Introduction

What is HTML?

Html stands for Hyper Text Markup Language.

- HTML is not technically computer code but it doesn't hurt to refer to it as such. Its proper name is HTML.
- HTML is the building blocks of all web pages. It can be combined with such things as CSS (style sheets) and computer programs to make snazzy interactive web pages or it can be used on its own to make "web 1" pages.
- This course is designed to enable the student to design and create their own simple web page and to publish these pages on the internet (i.e. make them available for the entire world to see).
- To design our own web page we need a basic understanding of HTML, a simple word editor (notepad for example) and a browser (to test out creation)

Lesson 1

Create a folder on your computer to save all our work. (For example create a folder called JohnWeb on the desktop. This is where we will save everything we do in this course.)
Open up Notepad or Wordpad and type the following into a new word document and then save it as lesson1.htm in your new folder.

A very simple HTML document – *(lesson1-a.htm)*

```
<html>
<body>
<p>Hello everybody learning to make web pages.</p>
</body>
</html>
```

Now open your lesson1.htm with the web browser. (Double clicking lesson1-a.htm in your folder and the default browser will automatically start up)

Your Result:

```
Hello everybody learning to make web pages.
```

Boring!
So let's change the background colour and add a heading just to show what we can do.
Add to file lesson1.htm so it looks like this: *(lesson1-b.htm)*

```
<html>
<body bgcolor="lightblue">
<h2>Lesson 1 learning to make web pages </h2>
<p>Hello everybody learning to make web pages.</p>
</body>
</html>
```

Now hit your browser refresh button.

The result is a little less boring.

Now let us examine what we have done.
We have created four pair of tags. – <html>, <body>, <h2> and <p> and we have assigned an attribute to one of those pair of tags. They are called a pair of tags as they have a start tag <html> and an end tag </html>
The <html> tags tell the browser how to interpret everything in between
The <body> tags tell the browser what to display on the web page. That is everything between the start <body> and end </body> tags. Most of the other tags we will meet tell the browser how to display things.

HTML is made up of many different sets of tags and most of them have a list of attributes and/or associated tags that complement them. It is the attributes (including the associated tags) that enable us to vary the way the web pages look (and act).
Other tags can be used as "attributes" for a "mother" tag. For example the <p>tag can contain the <font> tag inside it and as such we can control the color, style and size of the font used by the <p> tag in this way.
Add to lesson1.htm so it looks like this: – *lesson1-c.htm*

```
<html>
<body bgcolor=" lightblue ">
<h2 align="center"> Lesson 1 learning to make web pages </h2>
<p align="center"><font face="verdana" size="4" color="blue">Hello everybody
learning to make web pages.</font></p>
</body>
</html>
```

Now hit your browser refresh button.

- The size attribute of <font> can also be expressed as a percentage eg. size="150%" – try it
- There are 6 heading tags <h1>,<h2>,<h3>,<h4>,<h5>,<h6> - try them
- Basic colours can be referred to just using their name as we did to set the font colour above. e.g. color="blue"
- Try adding more then one paragraph to your page. Change the type, colour and size of each font for each paragraph.
- Try adding some extra spaces between two words. What happens? They get ignored
- Try formatting the text you enter between the start and end <p> tags by typing it on different lines. What happens? It all ends up on the same line.
- To start a new line without a gap we can use the <br> tag. This tag is an exception as it has no end tag but a good web designer will always type it as
 (*some browser version stuff it up otherwise*)
- See what happens when we use a <hr /> (another exception as we do not need a start and end tag)

- Experiment with the following **TEXT** format tags. -- <b>, <strong>, <big>, <em>, <i>, <small>, <sub>, <sup>, <del>, <ins> -- by adding them to the start and end of a line of text inside the pair of paragraph (<p> </p>)tags.
- For pre formatted text such as a poem where we want to preserve the spaces and line formats we use the <pre> tag. It keeps the spaces and the new lines just like we have typed it.
- Try the address tag. Hint: use a <br /> at the end of each address line.

