Create a new webpage

Save it in your Practice folder named Attributes & Images.

Use the Save as instructions from the last activity to save your test page as the new page. Save the new page as <mark>4Attributes</mark> and make the following changes:

```
<!DOCTYPE html>
<html>
    <head>
        <title>Attributes & Images</title>
    </head>
    <body>
      <a href="1Index.html" >Back to Home Page </a> <br>
      <h1>Attributes & Images</h1>

       <a href="1Index.html" >Back to Home Page </a> <br>
    </body>
</html>
```

All content from this unit should be placed in the new page you just created (Attributes & Images).

Unit 4 HTML Attributes: What they are and How to use them

HTML attributes can be added to HTML elements to provide further information about that element. We used attributes in the Horizontal rule activity earlier.

HTML tags can contain one or more *attributes*. Attributes are added to a tag to provide the browser with more information about how the tag should appear or behave. Attributes consist of a *name* and a *value* separated by an equals (=) sign.

Consider this example:

Abbr is the opening tag for the abbreviation element (remember the element is all of the information from opening to closing tag).

    title is an attibute of the abbr element

        "**Hypertext Markup Language**" is the Value for the title attribute.

            HTML is the <mark>display text</mark>. – this is the text that will display on the webpage screen – <mark>notice it is in between the > < brackets</mark> but still enclosed in the whole tag (before the closing tag).

            </abbr> is the closing tag for this element.

```
<abbr title="Hypertext Markup Language">HTML</abbr><br><br>
```

<mark>Place the <abbr> code above **at line 9 in your new web page** (just below your H1 title).</mark>

Now Launch your webpage in Chrome. You should see an "HTML" displayed on your webpage, and when you hover over it with your mouse it should provide a "tooltip" that reads "Hypertext Markup Language". (the <br> tags just ensure some space between the abbr and the link home).

This example uses the **<abbr>** tag, which is used to indicate an abbreviation. But something extra has been added to the tag — an attribute. This particular attribute (the title attribute) provides a title for the element.

The name of the attribute is title. In this example, we've given it a value of Hypertext Markup Language.
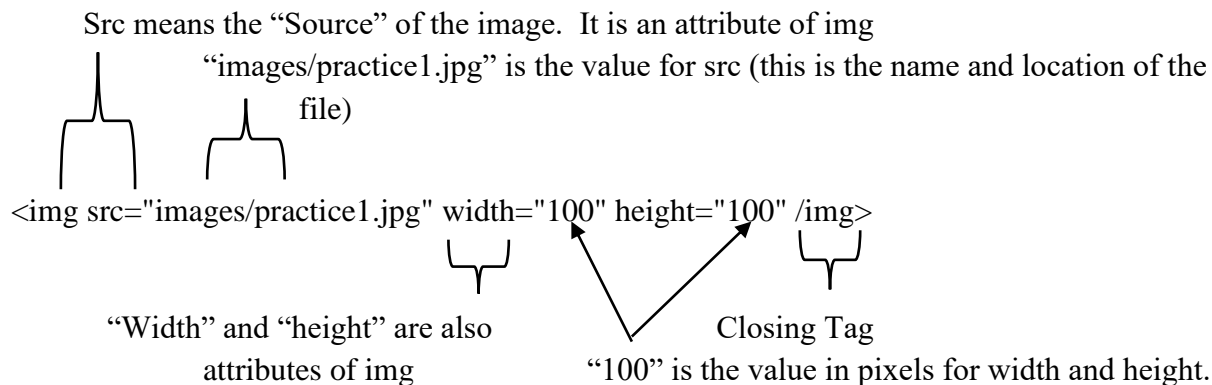
The title attribute can be used on any HTML element to provide extra information about the element's contents. When used with the **<abbr>** tag, it allows us to provide an expansion of the abbreviation or acronym (i.e. we can say what the acronymn stands for).

When using the title attribute, most browsers will display its value as a "tooltip" when the user hovers over the element.

More Attributes - Size Attributes

HTML images are defined with the **<img>** tag.

