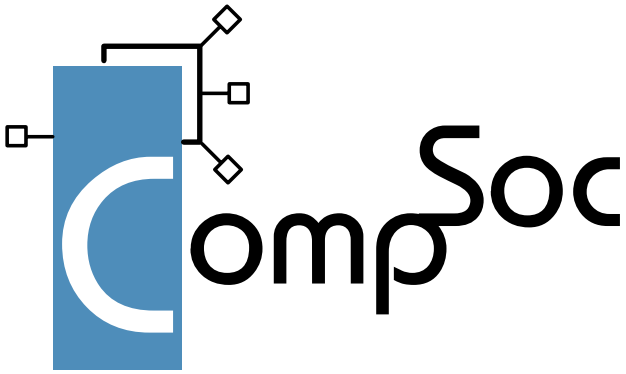


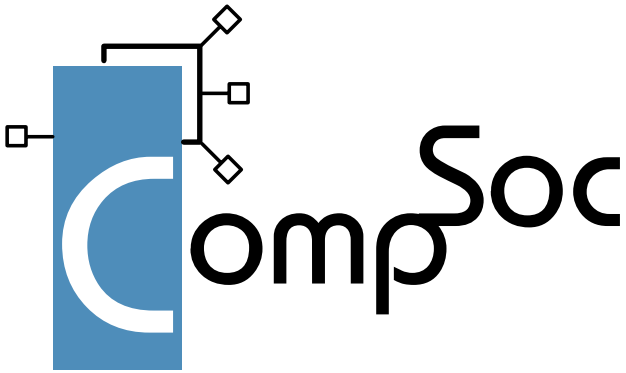
HTML Workshop

HTML

HyperText Markup Language

The Language behind Web Pages

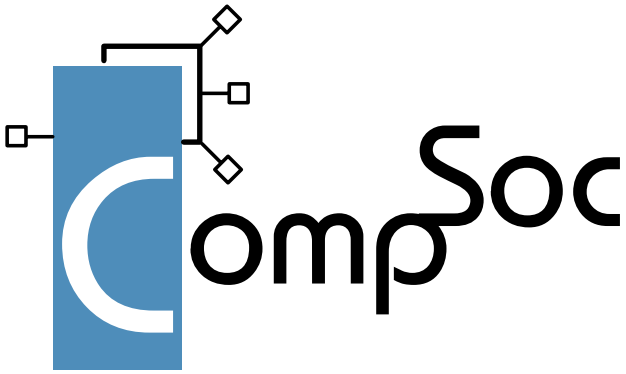
Workshop by Fionnuala Gibney



What is HTML

HTML stands for **H**yper**T**ext **M**arkup **L**anguage, in essence this means that HTML is plain text with special tags ("markups") which are used to create different effects.

A web browser will "read" HTML and add in the effects so the person viewing the page can see it as intended.

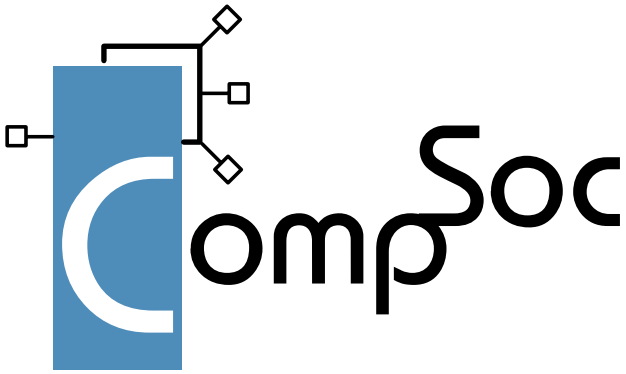


Writing HTML

Web pages can be created in a number of ways, using a WYSIWYG (What You See Is What You Get) editor such as Microsoft FrontPage (ick), or Macromedia Dreamweaver (better), or you can simply make them in a plain text editor.

We'll be using Notepad. ☺

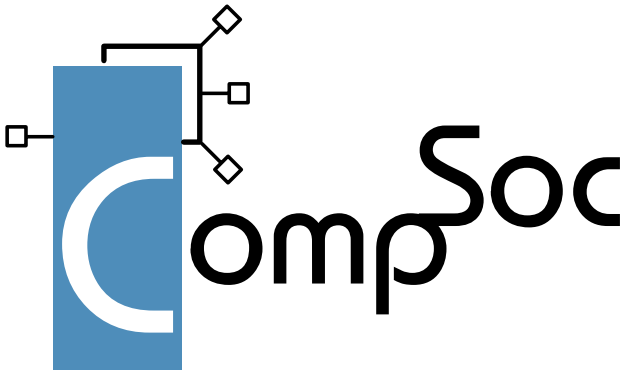
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HTML Basics

Writing HTML is relatively simple, but there are a few things that are important to look at in the beginning.

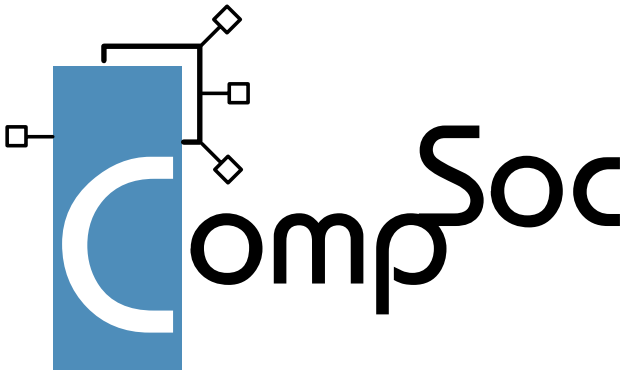
HTML "tags" generally come in pairs, e.g. if you have an opening tag <HTML>, then you will also have a closing tag </HTML>, the closing tags look identical to the first word of the tag only they have a / to show they are the closing tags.



HTML Basics

The web browser (e.g. Microsoft Internet Explorer, Netscape Navigator) simply reads the text between the tags and then makes the text appears on the page formatted in the way the tags says for it to be.

I tend to put HTML code in capital letters for ease of editing/reading.



Starting Your Page

Open Notepad [Start -> Programs -> Accessories -> Notepad].

We're going to try and keep all the files associated with your website in the same directory because this will make it far easier to manage and maintain.

First press Save.

Saving Your Page

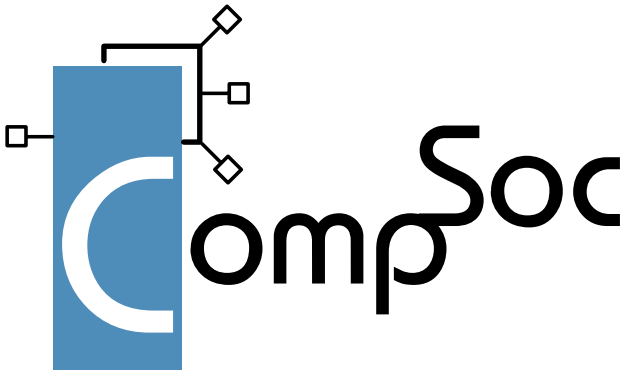
Select your U: drive and then click the “Create a New Folder” Icon:



You can call your folder anything you like, “My Website” would be a good start.

Open this folder and save your file as “index.html”

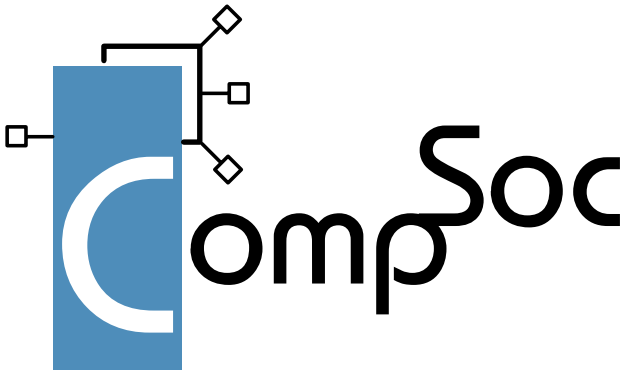
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index.html

Type the following code into your file and then press Save.

```
<HTML>
<HEAD>
<TITLE> My First Web Page </TITLE>
</HEAD>
<BODY>
Hello World
</BODY>
</HTML>
```



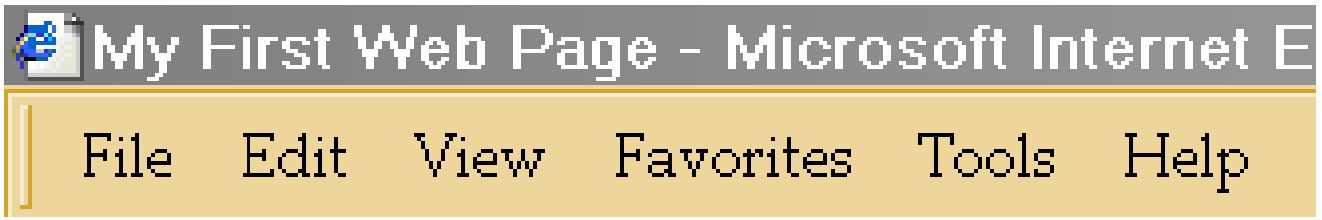
What index.html Shows

Now we'll open up index.html in a web browser so you can see what you have created. ☺

Click Start -> Run, then click "Browse" and change "Files of Type" to "All Files".