Abbreviations and acronyms
Add to lesson1.htm so it looks like this: – *lesson1-d.htm*

```
<html>
<body bgcolor="#99FF66">
<h2 align="center">Lesson 1 learning to make web pages.</h2>
<p align="center"><font face="verdana" size="4" color="blue">Hello everybody
learning to make web pages.</font></p>
<abbr title=" Eden High School ">EMHS</abbr><br />
<acronym title="Eden Tigers ">ET</acronym>
</body>
</html>
```

Now hit your browser refresh button. Hover your mouse over the EMHS and ET.

Comments
All computer code, and HTML for that matter, should contain comments. It helps you when you want to go back over a large file and edit it. Comments are used to label an area of the HTML so it easy to find or to explain how a complicated looking piece of HTML actually works.

Add to lesson1.htm so it looks like this: – *lesson1-e.htm*

```
<html>
<body bgcolor="#99FF66">
<h2 align="center">Lesson 1 learning to make web pages </h2>
<!-- Everything on this line will be hidden from the browser -->
<p align="center"><font face="verdana" size="4" color="blue">Hello everybody at the
Eden Access Centre learning to make web pages.</font></p>
<abbr title=" Eden High School ">EMHS</abbr><br />
<acronym title="Eden Tigers ">ET</acronym>
</body>
</html>
```

Now hit your browser refresh button.
See nothing changes.

Lesson 2

The STYLE tag

The STYLE tag is the most useful and powerful tag we have. Most HTML courses will not mention it but I think it is much better if we learn about it sooner rather that later.

Create a new notepad file so it looks like below: – Name it lesson2.htm.

```
<html>
<body style="background-color:yellow">
<h2 style="text-align:center">Lesson 2 learning to make web pages.</h2>
<p align="center"><font face="verdana" size="4" color="blue">Hello everybody
learning to make web pages.</font></p>
</body>
</html>
```

Now open this file with your browser. So What??

Besides the background colour changing it appears nothing else has happened from lesson1.htm so what is the big deal about the <STYLE> tag? Well if it is used in this way it is not that good. However

Add to lesson2.htm so it looks like this: : – *lesson2-b.htm*

```
<html>
<style>
body{background-color:yellow }
h2 {text-align:center}
p.bluefont
{
text-align:center;
color:blue;
font-weight: 900;
font-size: 100%;
font-family: sans serif;
}
p.redfont
{
text-align:right;
color:red;
font-weight: 400;
font-size: 120%;
font-family: verdana;
}
</style>
<body >
<h2>Lesson 2 learning to make web pages.</h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p class="redfont">Hello everybody learning to make web pages.</p>
</body>
</html>
```

Now hit your browser refresh button.

Ok we can now see some of the power of the <style> tag. It can hold all the attributes and characteristics of any tag in one place. This means anytime we want to have the attributes described by say the class "redtag" we just need to use the class attribute of the <p> tag. It saves a lot of double typing and also means if we decide later to change something about the "redfont" we change it just once in the <style> tag and it will be automatically changed in every <p> tag that we use the "redfont" class with. Any individual HTML tag can have a class defined in this way. As the lesson progresses we will learn just how much work we can save by making use of the <style> tag.

Notice that the <body> and <h2> elements of the style are on their own but the <p> elements are different by the use of a .*classname* immediately following.

Eg -- p.redfont -- where redfont is the classname. When we follow a tag element with a .*classname* we are declaring a class of this element. Using classes is a very useful and powerful way of formatting HTML.

But using the <style> tag can get even better. Let's create a Cascading Style Sheet (that is what CSSstands for) that can be used by many different web pages all at once.

Cut and paste the text from lesson2.htm between the pair of <style> tags to a new text document and save this new file as **lesson2.css.**

```
body{background-color:yellow }
h2 {text-align:center}
p.bluefont
{
text-align:center;
color:blue;
font-weight: 900;
font-size: 100%;
font-family: sans serif;
}
p.redfont
{
text-align:right;
color:red;
font-weight: 400;
font-size: 120%;
font-family: verdana;
}
```

Now

Make changes to lesson2.htm so it looks like this: : – *lesson2-c.htm*

```
<html>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
<body >
<h2>Lesson 2 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p class="redfont">Hello everybody learning to make web pages.</p>
</body>
</html>
```

Now hit your browser refresh button. Everything looks the same. This Cascading Style Sheet can be referenced from many different web pages and any changes to any elements of the style will be automatically updated by any of the web pages that are referencing that class. Notice we have added a link to an external file using the <link> tag.