The filename of the source (**src**), and the size of the image (**width** and **height**) are all provided as **attributes**: img is an element, but it is an empty element as it is only for displaying an image.
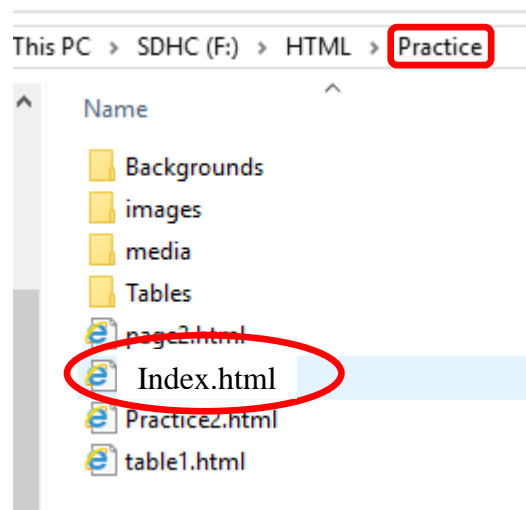
Src means the "Source" of the image. It is an attribute of img

"images/practice1.jpg" is the value for src (this is the name and location of the file)

<img src="images/practice1.jpg" width="100" height="100" /img>

"Width" and "height" are also attributes of img

Closing Tag

"100" is the value in pixels for width and height.

<mark>If you have not already done this, Go to the Student shared drive – BBT9 – HTML5 folder and copy the entire folder into your **Practice** folder. **This folder also needs to contain all your .html source files (Index, Elements, Lists, Attributes…).**</mark>

A Note about File structure in HTML

When coding in HTML it is important that you keep all your files in a neat and organized manner and that all files used in the website are located in the same folder. Html pages cannot look outside their main folder for content to display on the page.

For example:

The source HTML document (Index.html) needs to be inside the main folder (Practice) Likewise any images, media and backgrounds need to be either in the main HTML

This PC › SDHC (F:) › HTML › Practice

Name

Backgrounds
images
media
Tables
page2.html
Index.html
Practice2.html
table1.html

folder (Practice), or a folder inside the main HTML folder. If you want to use an image or other content from some other folder it needs to be copied into one of the folders in the main HTML folder – Your source page cannot look outside the main folder (Practice).

**_Show your teacher your file folder showing your Main folder named Practice and the files and folders inside it that look like the picture above and have them mark your Activity sheet at #8_

Then type the highlighted code below into your Attributes & Images.html above the closing body tag (</body>).

<h2>Working with Images</h2>

<img src="images/practice1.jpg" width="100" height="100"></img>

Copy and paste the img code again. **Save and refresh your page**. Do you notice that you have 2 pictures on the same line. How could you put them on separate lines?

Try adding a couple of <br> tags at the end of each image line:
<img src="images/Practice1.jpg" width="100" height="100"></img>

Insert the flamingo1.jpg picture below this image in your HTML editor.

<img src="images/flamingo1.jpg"> </img>

You will notice the picture is too large so lets change the code to have width and height to make the picture smaller:
<img src="images/flamingo1.jpg"width="100" height="133"></img>

Save your code and launch the website in Chrome. What is the difference between the two pictures?

**NB: it should be noted that the size attribute for images does not change the file size of the image, only the size it will appear on the webpage. The image size is specified in pixels: width="100" means 100 screen pixels wide. If the file size is large it may be a good idea to make it smaller so the page loads more quickly. This can be easily accomplished using MS Paint.
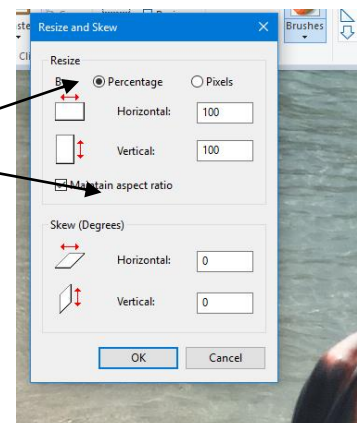
Resizing Image file size:

Open Paint, then open the flamingo1.jpg file in your HTML folder
Select the resize button and ensure the Percentage button is
selected and the Maintain Aspect Ratio box is selected.
Then change the 100 in the Horizontal box to 10.
Now select the Pixels button and change the Horizontal number to 100.
This will change the Vertical to 133 because we have selected the Maintain aspect ratio box. This is the information we need to set the width and height of the picture in our img tag.

Now select the OK button, then choose File and Save as, select the JPEG option and save the file as **flamingo2.jpg** (save this in the images folder inside your Practice folder) and close the Paint program.

