

HTML – Basic tags

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HTML

HTML stands for Hypertext Mark-up Language. The World Wide Web is made of HTML files, HTML files are formatted documents that can contain links, as well as images and other media. Web browsers read and display HTML files. HTML describes the **structure** of a page.

To create a web page, you need to identify the sections of a page which are headings and the sections that are paragraphs, images and so on. You do that by creating elements.

HTML **elements** consist of **tags** enclosed in angle brackets (like <html>). HTML tags most commonly come in pairs like <h1> and </h1>, although some tags, known as empty or void elements, are unpaired, for example . The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text and other tags.

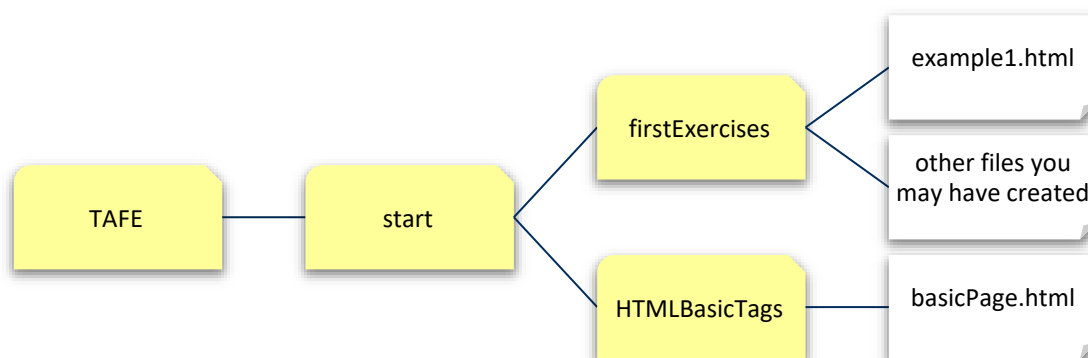
Activity 1. Create a web page

Create a folder called “HTMLBasicTags”

All of the exercises in this PDF should be saved in a folder called “HTMLBasicTags”. On your memory stick you should have a folder called “TAFE” inside the TAFE folder you should have a folder called “start”. Inside the start folder create a folder called “HTMLBasicTags”

Using sublime create a new html page called “basicPage.html”

So far your folder structure should look like:



Add the following code:

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Basic HTML</title>
5 </head>
6 <body>
7   <h1>This is a heading</h1>
8   <p>This is a paragraph.</p>
9   <p>This is another paragraph.</p>
10  <h2>This is a smaller heading</h2>
11  <p>More text added here.</p>
12 </body>
13 </html>
```

Save it and view it in the browser, it should look like:

This is a heading

This is a paragraph.

This is another paragraph.

This is a smaller heading

More text added here.

Doctype

First, we have the **Document Type Declaration, or doctype**. This is a way to tell the browser what type of document it's looking at. The doctype should always be the first item at the top of any HTML file. The doctype can be written in uppercase, lowercase, or mixed case.

The html element

Web pages are built using **elements**. An element is as follows:

```
<html>
</html>
```

The first line is the opening **tag**.

```
<html lang="en">
</html>
```

You can add an **attribute** "lang" to specify the language of the web page. In this example we have set the language to English.

The second line is the closing tags. The html tag surrounds the contents of the web page. All other tags must go between the opening and closing html tags. It is also called the root element.

The head element

The head element contains information about the page. It will not contain any information that will be displayed on the page.

The title element

This is the text that appears in the title bar of the browser window. It is also the text that appears when the web page is minimized. The title element is used heavily by **search engines**. Giving your web page a meaningful title is very important.

The meta element

Although we haven't added this yet you can include the meta element, it provides information about the document content; that information may be used by the browser to decide how to display content.

```
<meta charset="utf-8">
```

Document encoding tells the browser what standards we are using when it comes to interpreting characters. UTF-8 is Unicode which covers all the main characters of the English language.

The body element

The body element contains everything you see on the screen.

Basic structure of a web page

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <title></title>
</head>
<body>

</body>
</html>
```

The above contains the elements needed for every web page. As nothing appears in the body the browser will not display anything. In our first active the <body> element contained:

<pre><h1>This is a heading</h1></pre>	The browser will display a large heading. <h1> marks up the text as the most important heading of the page.
<pre><p>This is a paragraph.</p></pre>	The browser will display this text as a paragraph. A paragraph is typically displayed with some space above and below.
<pre><p>This is another paragraph.</p></pre>	The browser will display this text as a paragraph. The <p> marks up the text as a paragraph.
<pre><h2>This is a smaller heading</h2></pre>	The browser will display a heading with slightly less importance as a <h1> heading.
<pre><p>More text added here.</p></pre>	The browser will display this text as a paragraph.

