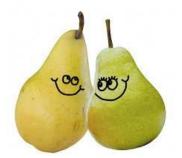
```
<!DOCTYPE html>
1
     <html>
3
        <body>
           <h2>An Unordered HTML List</h2>
5
6
           <l
              Coffee
              Tea
8
9
              Milk
10
           11
           <h2>An Ordered HTML List</h2>
12
13
           <01>
14 -
              Coffee
15
              Tea
16
              Milk
17
18
           </body>
19
     </html>
20
```

An Unordered HTML List

- Coffee
- Tea
- Milk

An Ordered HTML List

- 1. Coffee
- 2. Tea
- 3. Milk



List Item: <Ii>>

The tag defines a list item.

The tag is used in ordered lists(), unordered lists ().

```
<!DOCTYPE html>
     <html>
3 ▼
        <body>
            <h2>An Unordered HTML List</h2>
5
6
               Coffee
               Tea
8
               Milk
9
10
11
12
            <h2>An Ordered HTML List</h2>
13
14 -
               Coffee
15
               Tea
16
17
               Milk
18
19
        </body>
20
     </html>
```

An Unordered HTML List

- Coffee
- Tea
- Milk

An Ordered HTML List

- 1. Coffee
- 2. Tea
- 3. Milk



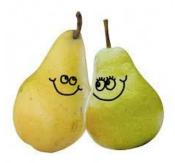
Activity: Lists

Create a new HTML file, then create two different lists. One list should be an ordered list, the other an unordered list. Figure out from below which list should be ordered and which should be unordered:

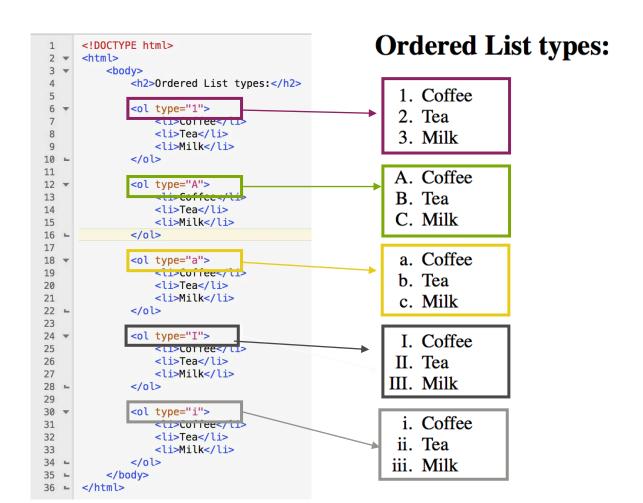
The first list should be a priority to do list of things that you have to do today.

The second list is a list of games you have at home or on your phone i.e. console games, mobile app games etc.

Again you should use the appropriate list tag.



Ordered List Types:





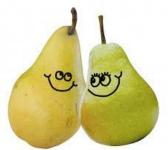
Activity: Ordered List Type

Create three different ordered lists each with a different ordered list type:

The first list should be a list of your favourite drinks, your most favourite being at the top of the list.

The second list is a list of things which you would describe yourself as e.g. I am quite adventurous I love to going to new places outside.

The third list should be a list of things that you dislike the most e.g. I don't like being caught in the rain.



Tables:

,,,

An HTML table is defined with the tag.

Each table row is defined with the
 table row is defined with the table header is defined with the table headings are bold and centered. A table data/cell is defined with the table table table.



Tables: ,,,

```
<!DOCTYPE html>
1
2 -
   <html>
3 -
      <body>
        <h2>Basic HTML Table</h2>
4
          5
6
             7
               Firstname
8
               Lastname
9
               Age
10 -
             11 -
             12
               Bob
               Jones
13
14
               35
15 -
             16
             17
               Alice
               Robinson
18
19
               64
20 -
             21 ▼
             22
               Mark
23
               Williams
24
               24
25 -
             26
27
      </body>
28
   </html>
```

Basic HTML Table

Firstname	Lastname	Age
Bob	Jones	35
Alice	Robinson	64
Mark	Williams	24



Activity: Tables

Create a table which contains three columns, each column contains three rows:

The first column is about Music/Songs.