Next, navigate to your practice/images folder and compare the file sizes of both Flamingo1.jpg and flamingo2.jpg. You will notice that Flamingo2.jpg is much smaller than its original. In this case the original file size is not that large, however, the point is that the more and the larger the files that a browser needs to download the slower the browser will be.

You can use this process with any picture or drawing to decrease file size.

Now let's **change the code** to use our smaller sized picture. Change the file name to Flamingo2.jpg, so your code should look like this:

`<img src="images/flamingo2.jpg" width="100" height="133"></img><br><br>`

More about images *(the alt attribute)*

The `<img>` **tag** is written as `<img src="images/file.jpg" alt="descriptor"></img>` with the image file name **and** location (or URL) inserted between the double quotes of the **src** attribute.

The alt attribute provides alternative text for users who are unable to view the image. Some reasons why users can't view the image might include having a slow Internet connection, they are vision impaired and are using text-to-speech software, the image won't load for some reason, etc. **Note that the alt attribute is a required attribute for all image files.**

Like this: `<img src="images/myimage.jpg" alt="My Image">`

You can also provide the image dimensions using the width and height attributes.

`<img src="images/myimage.jpg" alt="My Image" width="100px" height="50px"></img>`

Go back to all your image codes and place an alt attribute in all the codes like this:

`<img src="images/Practice1.jpg" alt="flower" width="100" height="100"></img><br><br>`

And

`<img src="images/flamingo2.jpg" alt="flamingo" width="100" height="133"></img><br><br>`

**NB: not all browsers will show the alt text on screen. IE for example will not show the text if the picture works, so if you want the viewer to see the text while the file is opening it is acceptable to also place a title attribute in the tag, like this:

`<img src="images/flamingo1.jpg" alt="flamingo" title="flamingo" width="100" height="133"></img><br><br>`

Save your code and launch the website in Chrome. What is the difference between what you typed and how the browser displays the text? Why is that? What happens when you mouse over the picture?

Centering your images

The correct method to center an image is to use the CSS display property with a value of block and a margin property with a value of 0 (zero). Type this code below your last flamingo picture:

```
<img src="images/flamingo2.jpg" alt="flamingo" title="flamingo" width="100" height="133"
style="display:block; margin:0 auto"></img><br><br>
```

Multiple Attributes

You can add more than one attribute to a given element.

Here's an example of adding two attributes to the <a> element (which is used for creating a hyperlink to another web page). ==Type this code below your flamingo img code== and **before the closing body tag.**

```
<a href="https://grade9bbt.weebly.com" title="Best grade 9 BBT tutorials on the web!">BBT
Weeblysite</a>

<br><hr><br>  <!--this is just for a thematic break between the images and aligning Images
(Unit 6)-->
```

The **href** attribute specifies the location of the web page that we're linking to.
We also use the **title attribute** to provide some advisory text (**a tool tip for mousing over**).
Save and refresh your page and hover your mouse over the grade9weebly link. You should see a tool tip.
(Show your teacher your images: separate lines, one centered, and a link with a tool tip - *Do this on your Activity sheet at # 9*

More Attributes

There are many different attributes available to HTML elements. Some attributes can be used on every HTML element some are available on many (but not all) elements, while other attributes are only available on one specific element.

Many HTML elements assign a default value to its attributes — meaning that, if you don't include that attribute, a value will be assigned anyway. Having said that, some HTML tags do require an attribute (such as the hyperlink example above).

(full list here: https://www.quackit.com/html_5/tags/html_5_global_attributes.cfm

What you have learned so far:

- Some HTML elements can have attributes
- The pattern for an attribute is attribute="value"
- Attributes provide additional information about an element
- Attributes are always specified in the start tag
- Attributes require quotation marks, this also makes it easier to check code at a future date.
- Multiple attributes can be used inside a tag or element.
- How to center an image on the browser.

*Activity 4 – Name the parts: (*Do this on your Activity sheet at # 10*)

<u>1</u> <u>2</u>   <u>3</u>   <u>4</u>   <u>5</u>   <u>6</u>   <u>7</u>

↓ ↓   ↓   ↓   ↓   ↓   ↓

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Use the possible answers below and place the correct letter in the activity sheet blank.

A – Opening tag   B – Closing Tag   C – Attribute   D- Value   E – Display text   F – Element

See example on Page 2 for assistance in answering this question

Next Lesson: Styles: Centering, Backgrounds, Borders, and Fonts