Additional practice

1. Create a new page and call it "whatIsHTML.html"

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8">
5   <title>What is HTML</title>
6 </head>
7 <body>
8   <h1> What is HTML? </h1>
9   <p>HTML stands for Hypertext Mark-up Language. It is the main mark-up language for
creating web pages.</p>
10 </body>
11 </html>
```

What is HTML?

HTML stands for Hypertext Markup Language. It is the main mark-up language for creating web pages.

Important text elements

All our pages will contain text, a well-structured web page will use headings and paragraphs.

Headings and paragraphs

When you open a book, document, magazine or webpage the content is organised with headings and paragraphs. The headings break up the content to make it easier for the reader to locate sections and read the content.

The **h1** element is used to indicate the **most important** (or highest-level) heading on the page. In total, we have six heading levels to choose from—h1 to h6—to add structure to the web page. h1 is the highest heading level (and, by default, the largest in terms of font size) and **h6 the lowest** (and smallest). A document's first heading should be an h1, followed by one or more h2 headings; each of these h2 headings can then have a further series of h3 headings below them, and so on, right on down to heading level 6. The HTML spec states that **heading levels should not be skipped** (that is, you shouldn't have a series of headings in the order h1, h2, h2, h4, which skips the h3 entirely).

Paragraphs separate text content on your web pages just as paragraphs in a book separate text. The p element is one of the most commonly used building blocks of HTML. When you use the p element to begin a new paragraph in HTML, it automatically creates some space above and below the content. This space is applied by the browser's built-in style sheets, but you can override it as you see fit using CSS.

Search engines look at headings so it is important to use the correct heading level.

Activity 2. Headings

Create a file called **headings.html** add the following code:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8">
5   <title>Headings</title>
6
7 </head>
8 <body>
9   <h1>This is a level 1 heading</h1>
10  <h2>This is a level 2 heading</h2>
11  <h3>This is a level 3 heading</h3>
12  <h4>This is a level 4 heading</h4>
13  <h5>This is a level 5 heading</h5>
14  <h6>This is a level 6 heading</h6>
15  <p>There is no level 7 remember a p tag is a paragraph</p>
16 </body>
17 </html>
```

You should see:

This is a level 1 heading

This is a level 2 heading

This is a level 3 heading

This is a level 4 heading

This is a level 5 heading

This is a level 6 heading

There is no level 7 remember a p tag is a paragraph

Headings range from h1 through to h6 and they tell the browser the level of importance.

Additional practice

1. Create a web page called **contact.html**. The page will list the contact details for some people, first we will create it as a single paragraph:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8">
5   <title>Contact Details</title>
6 </head>
7 <body>
8   <p>Contact Details
9   John Smith
10  Phone: 123456
11  Email: john.smith@email.com
12  Kate Brown
13  Phone: 789654
14  Email: kate.brown@email.com
15  Jane Wright
16  Phone: 4546321
17  Email: Jane.brown@email.com
18  Jack Yu
19  Phone: 369852
20  Email: jack.yu@email.com
21 </p>
22 </body>
23 </html>
```

Contact Details John Smith Phone: 123456 Email: john.smith@email.com Kate Brown Phone: 789654 Email: kate.brown@email.com Jane Wright Phone: 4546321 Email: Jane.brown@email.com Jack Yu Phone: 369852 Email: jack.yu@email.com

Even the line breaks are ignored. This makes it harder to read and understand.

2. Modify the file so it contains headings and paragraphs:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8">
5   <title>Contact Details</title>
6 </head>
7 <body>
8   <h1>Contact Details</h1>
```

```

9
10 <h2>John Smith</h2>
11 <p>Phone: 123456
12 Email: john.smith@email.com</p>
13
14 <h2>Kate Brown</h2>
15 <p>Phone: 789654
16 Email: kate.brown@email.com</p>
17
18 <h2>Jane Wright</h2>
19 <p>Phone: 4546321
20 Email: Jane.brown@email.com</p>
21
22 <h2>Jack Yu</h2>
23 <p>Phone: 369852
24 Email: jack.yu@email.com</p>
25
26 </body>
27 </html>