The second column is the Artist/Band who made those songs.

The third column is the number of times (estimate, unless you actually know the exact number of times) you listened to that song.



Activity: Match Up

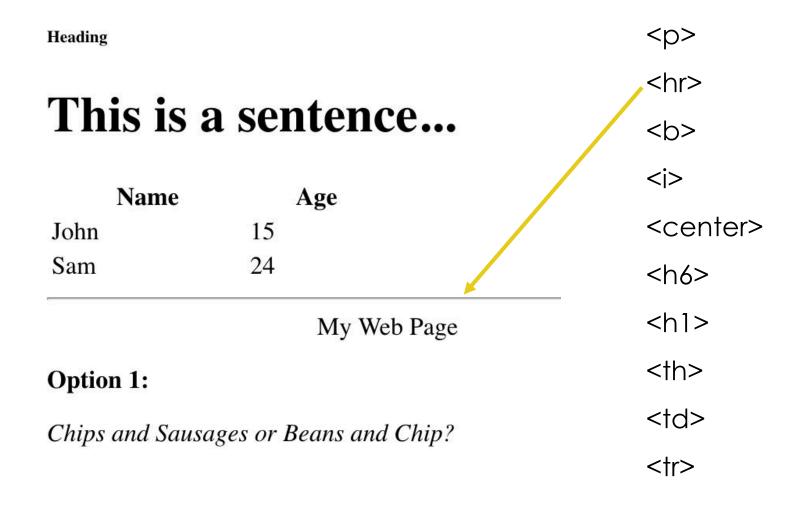
Using the HTML tags on the right, match up each tag with its corresponding output.

Note: some tags may have been used twice.

Heading		>	
This is a sentence		<hr/>	<h1></h1>
Name	Age	>	
John Sam	15 24	.•.	>
	My Web Page	<j></j>	
Option 1:		<center></center>	
Chips and Sausages or Beans and Chip?			
		<h6></h6>	



Heading		/	
		<hr/>	
This is a	i senter	ce / 	
Name	Age	<j></j>	
John	15	<cente< th=""><th>er></th></cente<>	er>
Sam	24	<h6></h6>	
	My '	Web Page <h1></h1>	
Option 1:		<	
Chips and Sausa	ges or Beans a	nd Chip?	
	0		



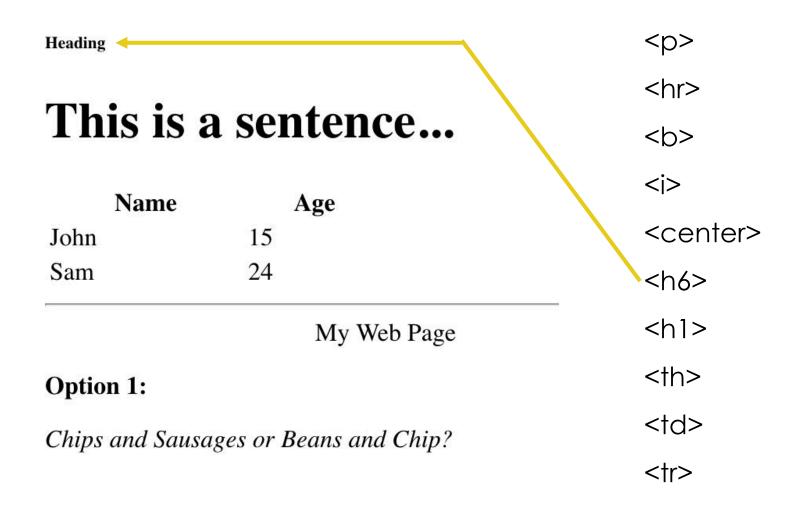


Heading		>
This is a sentence		<hr/>
		
Name	Age	<i>></i>
John	15	<center></center>
Sam	24	<h6></h6>
	My Web Page	
Option 1: Chips and Sausages or Beans and Chip?		
		>



Heading		>	
		<hr/>	
This is a sentence			
Name	Age		/ <i></i>
John	15		<center></center>
Sam	24		<h6></h6>
	My We	b Page	<h1></h1>
Option 1:			
Chips and Sausages or Beans and Chip?		>	
1	O		<†r>