- The <link> tag defines the relationship between a document and an external resource.
- The <link> tag is most used to link to style sheets.

A Little bit more.

3 other tags that can be quickly introduced here and are important are the <head>, <title> and <meta> tags.

Make changes to lesson2.htm so it looks like this: : – *lesson2-d.htm*

```
<html>
<head>
<meta name="description" content="Lesson 2 on HTML" />
<meta name="keywords" content="Some High School, lesson2, html" />
<title>Lesson2</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body >
<h2>Lesson 2 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p class="redfont">Hello everybody learning to make web pages.</p>
</body>
</html>
```

Now hit your browser refresh button.

Notice anything different? The title appears.

The meta tags do not have any visible effect but they are very important. They are examined by search engines like Google and will help your page appear in search results.

Lesson 3

IMAGES

Most simple web pages are made up of just text and images. Above is a very brief introduction to using text with HTML. Let's move on to including images.

First lets find some images and save them to the folder we created at the start of lesson 1. We can do this by copying an image from the internet.
Try -- http://www.designedtoat.com/cartoons.htm --
Let's save an image as animal1.gif

Now create a new text file and save it as lesson3.htm – *lesson3a.htm*

```
<html>
<head>
<title>Lesson3 Images</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body >
<h2>Lesson 3 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p>
An image:
<img src="animal1.gif"
width="144" height="144">
</p>
</body>
</html>
```

Open Lesson3.htm with your browser. Play around with the width and height attributes.
This worked because the image and the text file were stored in the same folder.
We can access images from a different folder also. Make a new folder inside your work folder called "images" and put an image into it called animal2.gif.

Make changes to lesson3.htm so it looks like this: : – lesson3-b.htm

```
<html>
<head>
<title>Lesson3 Images</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body >
<h2>Lesson 3 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p>
An image:
<img src="images/animal2.gif"
width="144" height="144">
```

```
</p>
</body>
</html>
```

Images can also be used as background images

Make changes to lesson3.htm so it looks like this: : – *lesson3-c.htm*
```
<html>
<head>
<title>Lesson3 Images</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body background="images/animal3.gif">
<h2>Lesson 3 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p>
An image:
<img src="images/animal2.gif"
width="144" height="144">
</p>
</body>
</html>
```
Now hit your browser refresh button.
Images smaller than the background page size will repeat themselves to fill the entire space.

Aligning Images with text
Make changes to lesson3.htm so it looks like this: : – *lesson3-d.htm*
```
<html>
<head>
<title>Lesson3 Images</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body>
<h2>Lesson 3 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p>
An image:
<img src="images/animal2.gif"
align="bottom" width="144" height="144">
```

```
</p>
</body>
</html>
```

Now hit your browser refresh button.

- Also try the align ="top" and align ="middle" settings. (bottom is the default)
- Next move the text to after the <img> tag and then surround the <img> tag with some text.
- Next try the align="left" and align="right" settings.

Alternate text

Some browsers do not display images (only really old ones) we can set it to display text if the Image is not displayed. This is a good habit to get into. It is good for testing your HTML pages as well as the image you reference may not be where it is expected.

Make changes to lesson3.htm so it looks like this: : – *lesson3-e.htm*

```
<html>
<head>
<title>Lesson3 Images</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body>
<h2>Lesson 3 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p>
An image:
<img src="images/animal2.gif"
align="bottom" alt="animal" width="144" height="144">
</p>
</body>
</html>
```

Now hit your browser refresh button.
Now change it to say animal6.gif. The image is not found so the text is displayed.

Lesson 4

HYPERLINKS

One other common part of a web page besides text and images is a link to another web page. These are referred to as hyperlinks. Hyperlinks are set with the <a> tag (anchor tag)

Now create a new text file and save it as lesson4.htm – *lesson4a.htm*

```
<html>
<head>
<title>Lesson4 Links</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body >
<h2>Lesson 4 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
 <p>
<a href="lesson3.htm">
Lesson 3</a> is what we learnt earlier
</p>
<a href="  http://www.w3schools.com/ ">
W3 Schools</a> is a good web page.
</p>
</body>
</html>
```

Open Lesson4.htm with your browser. Click on the link and see what happens.