```

Contact Details

John Smith

Phone: 123456 Email: john.smith@email.com

Kate Brown

Phone: 789654 Email: kate.brown@email.com

Jane Wright

Phone: 4546321 Email: Jane.brown@email.com

Jack Yu

Phone: 369852 Email: jack.yu@email.com

Strong, em and br

The next 3 elements we will look at are:

Element	Description	Example/link
	signifies strongly emphasized content	<code><p>This word is more important than the rest of the paragraph.</p></code>
	signifies emphasized content	<code><p>This text is slightly more important than other text here.</p></code>

	creates a single line break in a block of text	<code><p>Hornsby Campus
205 Peats Ferry Road
Hornsby</p></code>

Activity 3. Strong

In this activity we will apply the tag to some text in your contact page:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8">
5   <title>Contact Details</title>
6 </head>
7 <body>
8 <h1>Contact Details</h1>
9
10 <h2>John Smith</h2>
11 <p><strong>Phone:</strong> 123456
12 Email: john.smith@email.com</p>
13
14 <h2>Kate Brown</h2>
15 <p><strong>Phone:</strong> 789654
16 Email: kate.brown@email.com</p>
17
18 <h2>Jane Wright</h2>
19 <p><strong>Phone:</strong> 4546321
20 Email: Jane.brown@email.com</p>
21
22 <h2>Jack Yu</h2>
23 <p><strong>Phone:</strong> 369852
24 Email: jack.yu@email.com</p>
25
26 </body>
27 </html>
```

Contact Details

John Smith

Phone: 123456 **Email:** john.smith@email.com

Kate Brown

Phone: 789654 **Email:** kate.brown@email.com

Jane Wright

Phone: 4546321 **Email:** Jane.brown@email.com

Jack Yu

Phone: 369852 **Email:** jack.yu@email.com

Notice “phone” is now displayed in bold.

Activity 4. Em

Now we will apply the element to the words “Email” so they are emphasised.

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8">
5   <title>Contact Details</title>
6 </head>
7 <body>
8 <h1>Contact Details</h1>
9
10 <h2>John Smith</h2>
11 <p><strong>Phone:</strong> 123456
12 <em>Email:</em> john.smith@email.com</p>
13
14 <h2>Kate Brown</h2>
15 <p><strong>Phone:</strong> 789654
16 <em>Email:</em> kate.brown@email.com</p>
17
18 <h2>Jane Wright</h2>
19 <p><strong>Phone:</strong> 4546321
20 <em>Email:</em> Jane.brown@email.com</p>
21
22 <h2>Jack Yu</h2>
23 <p><strong>Phone:</strong> 369852
24 <em>Email:</em> jack.yu@email.com</p>
25
26 </body>
27 </html>
```

Contact Details

John Smith

Phone: 123456 *Email:* john.smith@email.com

Kate Brown

Phone: 789654 *Email:* kate.brown@email.com

Jane Wright

Phone: 4546321 *Email:* Jane.brown@email.com

Jack Yu

Phone: 369852 *Email:* jack.yu@email.com

Activity 5. Br

 adds a line break. Modify the file so that the Phone and Email are on separate lines:


```

1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="utf-8">
5   <title>Contact Details</title>
6 </head>
7 <body>
8 <h1>Contact Details</h1>
9
10 <h2>John Smith</h2>
11 <p><strong>Phone:</strong> 123456<br>
12 <em>Email:</em> john.smith@email.com</p>
13
14 <h2>Kate Brown</h2>
15 <p><strong>Phone:</strong> 789654<br>
16 <em>Email:</em> kate.brown@email.com</p>
17
18 <h2>Jane Wright</h2>
19 <p><strong>Phone:</strong> 4546321<br>
20 <em>Email:</em> Jane.brown@email.com</p>
21
22 <h2>Jack Yu</h2>
23 <p><strong>Phone:</strong> 369852<br>
24 <em>Email:</em> jack.yu@email.com</p>
25
26 </body>
27 </html>