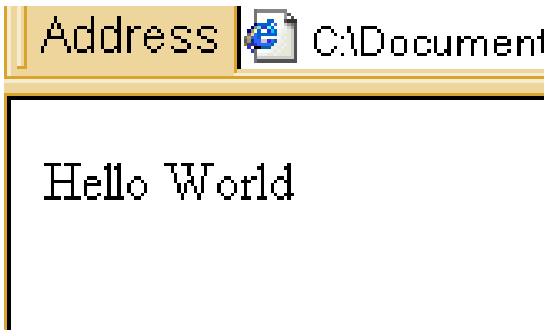
Go to your U: drive and double click on your folder, then "index.html". Click "Run".

What index.html Shows



In the top right hand corner you should see the words that you typed between the <TITLE> and </TITLE> tags.

In the web page itself you should see whatever words you put between the <BODY> tags.



Changing index.html

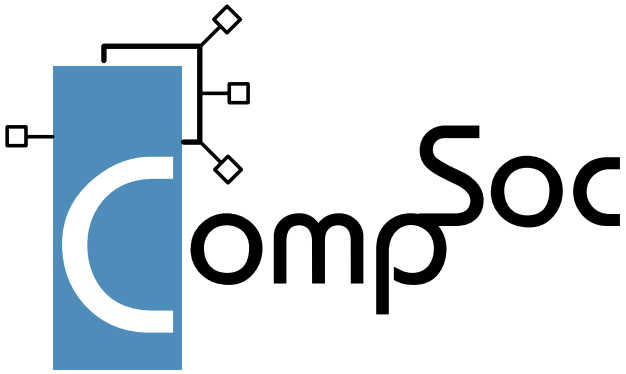
Minimise the web browser window and go back to the Notepad window.

Try changing the text between the <TITLE> tags and the <BODY> tags.

Save the file (CTRL + S at the same time is a handy shortcut) and open the web browser window again.

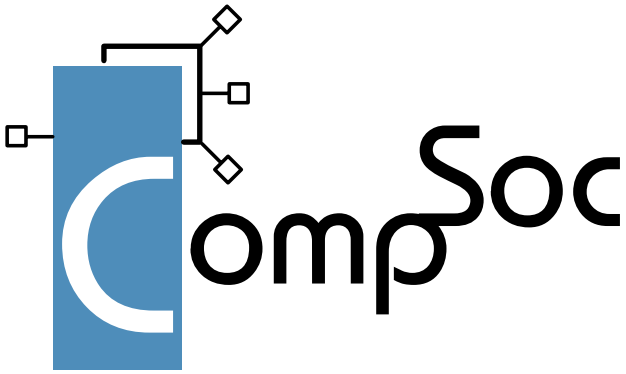


Click the Refresh button (or F5) and you should see your updated page.



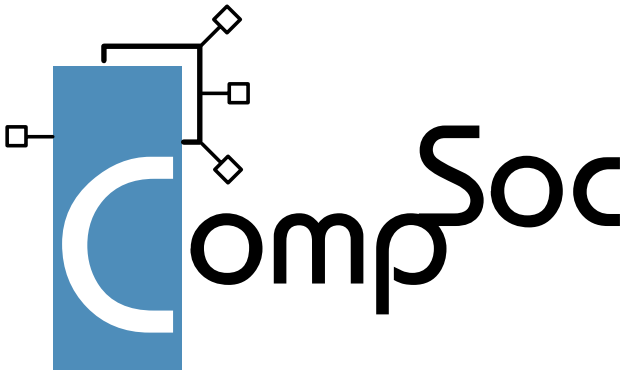
Explaining the Basics

Now that you've seen what some of the tags do, and how easy it is to change content, we'll take a look at the tags we've used so far in a little more detail.



<HTML> … </HTML>

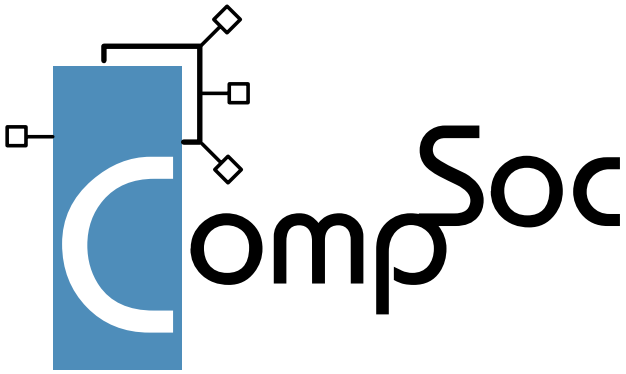
Everything on in a HTML file should be in between the HTML tags, this indicates to web browsers that all the code in between those tags is part of a HTML file and should be thus interpreted.



<HEAD> … </HEAD>

Code that is between the HEAD tags is there to be read by the web browser but not displayed as it is on the web page.

You can set the title of your web page by changing the words between the <TITLE> and the </TITLE> tags. (as you should have already seen!)



<BODY> … </BODY>

Code that is between the BODY tags is the code that will be displayed in the web page itself.

Anything that you want to be displayed on the page should be typed in before the closing tag.

Both the BODY and HEAD tags should be contained within the HTML tags

Preformatted Tags

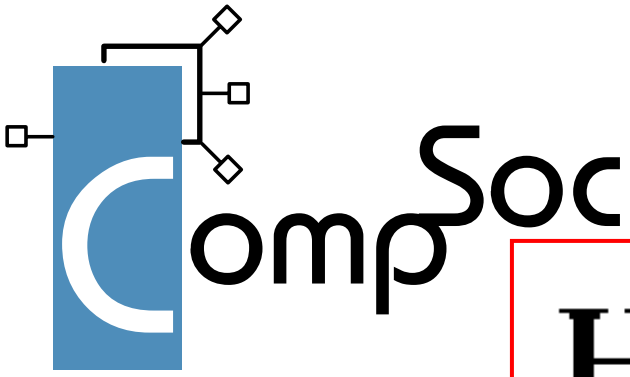
Add the line:

```
<H1> Page Heading </H1>
```

into the BODY tags, save (CTRL + S) and refresh (F5) the page in the web browser.

The text in between the H1 tags should appear far larger.





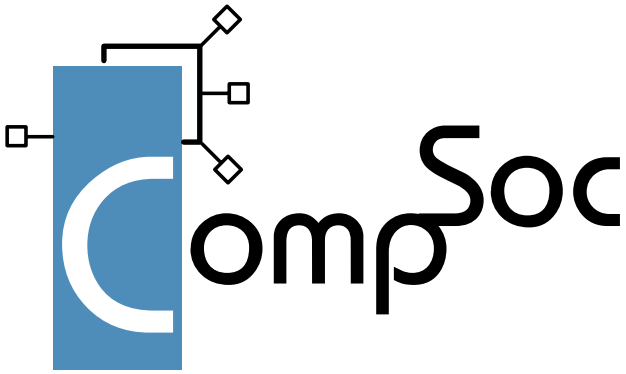
Preformatted Tags

H1 H2 H3 H4 H5 H6

H1 is short for “Headline 1”, a pre-formatted tag which contains a font setup which is commonly used, H2, H3, H4, H5, H6 are all similar but are different sizes, working downwards.

The text is in Bold with sizes approximately 24, 18, 13.5, 12, 10, 7.5 points for most browsers, or in a similar scale at least.

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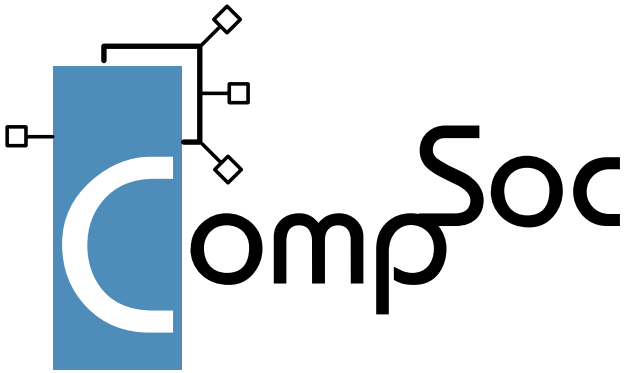
Preformatted Tags

Try adding in some extra text to your page (remembering to keep it in between the BODY tags) and put some of those tags in use (save it & refresh the web browser window to view the page!).

The layout is the same as before:

```
<H2>Heading Two Text</H2>
```

i.e. **opening tag** *text* **closing tag**.



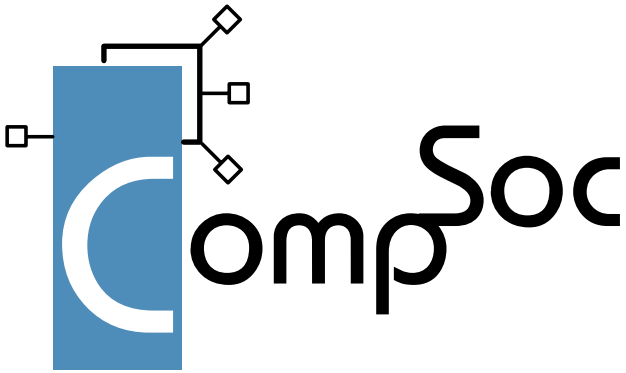
Tag Attributes

As you can see this isn't very fancy (or hard!) at all.