We can set an image with the link.

Make changes to lesson4.htm so it looks like this: : – *lesson4-b.htm*

```
<html>
<head>
<title>Lesson4 Links</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body >
<h2>Lesson 4 learning to make web pages. </h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
 <p>
<a href="lesson3.htm"><img border="0" src="images/animal1.gif" width="50"
height="50"></a> is what we learnt earlier
</p>
<a href=" http://www.w3schools.com/ ">W3 Schools</a> is a good web page.
</p>
</body>
</html>
```

Now hit your browser refresh button.

- We can also add alt="animal1" in case the browser does not display the image.

Sometimes a link can be to another part of the same page.

Make changes to lesson4.htm so it looks like this: : – *lesson4-c.htm*

```
<html>
<head>
<title>Lesson4 Links</title>
<link rel="stylesheet" type="text/css" href="lesson2.css" />
</head>
<body >
<h2><a name="part1">Part 1</a></h2>
<p class="bluefont">Hello everybody learning to make web pages.</p>
<p><a href="#part2">Jump to part 2</a></p>
<h2><a name="part2">Part 2</a></h2>
<a href=" http://www.w3schools.com/ ">W3 Schools</a> is a good web page.
</p>
<p><a href="#part1">back to part 1</a></p>
</body>
</html>
```

Now hit your browser refresh button.

The next parts of the course will deal with the <table> tag.

Homework: (optional)
Visit the below website. It can teach you everything about web design.
http://www.w3schools.com/default.asp

Lesson 5

Tables

Tables consist of rows and columns. Each Table starts with a <table> tag. Each table row starts with a <tr> tag. Each table cell starts with a <td> tag. Within each table cell we can add text, images, hyperlinks, background colours etc with all the formatting and attributes we have learnt in earlier lessons. Tables are very good for formatting the way a web page looks as we can divide it up into rows and columns and hold different elements in different positions on the page.
 Let's set up some different looking tables. Tables consist of rows and columns.

Now create a new text file and save it as lesson5.htm – *lesson5-a.htm*

```
<html>
 <body>
<p>table 1<p>
<table border="1">
<tr>
 <td>The Famous Four Project</td>
</tr>
</table>
<p>table 2<p>
<table border="1">
<tr>
 <td>The</td>
 <td>Famous</td>
 <td>Four</td>
</tr>
</table>
<p>table 3<p>
<table border="1">
<tr>
 <td>The</td>
 <td>Famous</td>
 <td>Four</td>
</tr>
<tr>
 <td>HTML</td>
 <td>Course</td>
 <td>Table</td>
</tr>
</table>
</body>
</html>
```

- Change the border="1" attribute to different values and see what happens. (try from 0 to 10)
- Remove the text from 1 or more cells in a table

We can make cells span more that a single row or more that a single column.
Make changes to lesson5.htm so it looks like this: : – *lesson5-b.htm*

```
<html>
<body>
<p>table 2<p>
<table border="1">
<tr>
 <td colspan="3">Hello everybody learning to</td>
</tr>
<tr>
 <td >make</td>
 <td>web</td>
 <td>pages</td>
</tr>
</table>
<p>table 3<p>
<table border="1">
<tr>
 <td rowspan="2">How</td>
  <td>The</td>
 <td>Famous</td>
 <td>Four</td>
</tr>
<tr>
 <td>HTML</td>
 <td>Course</td>
 <td>Looks</td>
<td>at</td>
 <td>Tables</td>

</tr>
</table>
</body>
</html>
```

- Try adding a heading, paragraph, image and then hyperlink inside each of the table cells of the above tables. (Hint the opening and closing tags must be nested inside the <td> …. </td>)
- Try setting a different background colour of each cell of the above tables. (Hint: use bgcolor="red" inside the opening <td>)
- Try setting a background colour for every cell of the above tables. (Hint: use bgcolor="xxxxxxx" inside the opening <table> tag) replace xxxxxx with a color name
- Try setting a background image for every cell of the above tables. (Hint: use background="animal1" inside the opening <table> tag)

- Use the align="left", align="right", align="center", This can be used to format a money column perhaps