```

Contact Details

John Smith

Phone: 123456
Email: john.smith@email.com

Kate Brown

Phone: 789654
Email: kate.brown@email.com

Jane Wright

Phone: 4546321
Email: Jane.brown@email.com

Jack Yu

Phone: 369852
Email: jack.yu@email.com

Additional practice

1. Create a web page listing your timetable, the room number is emphasised and the stream name is in bold:

My Timetable

Monday

9:00 AM - 1:00 PM *G1.09A* Client side web programming
1:30 PM - 3:30 PM *G1.09A* Web page creation

Tuesday

9:00 AM - 1:00 PM *G1.09A* Web programming

Thursday

9:30 AM - 12:30 PM *G1.09A* Web page design and layout
1:30 PM - 3:30 PM *G1.09A* Web page creation

Friday

9:30 AM - 12:30 PM *G1.09A* CMS

Remember to be on time and attend every class

Entities

Character entities are used to display symbols on web pages. Here is a listing of some common character entities:

<https://dev.w3.org/html5/html-author/charref>

Here are some common character entities:

Character Reference	Symbol	
&gt;	>	Since > is a special character in HTML
&lt;	<	Since < is a special character in HTML
&amp;	&	Since & is used to start an entity
&copy;	©	
&trade;	™	
&reg;	®	
&nbsp;		Creates a space character

Activity 6. Adding entity characters

Create this web page:

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <title> Headings and Paragraphs</title>
5     <meta charset="utf-8" />
6   </head>
7
8   <body>
9     <h1>Headings and Paragraphs</h1>
```

```

10      <p>Headings range from h1 through to h6.</p>
11      <h1>A level 1 heading &lt;h1> is the largest</h1>
12      <h6>A level 6 heading is the smallest.</h6>
13      <p>Paragraphs separate text content on your web pages just as paragraphs in a book
separate text.</p>
14      <p>Other common entities include &nbsp; the non-breaking space
character, &copy; copyright, &trade; trade mark, &amp; ampersand, and &reg; registered
trademark</p>
15      </body>
16      </html>

```

Headings and Paragraphs

Headings range from h1 through to h6.

A level 1 heading <h1> is the largest

A level 6 heading is the smallest.

Paragraphs separate text content on your web pages just as paragraphs in a book separate text.

Other common entities include the non-breaking space character, © copyright, ™ trade mark, & ampersand, and ® registered trademark

Additional practice

1. Add an extra paragraph to the file, save it and make sure it appears in the browser.
2. Add a h2 heading under the h1 heading <h2>This is a level 2 heading</h2>

You will notice the browser displays elements differently. For example, a h1 heading is large bold text with some white space before and after the heading. This is because browsers have default styling for each element. Using CSS (cascading style sheets) we can change the way elements are displayed.

If you have a heading on a page which is the main heading but you want a smaller heading size you might be tempted to use h3 for example, however you should still be using h1 and use CSS to change its size. We will look at CSS as our next topic.

Comments in HTML

Most programming languages have comments, they are used to: Describe and explain code to other people who may need to view and edit the code. The comments are ignored by the web browser.

```
<!--This is a comment. Comments are not displayed in the browser-->
```

Activity 7. Comments

Modify the above code so that a comment is added:

```

1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <title> Headings and Paragraphs</title>
5      <meta charset="utf-8" />
6    </head>
7
8    <body>
9      <!--<h1>Headings and Paragraphs</h1>
10     <p>Headings range from h1 through to h6.</p>
11     <h1>A level 1 heading &lt;h1> is the largest</h1>
12     <h6>A level 6 heading is the smallest.</h6>
13     <p>Paragraphs separate text content on your web pages just as paragraphs in a book
separate text.</p>

```

```
14      <p>Other common entities include &nbsp; &nbsp; &nbsp; &nbsp; the non-breaking space
15      character, &copy; copyright, &trade; trade mark, &amp; ampersand, and &reg; registered
16      trademark</p>-->
15      </body>
16      </html>
```

When you open the page you will see that the browser has now ignored all of the HTML content.

Comments can be used to isolate problems when trying to find errors in the code.

Exercises

1. Create this web page:

This is a level 1 heading

This is a paragraph

This is a level 2 heading

This paragraph has *emphasised* words in it and some words are **strong**. The rest of the paragraph is in plain text

The copyright symbol: ©

In a paragraph you can also add line breaks
so that the content is displayed on the next line.