You can add in additional attributes to the existing tags, the format is:

```
<tagname attribute="value"> … </tagname>
```

i.e. you can change the background colour of the page by altering the BODY tag to include the colour, e.g. <BODY BGCOLOR="#239323"> (emerald green)



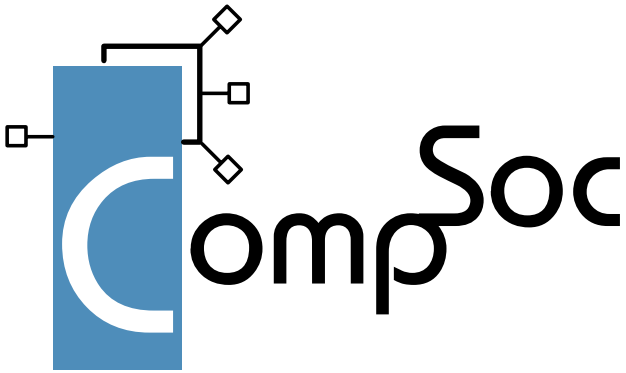
Tag Attributes

<BODY BGCOLOR="#23A323">

The attribute BGCOLOR belongs to the BODY tag and is encased in the same brackets (< ... >) as it.

- BGCOLOR stands for "**B**ack**G**round **COLOR**" (Note the American spelling of "color"!)

Most HTML tags and attributes have sensible names. (thankfully!)



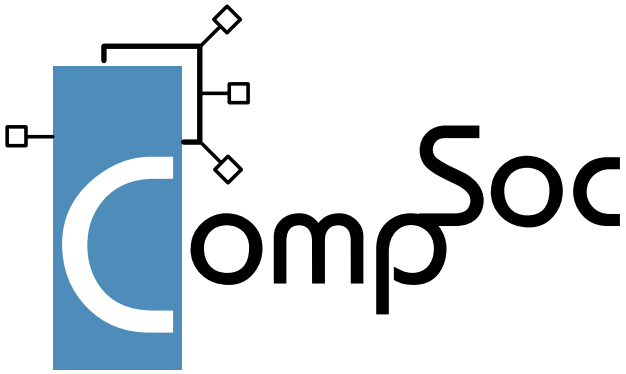
Tag Attributes

<BODY BGCOLOR="#23A323">

The attribute BGCOLOR uses colours expressed in terms of Red Green and Blue (2 characters each) – these are expressed in what is called hexadecimal.

Each character is between 0 and F.

Using two characters 00 is the lowest, FF the highest.



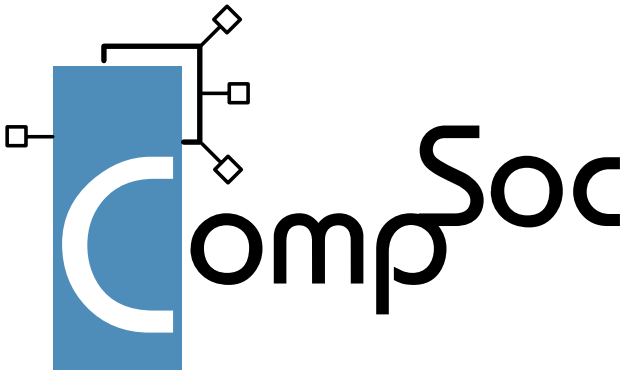
The COLOR Attribute

Colour codes range from “#000000” to “#FFFFFF” and all combinations in between work.

Black	**#000000**	Yellow	#FFFF00
Blue	#0000FF	Orange	#FF9900
Red	#FF0000	Navy	#000066
Green	#00FF00	Beige	#FFFFCC
White	#FFFFFF		

http://hotwired.lycos.com/webmonkey/reference/color_codes/

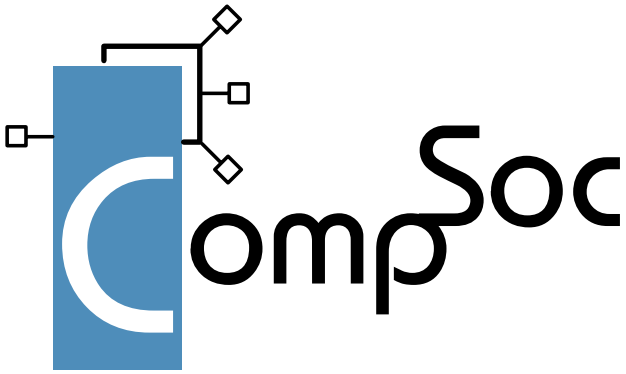
The above link will make it a bit easier!



Going onto New Lines

As some of you may have seen, when you go onto a new line in the .html file, you may not necessarily go onto a new line in your web page.

(except when you start each line with a new <H*> tag)



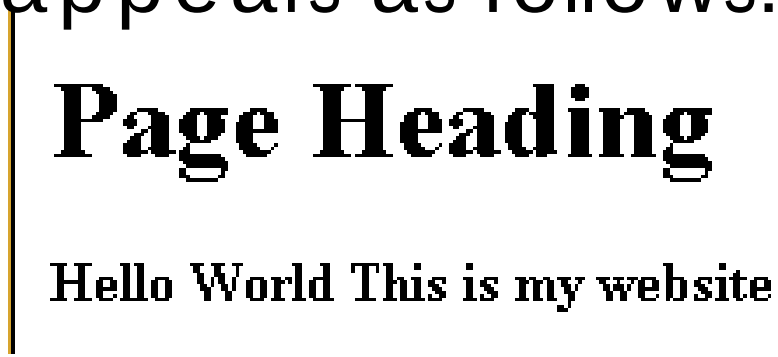
Going onto New Lines

```
<HTML>
<HEAD>
<TITLE> My First Web Page </TITLE>
</HEAD>
<BODY>
<H1>Page Heading</H1>
<H4>Hello World
This is my website</H4>
</BODY>
</HTML>
```

Note how “Hello World” and “This is my website” are on separate lines.

Going onto New Lines

But this the page (when you save and refresh it) appears as follows:



This is because you need to use a tag to tell the browser when you are finished with a line of text.

Going onto New Lines

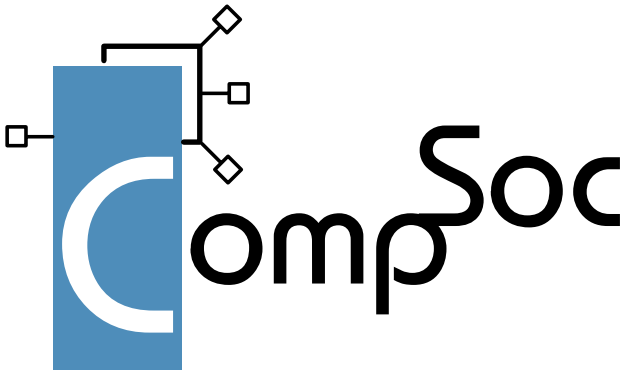
There are two different ways to achieve this, and both with different effects. We'll look at each of them in turn.

We can use <BR> at the end of the line (no closing tag needed). BR stands for "**BR**eak".

```
<H4>Hello World<BR>
This is my website</H4>
```



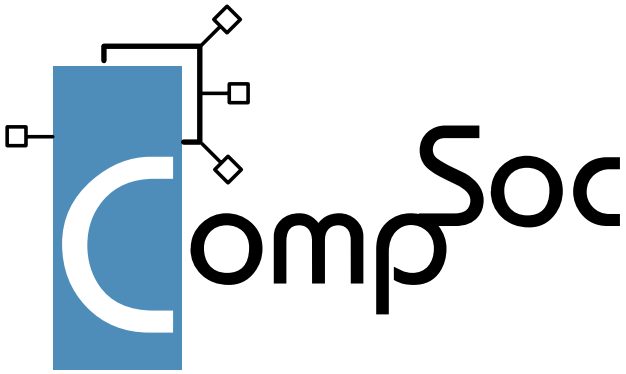
Hello World
This is my website



Going onto New Lines

 can be very useful for just going onto a new line.

The <P> tag is also used, but for many more reasons than just a new line. (P stands for "**P**aragraph".)

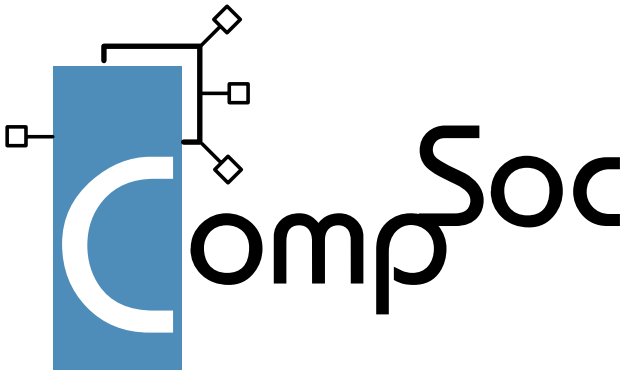


<P> … </P>

The <P> tag is used for separating paragraphs (surprise surprise).

Some people don't use the </P> (it will work without it), but I find that it is easier to keep HTML code neat and manageable if you include it.

