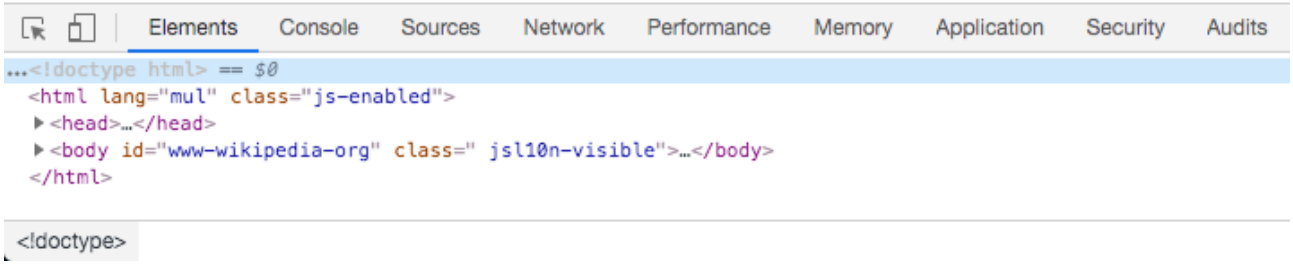
HTML & CSS for Beginners

Section 1: HTML

1.1 Structure of a Website

When we enter a URL address of the website you are browsing in a web browser, a request is sent to the server where the website lives and if the request is successful it will send back a HTML code which is downloaded by your computer.

The web browser will read the HTML code, interpret it and render the webpage accordingly. We can use the browser's developer tool and select the Elements tab to view the HTML code of the website we are viewing. Below is an example for Wikipedia.



We can view this line by line to understand the HTML structure:

ELEMENTS/TAG	DESCRIPTION
<!doctype html>	Document Type tells the browser the type of document the webpage is. In this case html refers to HTML5. **Note:** There are other document types.
<html></html>	This is a HTML element tag. All tags have an opening and closing tag. The closing tag has a forward slash (/). We can add attributes to tags for example lang="mul" is a language attribute set to multiple as its attribute value.
<head></head>	The head element usually contains various pieces of information which are used by the web browser for different purposes. **Note:** If we expand the head element we can view other elements nested inside of this element.
<meta charset="utf-8"> <meta name="viewport" content="initial-scale=1.0, user-scalable=yes">	A meta data is some machine passable data which does not appear on the webpage but will add some extra information to the browser so that it can render the page in the correct way. **Note:** Some tags are self-enclosing and do not require a closing tag. **Note:** charset attribute sets the character encoding of the webpage e.g. utf-8 covers all the characters and symbols in the world. The viewport attribute is used by the browser to render the webpage to different device sizes. The user-scalable value allows the user to zoom in and out of the webpage.
<title></title>	This is a title element and the text appears in the Browser Page Tab. If you try to add the page to their favourites the title will be suggested to you.

ELEMENTS/TAG	DESCRIPTION
<link>	A link element is used to link the webpage to external resources. For example the <link rel="stylesheet" href="…"> links the webpage to an external CSS style sheet used for decoration purposes.
<body></body>	The body element contains everything we see on the webpage. **Note:** If we expand the body element we can view other elements nested inside of this element. When we hover over the elements we would see the corresponding element on the page being highlighted.
 <a> …	There are many different elements that can be nested inside of the <body> element. These tags make up the structure of what is displayed in the webpage for example: The tag is a divisional tag, <a> is a anchor/link tag, is a line break tag, <h1> is a header tag, bolds text, emphasises (italics) text, <small> makes text smaller, etc.

To add a comment to a HTML code you would use the following syntax (*adding comment where Comment Text is*):
!-- Comment Text -->

Comments are used by developers to make the code more readable and can be used by yourself or any other developer to help track the code.

This introduces the structure i.e. components which builds up the skeleton of a webpage.

The HTML code behind a webpage consists of text only. Therefore, to create a website all we need is a text editor to write some text. There are many text editors out there to choose from for example: VS Code, Atom, Sublime, Brackets, Notepad, Notepad++ to name a few. You can download and install these editors by navigating over to their webpage.

When creating a new file you would need to add the .html file extension so that the web browser can recognise the file is a website.

At the moment the file is sitting on your computer. If we were to open the file in the web browser you would notice that the URL address bar of the web browser is using the file protocol. This means that the browser is reading a file located on your computer.
We would want the file to be on a remote server so that it can be shared across the world. This is why we need web hosting. We can buy web hosting from various web hosting providers.

We can use a FTP (File Transfer Protocol) to send files across between your computer and your web server. A popular FTP applications is FileZilla. You will need your web hosting FTP credentials to setup a FTP between machines.

Once the file is transferred to the web host server, the webpage should be available to view for the whole world visiting the web host webpage URL assigned to you.

If we have a file called index.html inside the root public directory of the website, whenever a user enters the address of the website this will land the user in the content of the index.html file. If the file was named something else the user would need to enter the

address followed by a forward slash (/) and the path to the file and the file name (for example: www.example.com/helloworld.html).

If there is no index.html file, when a user visits the web address (e.g. www.example.com) this will display the name(s) of the folders and files inside the public directory. Therefore, we would need to make sure we have one file called index.html inside of our web server for security reasons.

Note: There is another way to prevent the above from happening in the event of no index.html file inside the public directory. This will not be covered.