Heading		
This is a sentence		<hr/>
		
Name	Age	<j></j>
John	15	<center></center>
Sam	24	<h6></h6>
	My Web Page 🚄	<h1></h1>
Option 1:		
Chips and Sausages or Beans and Chip?		<†d>
		<†r>



Heading		
		<hr/>
This is a	ı sentençe	
Name	Age	<i>></i>
John	15	<center></center>
Sam	24	<h6></h6>
	My Web Page	<h1></h1>
Option 1:		
Chips and Sausages or Beans and Chip?		>
	6	

Heading		>
This is a sentence		<hr/>
		
Name -	Age	<j></j>
John	15	<center></center>
Sam	24	<h6></h6>
	My Web Page	<h1></h1>
Option 1:		
Chips and Sausages or Beans and Chip?		>

Heading	>
	<hr/>
This is a sentence	
Name Age	<i>></i>
John 15	<center></center>
Sam 24	<h6></h6>
My Web Page	<h1></h1>
Option 1:	>
Chips and Sausages or Beans and Chip?	

Heading	
	<hr/>
This is a sentence	
Name Age	<i>></i>
John 15	<center></center>
Sam 24	<h6></h6>
My Web Page	
Option 1:	
Chips and Sausages or Beans and Chip?	>



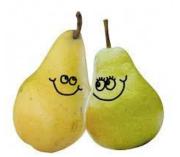
Activity: HTML Document

Use the tags learned up until now to mark up the document in your workbooks.



CSS

CSS stands for Cascading Style Sheets. CSS describes how HTML elements are to be displayed on screen, paper, or in other media. CSS saves a lot of work. It can control the layout of multiple web pages all at once



Style: <style>

Add the following code on the right inside your <head> tag and have a look at what happens to your table(s) in your HTML file.

After this bit of code is added to students HTML file, it will format the table with colours.

This is known as HTML styling or CSS. It allows the HTML pages to look more professional.

```
<style>
        table
            font-family: arial, sans-serif;
            border-collapse: collapse;
            width: 100%;
        td, th
            border: 1px solid #FFFFFF;
            text-align: left;
            padding: 8px;
        tr:nth-child(even)
            background-color: #7FFF00;
</style>
```



Activity: Styling Tables

Open up your table activity HTML file for the Table Activity and add the code from the previous slide inside your <head> tag.

Next, change the font used for your table and the size of the padding.

Using the internet research different HTML #?????? colour code e.g. #FFFFFF Is the code for the colour black.

Change the colour of your table rows.



Activity: Background Colour

```
<!DOCTYPE html>
<html>
<body style="background-color:powderblue;">
<h1>This is a heading</h1>
This is a paragraph.
</body>
</html>
```

This is a heading

This is a paragraph.



Activity: Changing Font

```
<!DOCTYPE html>
<html>
<body>
<h1 style="font-family:verdana;">This is a heading</h1>
This is a paragraph.
</body>
</html>
```

This is a heading

This is a paragraph.



Activity: Highlighting Text

```
<!DOCTYPE html>
<html>
<body>
<h2>HTML <mark>Marked</mark> Formatting</h2>
</body>
</html>
```

HTML Marked Formatting



Find more at w3schools.com

https://www.w3schools.com/html/html_styles.asp



Activity: Create Your Own!

Using the workbook provided to brainstorm ideas, create a different HTML revision document of a subject of your own choosing and using the tags that we have learned your document needs to include at least one of each tag you have used.

Research and brainstorm ideas of what subject you would like to create a revision HTML page on:

- What subject to base your revision webpage on,
- What topics within that subject will you use,
- What sub-topics within those topics,
- What information regarding those to pics do you need,
- How would you like your webpage laid out.

Extension: Research on different HTML styling / CSS you can use to make your webpage look much more professional.

Example:

Subject: Mathematics:

Topics:

- Numbers
 - Prime Factors
 - Index notation
 - Venn diagrams
- Algebra
 - Equations of curves
 - Basic Algebra
- Geometry and Measures
 - Polygons
- Statistics
 - Probability
 - Histograms

etc.