Lets add some paragraphs in our page to see how they work.



HTML for Paragraphs

I'm just showing the BODY section:

```
<BODY>

<H1>Page Heading</H1>

<P>Hello World<BR>

This is my website</P>

<P>This is a separate
paragraph</P>

</BODY>
```

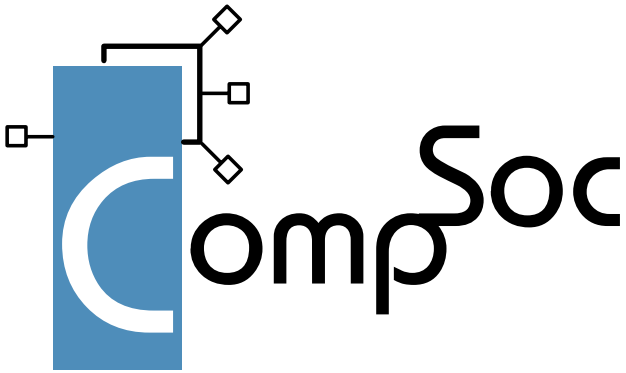
This has two paragraphs.

(you can still use the BR tag inside paragraphs)

Paragraphs

As you can see when you create a new paragraph you not only go onto a new line, but you skip a space which is larger than you would if you were using <BR> tags.





Paragraph Attributes

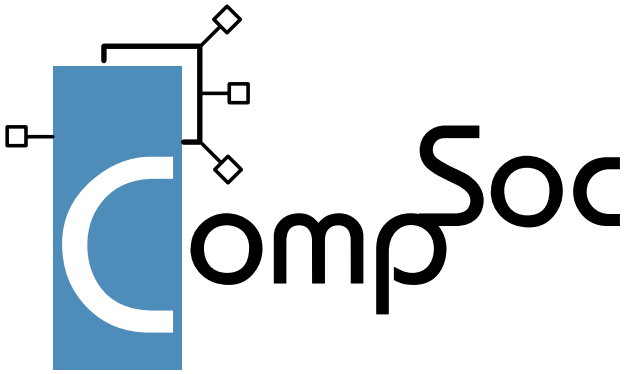
The main reason people use paragraphs is because you can control the attributes of the text inside paragraphs very easily.

i.e. you can align the text whatever way you like.

```
<P ALIGN="center">This is a separate paragraph</P>
```

That paragraph is now in the centre.

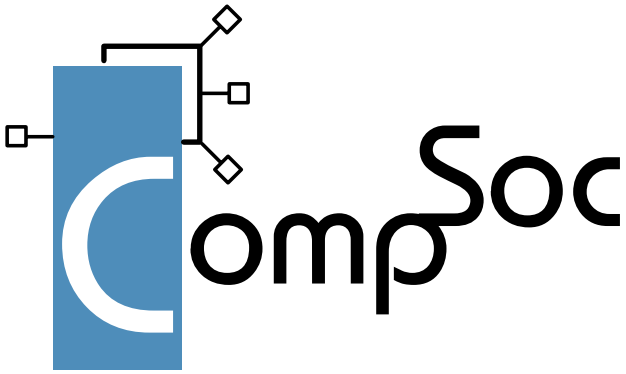
Note the American spelling!



Paragraph Attributes

You can also align paragraphs to the "left" (which is standard) or to the "right".

We will see later that the attribute ALIGN="..." can be used in many other tags, including the TABLE tags.

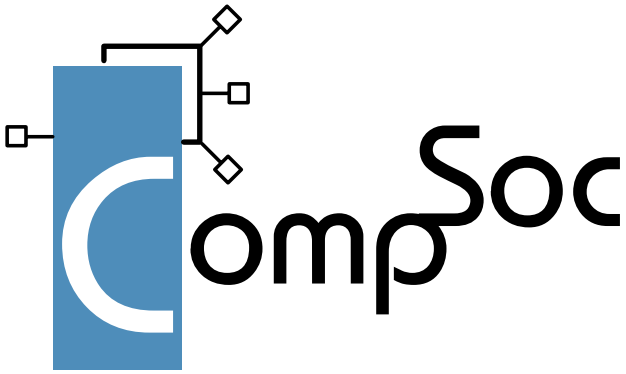


Center Alignment

There are also other ways to align text to the center.

`<CENTER> … </CENTER>`

Also works, and can be very useful for aligning text, images, etc. (anything between the tags) in one go.



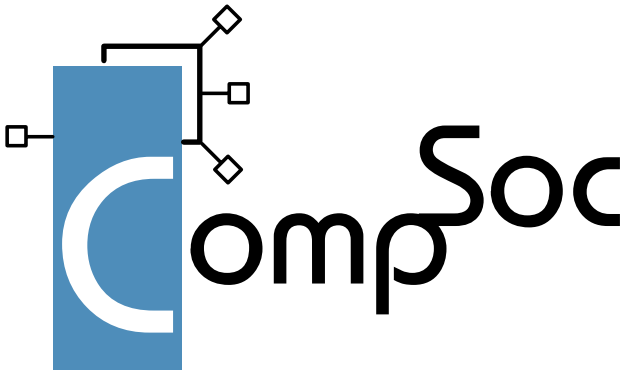
Formatting Text

Heading tags can be useful, but now we're now going to look at ways of formatting text. Put any of the following tags around text in the BODY section.

`<B> … </B>` → **Bold**

`<I> … </I>` → *Italic*

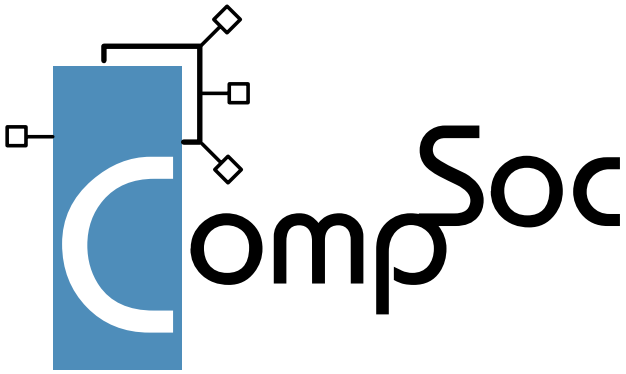
`<U> … </U>` → <u>Underlined</u>



<FONT> … </FONT>

Sometimes you will want to use other kinds of fonts (typefaces), and not just to use italics, bold and underline.

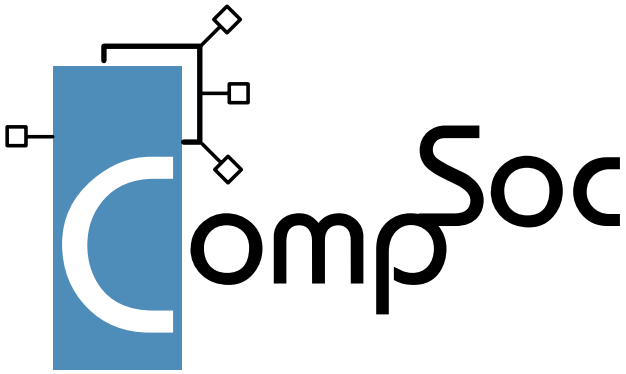
Only fonts that are installed on the viewer's computer will appear as you want, so it is best to stick to using some of the standard fonts.



Standard Fonts

The standard fonts installed tend to be:

Arial	abcdefghijklmnopqrstuvwxyz 1234567890
Times New Roman	abcdefghijklmnopqrstuvwxyz 1234567890
Verdana	abcdefghijklmnopqrstuvwxyz 1234567890
Symbol	αβχδεφγηιφκλμνοπθρστυϖωξψζ 1234567890
Courier New	abcdefghijklmnopqrstuvwxyz 1234567890
Tahoma	abcdefghijklmnopqrstuvwxyz 1234567890



Changing Fonts

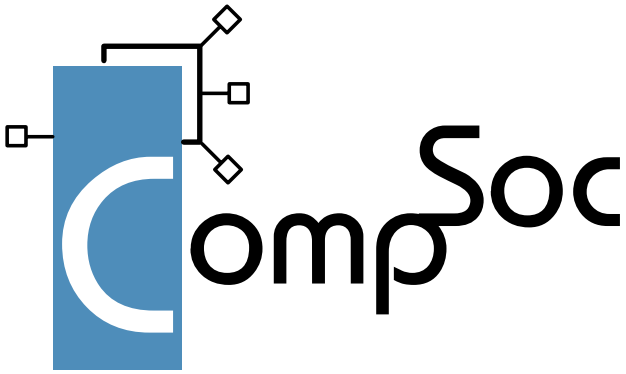
Add the line:

```
<FONT FACE="times new roman">My New Font</FONT>
```

Into your page, save it and refresh it.

The text in between the FONT should now appear in the font specified (in this case "times new roman")

If you specify a font that isn't installed it will appear in Arial or another standard font.



Other FONT Attributes

The FONT tag also has other useful attributes, including:

- SIZE
- COLOR

These can be used in conjunction with each other by keeping them inside the same brackets (< ... >) as FONT is:

```
<FONT FACE="…" COLOR="…" SIZE="…">my writing in my font</FONT>
```

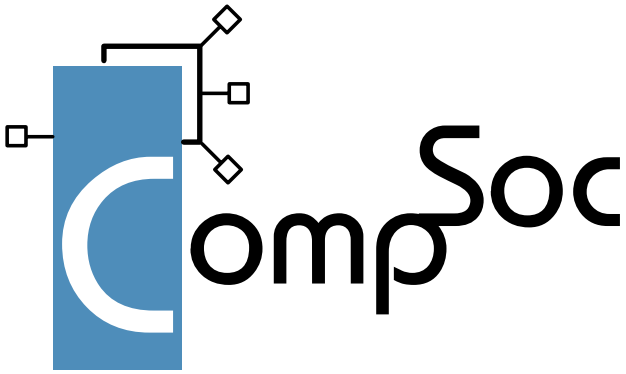
Changing Font Size

To change the size you need to put SIZE="5" into the FONT tag:

e.g. `<FONT SIZE="5"> My text </FONT>`

The sizes range from 1 to 7, you close the tag with just

size 1	size 2	size 3	size 4	size 5	size 6	size 7



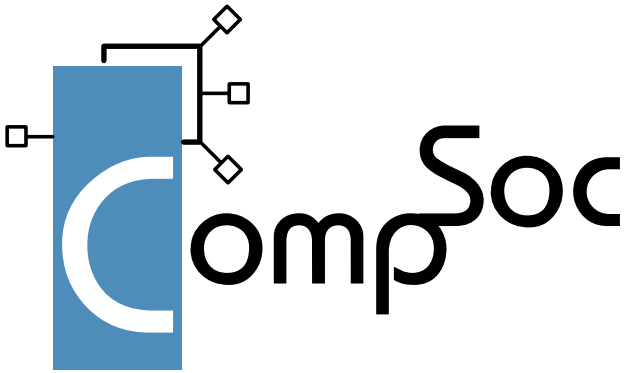
Changing Font Colour

To change the colour you need to put COLOR="#....." into the FONT tag:

e.g. <FONT COLOR="#334532"> My coloured text </FONT>

The colours you can use here are in the exact same format the the BODY BGCOLOR ones were – again the link should help you to pick the colour!

http://hotwired.lycos.com/webmonkey/reference/color_codes/

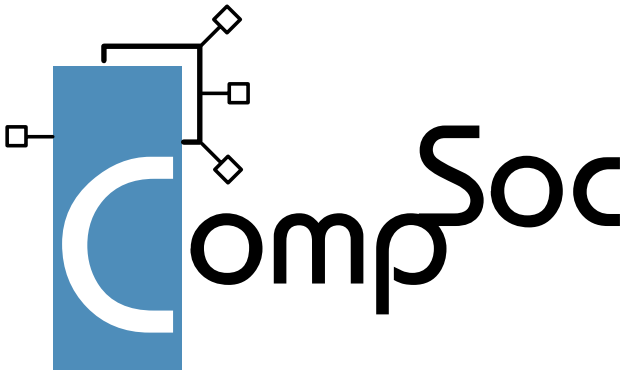


Adding Links

One of the advantages of the internet is that we can quickly get from page to page. We usually do this by clicking on a word describing the link.

e.g. Click here

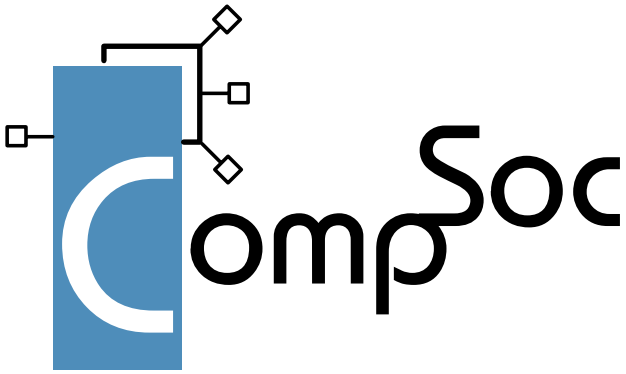
In HTML, we call these links between pages a hyperlink. A link to a page on the internet is called a Uniform Resource Locator, or URL for short.



Adding Links

A hyperlink can be ***absolute*** or ***relative***:

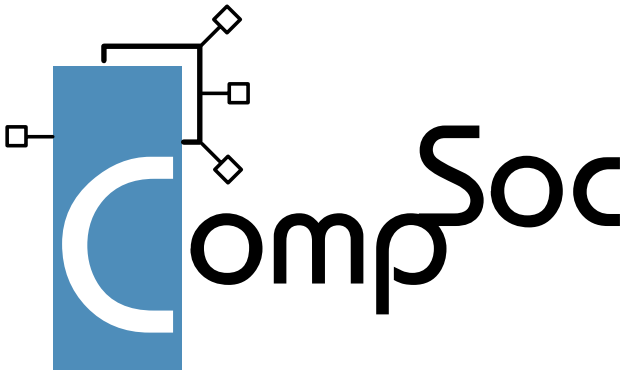
An **absolute** URL contains the full address. e.g. http://www.yahoo.com This is a complete address and will work from within any directory or from any file you create, no matter where on the internet the page with the link is located. In other words, the URL (path) is absolute.



Adding Links

A **relative** URL is used for linking pages which are on the same computer or server. The URL in this case is relative to the position of the file you are working on.

e.g. if you were working on index.html and wanted to create a link to best.html (which is in the same directory) the URL would be: best.html



Adding Links

The **A**nchor tag <A> … </A> is used to link to other documents. It's most important attribute is HREF (**H**yperlink **REF**erence):

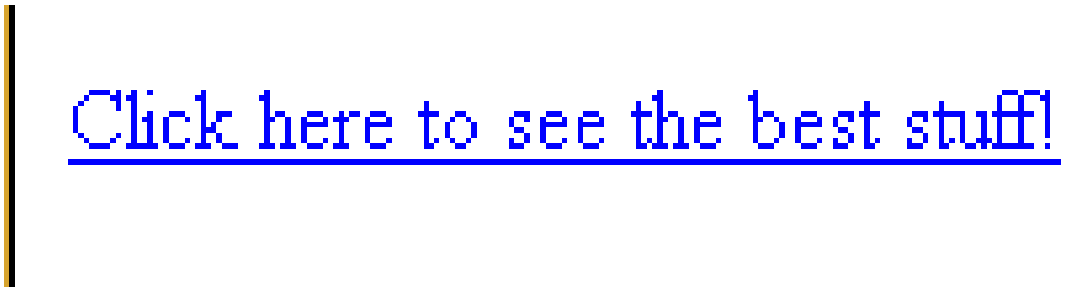
```
<A HREF="URL Here">Click me!</A>
```

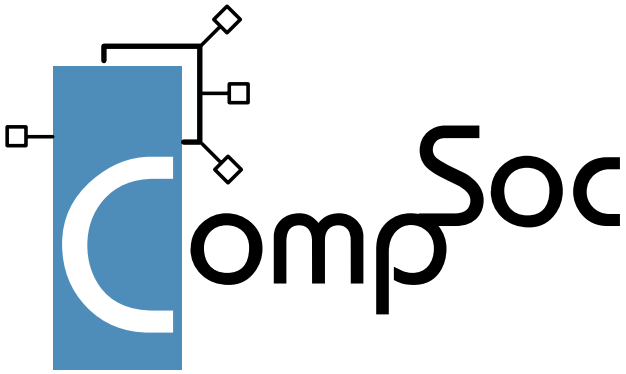
Adding Links

```
<A HREF="http://frink.nuigalway.ie">Click here to see the best stuff!</A>
```

Add the above line into your page.

When you look in the browser you should see the text in between the tags made into a link to the URL specified.





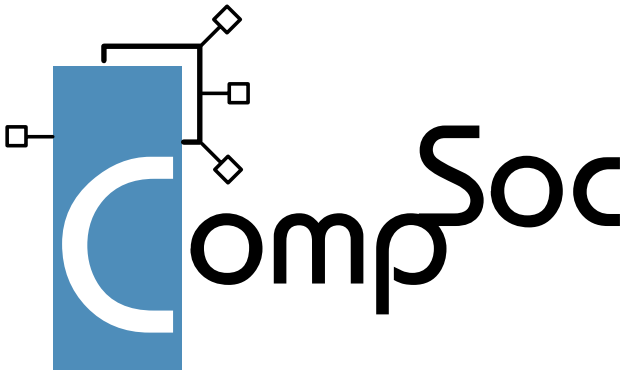
Adding Links

Similarly add the line below in:

```
<A HREF=“best.html">This is my best stuff!</A>
```

Again when you look in the browser you should see the text in between the tags made into a link to the URL specified.

This link is to another page on your website, you can create it later.



Adding Images

If you want to add images (pictures) to your web page you use the <IMG> tag. (it has no closing tag)

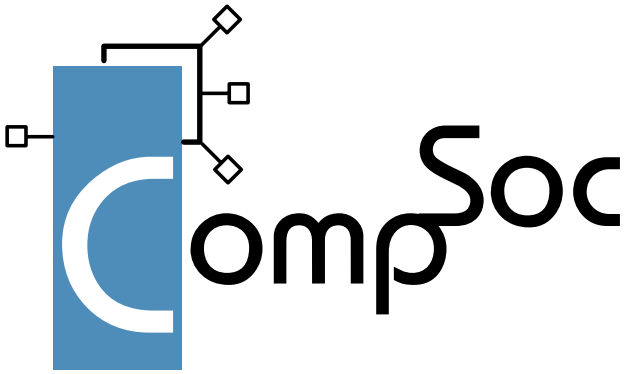
e.g. <IMG SRC="image.jpg">

Where picture is called "image.jpg" and is stored in the same directory as the html file you are working on (in this case "index.html")

Adding Images

You can use www.google.com "Image Search" to find one

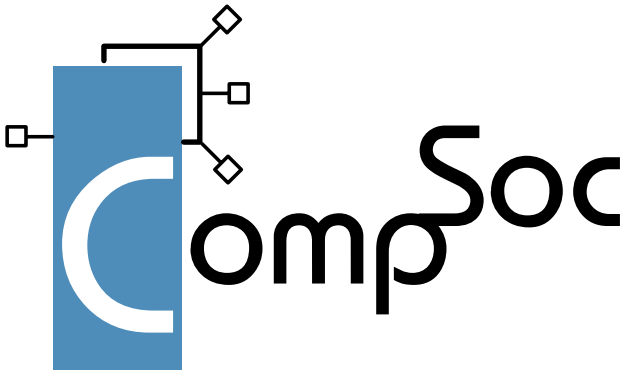
Once you have found a picture you like right-click on it and press Save Picture As... and save it into your root directory with a meaningful name. (eg "flower.jpg")



Adding Images

. If the picture you wanted to add was in a directory (e.g. “images”) then you would change the SRC link to be:
<IMG SRC=“images/image.jpg”>

SRC stands for **S**ou**RC**e .



Images & Links

You can combine the last two tags we just learned about by making an image into a link as follows:

```
<A HREF="…"><IMG SRC="…"></A>
```

That is, by putting the IMG tag inside the <A> and </A> tags.

For example:

```
<A HREF="http://www.sin.ie">
<IMG SRC="SIN.jpg"></A>
```

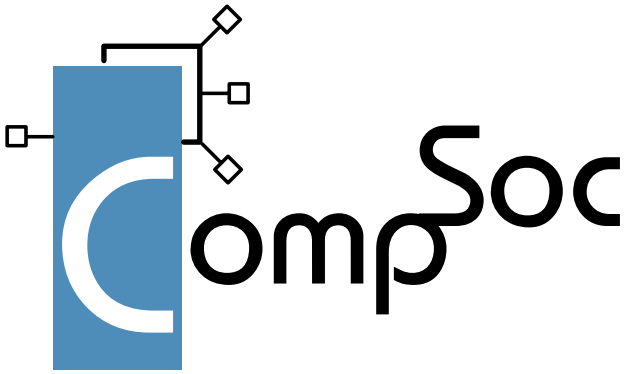


Image Attributes

When you add an image into your web page it is good practise to include in the IMG attributes details about the size of the image. (HEIGHT & WIDTH).

The reason for this is because text will load far faster than images because text is far smaller.

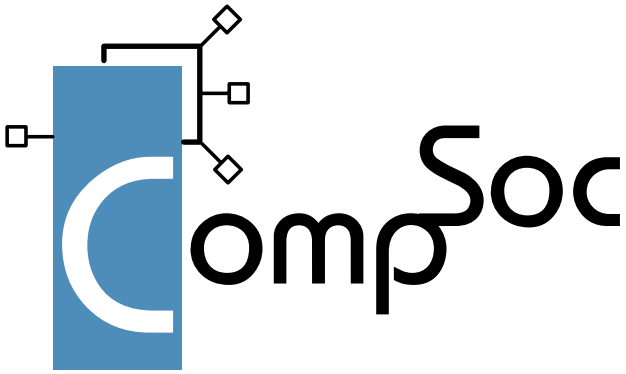
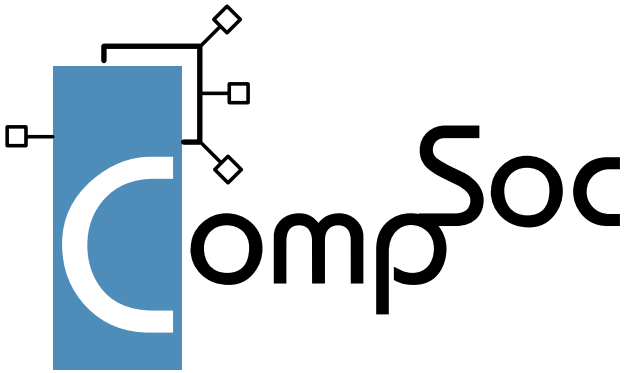


Image Attributes

If you do not specify the height and width of the image then when the text has already loaded and the image starts to load the text will have to move downwards and/or to the right to accommodate it.

You specify the details as below:

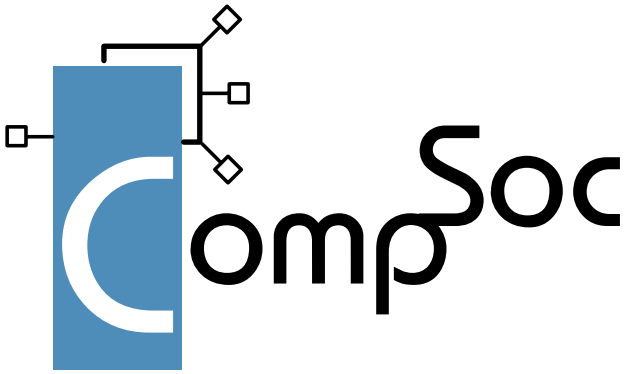
```
<img src="logo.gif" width="125"
height="75">
```



Back to the BODY

Now that we have seen how to add images and text into our web page, we're going to take another look at the BODY tag and see a few other attributes that it has.

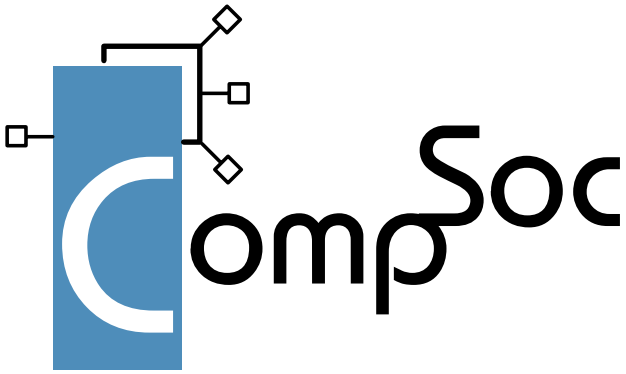
The BODY tag attributes set the standard format for the rest of the page.



BODY Attributes

```
<BODY background="back.jpg"
bgcolor="#FFFFFF" text="#009933"
link="#0000FF" vlink="#800080"
alink="#FF0000">
```

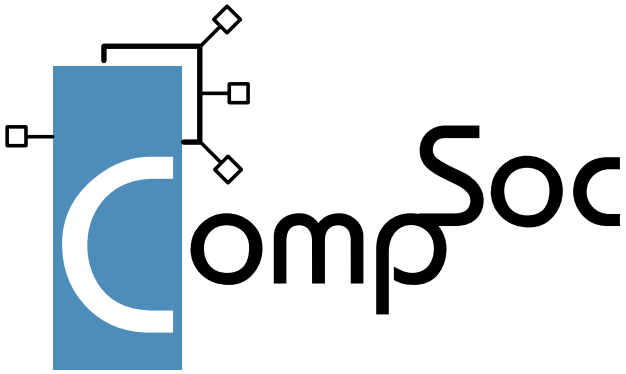
background="…" tells the browser to load an image as the background.



BODY Attributes

```
<BODY background="back.jpg"
bgcolor="#FFFFFF" text="#009933"
link="#0000FF" vlink="#800080"
alink="#FF0000">
```

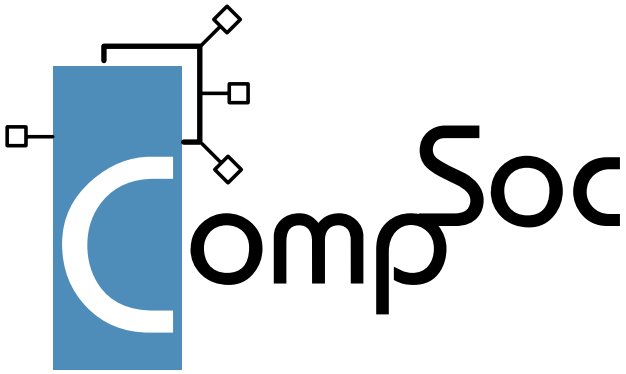
bgcolor="#..." tells the browser to load the colour #... if the background image doesn't load.



BODY Attributes

```
<BODY background="back.jpg"
bgcolor="#FFFFFF" text="#009933"
link="#0000FF" vlink="#800080"
alink="#FF0000">
```

`text="#..."` tells the browser to set the colour of all unspecified text to this colour.



BODY Attributes

```
<BODY background="back.jpg"
bgcolor="#FFFFFF" text="#000000"
link="#0000FF" vlink="#800080"
alink="#FF0000">
```

link="#..." – colour of a link

alink="#..." – colour of an active link

vlink="#..." – colour of a visited link

Looking at index.html

index.html should look a little different now..... ☺



Adding Unordered Lists

You can add a list of bullet points (an **U**nordered **L**ist) to your web page by using the following:

```
<UL>
      <LI>Item 1
      <LI>Item 2
      <LI>Item 3
</UL>
```

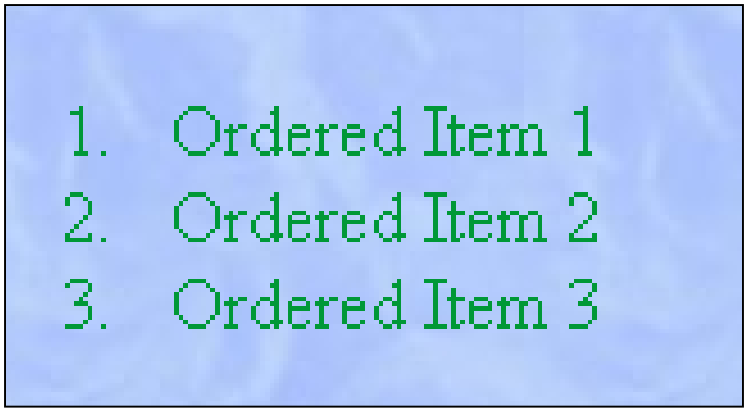


Add more <LI> (List Items) as you see fit.

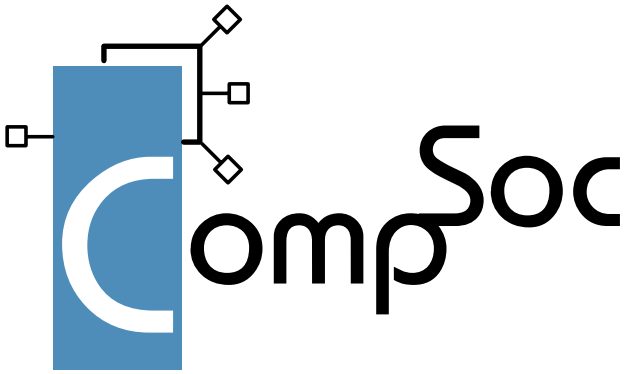
Adding Ordered Lists

You can add an **O**rdered **L**ist to your web page by using the following:

```
<OL type="1">
    <LI>Ordered Item 1
    <LI>Ordered Item 2
    <LI>Ordered Item 3
</OL>
```



Add more <LI> (List Items) as you see fit.



Adding Ordered Lists

As you saw the <OL> tag has an attribute called TYPE

Ordered lists have several types including:

- TYPE="A" Lists using A, B, C, D, ...
- TYPE="I" Lists using I, II, III, IV, ...
- TYPE="1" Lists using 1, 2, 3, 4, ... (default)
- TYPE="a" Lists using a, b, c, d, ...
- TYPE="i" Lists using i, ii, iii, iv, ...

Horizontal Rules

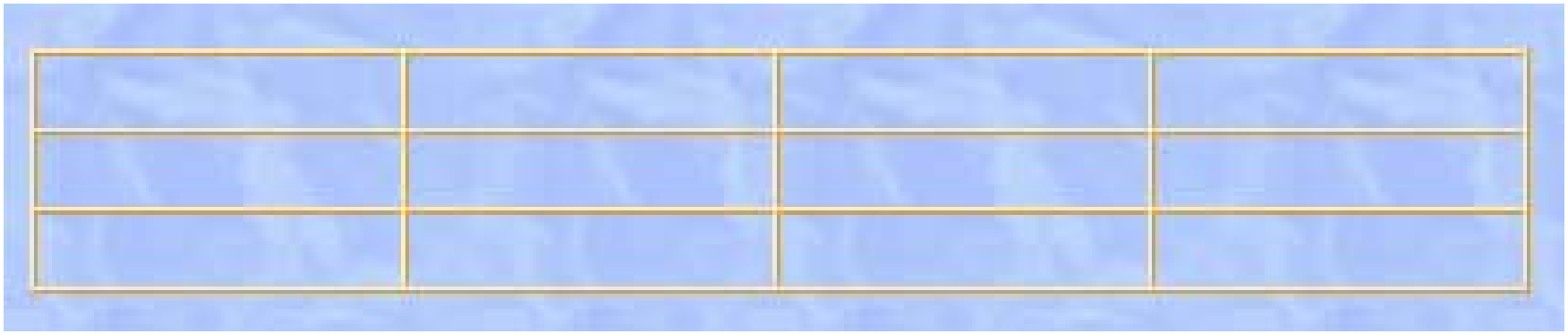
The **H**orizontal **R**ule tag <HR> places a horizontal line on the screen. It has SIZE and WIDTH attributes.

- SIZE is the "thickness" of the line in pixels.
- The WIDTH is length of the line on the screen and is either in pixels, or percentage of the entire screen.



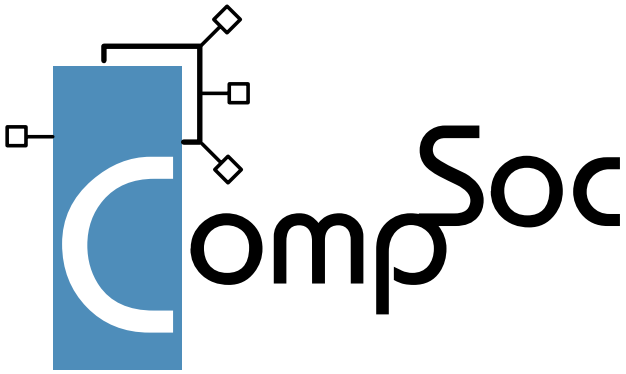
e.g. <HR SIZE=5 WIDTH=75%>

Tables



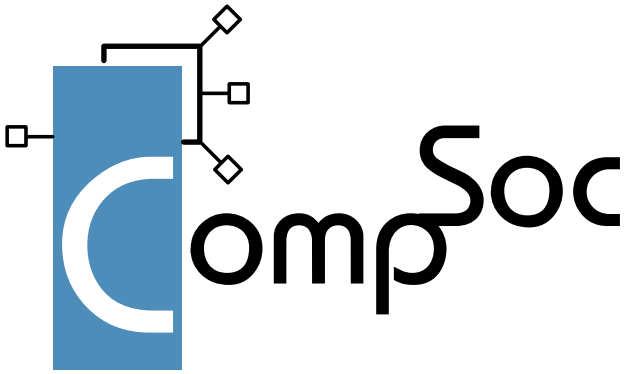
Tables can be very useful in formatting your HTML pages.

This table has 4 columns, 3 rows and 12 cells.



Tables

```
<TABLE BORDER="1">
<TR> (New Row -- optional the first time)
     <TD>Column Data</TD>
     … (optional more columns)
</TR>
<TR> (Next Row)
     <TD>Column Data</TD>
     … (again you have optional more columns)
</TR>
… ( optional more Rows)
</TABLE>
```



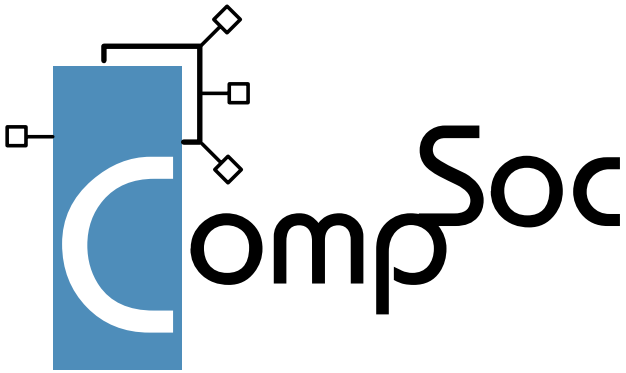
Tables

Essentially you need to remember that inside the TABLE tag you put in the row (<TR> ... </TR>) tags.

You then place the column (<TD> ... </TD>) tags inside the <TR> ... </TR> tags. e.g.

```
<TR>
    <TD> </TD>
    <TD> </TD>
    <TD> </TD>
    <TD> </TD>
</TR>
```

" " just means **n**on-**b**reaking **sp**ace – this is just a blank space.



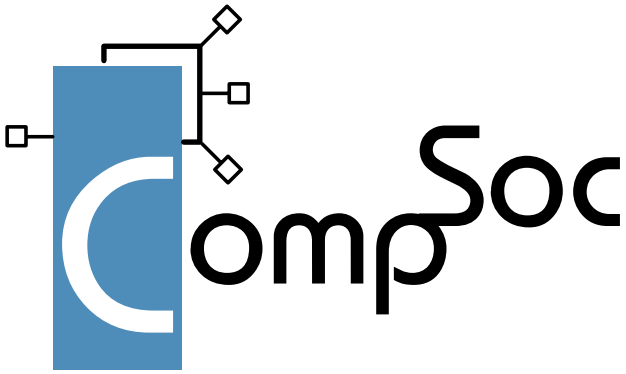
Attributes of TABLE

BORDER

The use of the BORDER attribute gives the table a border.

ALIGN

Positions the table on the screen. Possible values are: Left (default), Right, or Center.



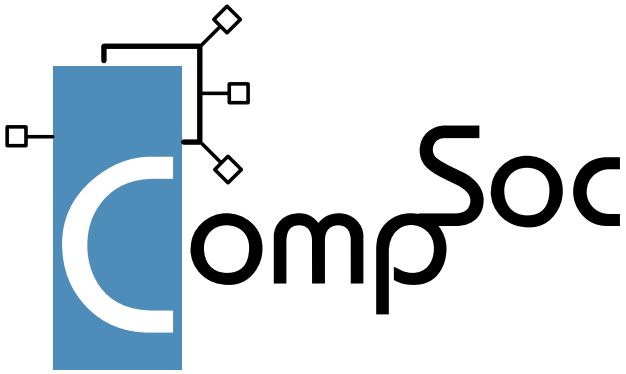
Attributes of TABLE

BORDERCOLOR

This attribute specifies the colour of the Border.

BGCOLOR

This attribute specifies the **colour** of the **B**ack**G**round of the Table.

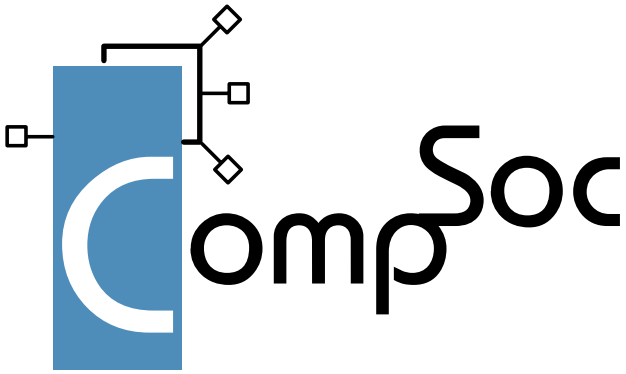


Attributes of TABLE

WIDTH and HEIGHT

Can be set in pixels or percentages (of window space). Defaults to minimum space requirements.

You can also set these attributes for any TD or TR tag. Experiment and see!

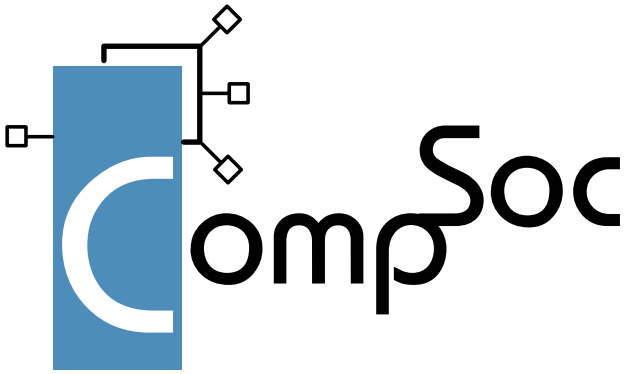


Data in Tables

You can put anything into tables. Basically put the information into the cells you have created.

i.e. inside the <TD> … </TD> tags which are inside the <TR> … </TR> tags.

You can add text, images, etc.

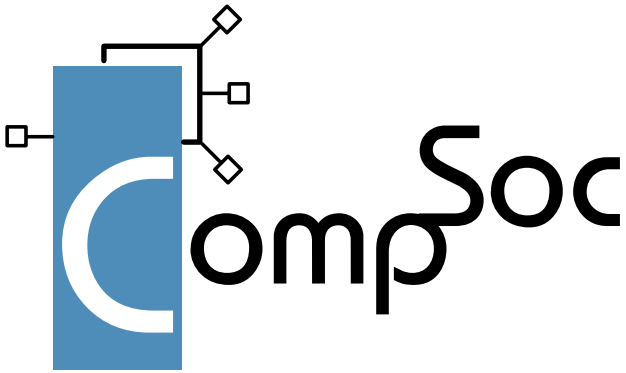


Your Site

Once you have attempted most of the things we have gone through in this workshop you should be able to experiment with these to make your own web page.

There is plenty of information online if you ever need it! ☺

Workshop by Fionnuala Gibney



Putting Your Site Online

Once you have added a few pages of content, you can put your website online.

To do this you need to have downloaded the WinSCP program from the CompSoc website.

It is in the “Quick Links” section for handiness.

Workshop by Fionnuala Gibney

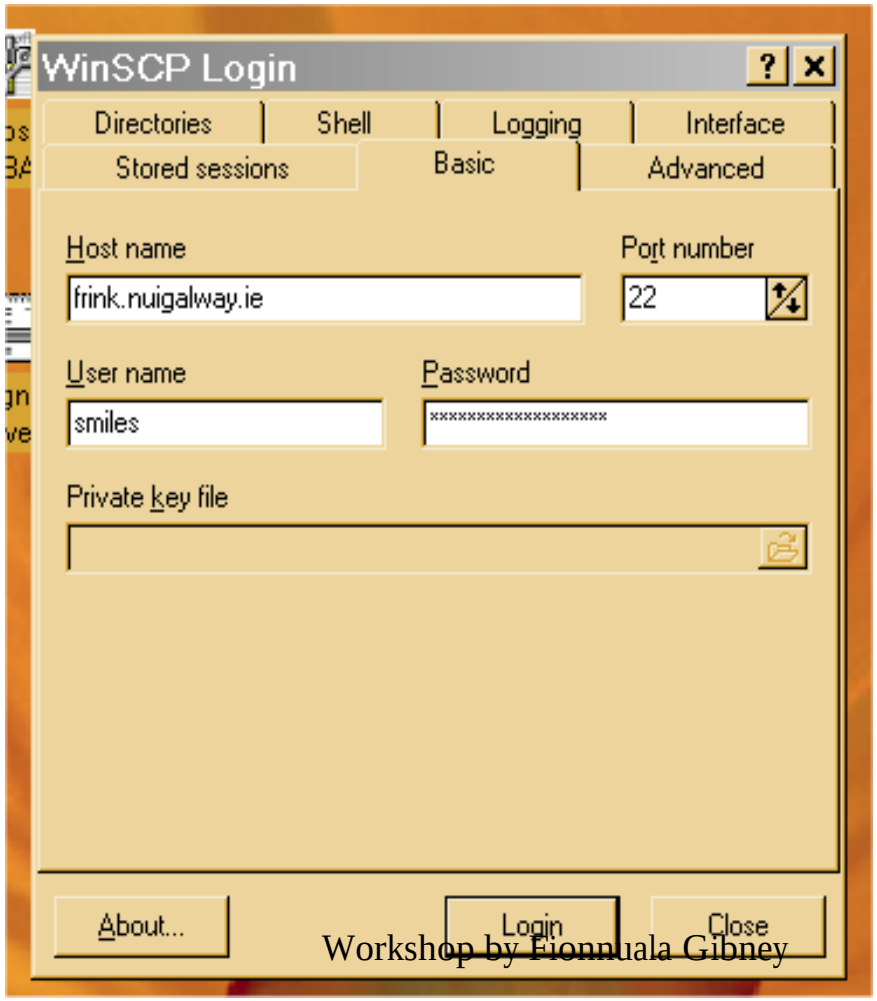
CompSoc Putting Your Site Online

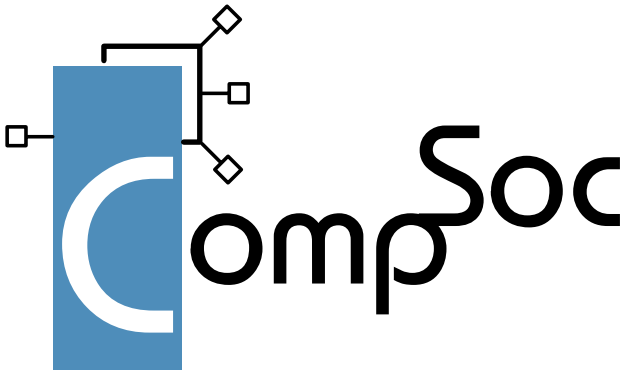
Run WinSCP, goto the "Basic" section.

Host: frink.nuigalway.ie

Port Number: 22

Insert your own username and password and then click Login





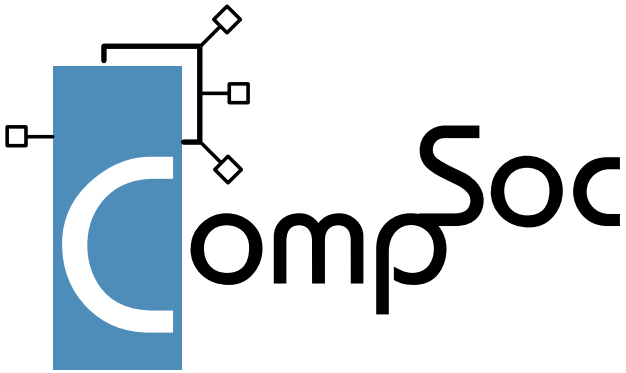
Putting Your Site Online

The left-hand side shows your computer. Open up the directory where you saved your files.

The right-hand side shows your account on frink. Open up the “public_html” directory.

Transferring files is just a matter of selecting and pressing F5 to copy.

Workshop by Fionnuala Gibney



Putting Your Site Online

Once you have uploaded all the files, you should be able to look at them online.

Open up an internet browser and type:

http://www.compsoc.nuigalway.ie/~username/

You can add and remove content by editing your website and uploading the altered / new pages.

Workshop by Fionnuala Gibney