

HTML Tags (Tutorial, Part 2):

Images and links (including absolute and relative paths)

Images (or pictures):

Note: For validation purposes, most of the tags we've seen so far must both open and then separately close. This is true for almost all html tags. However, there are exceptions. One of the exceptions is the images tag. You don't close the image tag.

To include an image, you must specify not only that you're including an image, but also:

- src: the name and location of the image,
- width: the width of the image in pixels
- height: the height of the image in pixels,
- id: a unique id for the image (you make up the id – it can be anything you want), and
- alt: alternative text that describes the image for people who are unable to download or see the image.

So an image tag will look as follows:

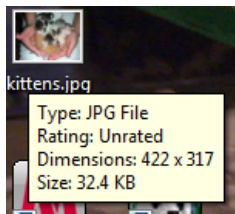
```
<img src = "pic.jpg" style = "width: 200px; height:300px;" alt = "a lovely picture of something" id = "pic1">
```

To include an image, follow these steps:

Step1: Find a picture with a .jpg, a .gif, or a .png extension and place it in **the same folder** as the web page you are working on. For now, the image **MUST** be in the same folder as your web page, or this won't work. Make sure the image is either a .jpg, a .gif, or a .png file. This ensures it will show up in all browsers.

(For this example I shall be using the picture "kittens.jpg". You will be using whatever image you've chosen.)

Step 2: in the folder, hover your mouse over the image. You should see something like this:



Notice the dimesions. The width is 422 pixels, and the height is 317 pixels.

(On the mac, click on the image, then under the file menu, choose get info. You should see the dimensions in the menu that pops up.)

Step 3: Now open a web page that you want to place a picture in using either notepad++ or textwrangler.

step 4: Add the image (note that it's inside of a p tag here – images **MUST GO** inside of other tags):

```
<p><img src = "kittens.jpg" style = "width: 422px;height:317px;" alt = "a picture of itty bitty baby kittens" id = "kittenpic"> Way cute!!! </p>
```

- **The src is the name of the picture we want to show up (kittens.jpg).**
- **The width and the height are the width, and height in pixels, respectively (422 pixels and 317 pixels, respectively).**

- **The alt is alternative text describing the picture for people who either can't download or can't see the image (critical for individuals who are blind) (here, "a picture of itty bitty baby kittens"); and**
- **The id is a unique id for this particular picture. Every id on a web page must be different ("kittenpic").**

Save the web page and view it in the browser. Your web page should now have a picture in it.

If the image doesn't show up:

1. Is the image in the same folder as your web page???
2. Did you spell the name of the image EXACTLY the same in your web page as it is named? (e.g., Kitten.jpg is not the same as kitten.jpg and kitten.JPG is not the same as kitten.jpg,
3. Did you put a space before the words: src, width, height, alt, and id?
4. If you opened a quote, did you close it? (e.g., **WON'T work.**)

To create a folder for images:

What if you want to put all your images into a folder named Images, and then use the images in that folder on your web page? To do that you need to do two things: First create a folder called Images that is in the same folder your web page is in, then move your image(s) into that folder, and second, modify the src to tell the browser where to now find the image(s).

Step 5: Navigate to the folder containing your saved web page.

Step 6: Inside that folder, create a new folder called "Images".

Step 7: Move your image (kittens.jpg) into the Images folder.

Step 8: Reload your web page. You should no longer see your image. The browser can't find it because it is looking for the image in the same directory where your web page is, but now the image is located in the Images folder.

Step 9: Edit your web page. Change the image tag to:

```
<p><img src = "Images/kittens.jpg" style = "width:422px; height:317px;" alt = "a picture of itty bitty baby kittens" id = "kittenpic"> Way cute!!! </p>
```

The change: src now is set to "images/kittens.jpg". That is telling the browser to look inside the images folder for the picture kittens.jpg.

Save the web page and view it in the browser. Your web page should have a picture in it again.

Links to other web pages:

Note: links must go inside one of the other tags mentioned above.

There are two types of links: **Absolute and Relative**.

Absolute Links:

Absolute links must include:

- the transfer protocol (usually http),
- the domain name,
- the name of the web page (html file).

In other words, an absolute link is a link to a web page on another server.

An example of a link using an absolute path:

```
<p> This is a link: <a href = "http://www.eecis.udel.edu/~yarringt/103/index.html" > link to 103 Web page </a> </p>
```

In this example

- **href is what we're linking to:**
 - **http is the transfer protocol**
 - **www.eecis.udel.edu is the domain name**
 - **~yarringt/103 are the folders in which the web page is located, and**
 - **index.html is the web page**
- **the text between <a... id="103link"> and is the text you click on to go to the web page, and**
- ** ends the text that can be clicked on.**

Add the absolute link to your web page. Save the page and view it in your browser. Click on "link to 103 Web page". Did it take you to the class's web site? Now modify the link (and the text that takes you to that link) so that it is a link to amazon (or espn, or cnn – whatever you like). Save your web page and make sure it works.

Relative links

You use relative links for pages within your web site (so they are on the same server as the web page you're editing).

With a relative link, the browser **starts looking in the folder where your web page is saved**, and moves around from there. To move up a folder, you'd use ../ To move down into another folder, you specify the name of that folder.

Let's start by creating a relative link to another web page that is located in the same folder as the web page you're editing. You'll first need to create another web page from your template file.

step1. Using the template.html file, create a new web page. Add a paragraph, and possibly a header. Save the new web page as *samedirectory.html*. Save it in the same folder as the web page you've been working on so far.

step2. In the web page you've been working on, add the following code :

```
<p> This is a relative link: <a href = "samedirectory.html" > link to web page in the same directory </a></p>
```

Save your web page and open it in a browser. Click on “link to same directory page”. The browser should open the samedirectory.html web page you created. This is because we didn’t specify another folder, or a transfer protocol and a domain, so the browser looked for samedirectory.html in the same folder where your web page is located. Unless told to look elsewhere, the browser will always start looking for the linked web page in the same folder where the web page you’re working on is saved.

To create a relative link to a file in another folder:

step3. Create a new folder in the same place where you’ve saved your web page (and now, samedirectory.html). Name this new folder OtherWebPages

step4. Use the template to create another new web page. Give your new web page a paragraph and save your new web page in the folder OtherWebPages. Call your new web page *tba.html*.

step5. In the web page you’ve been working on add the following link:

<p> This is a link to a web page in a folder (remember, we always start looking in the folder this web page is in and move from there): link to tba </p>

Notice that in this case, the href specifies the folder first, and then the file name. Now the browser starts looking in the same folder where the web page you’re working on is saved, looks for a folder called OtherWebPages, and then, inside that folder, it looks for the file tba.html.

Save and view in browser. Click on “link to tba”. Your browser should bring up the tba.html page.

Now you’re going to create a link from the web page “tba.html” back to the web page you’ve been working on. To do that, you must tell the browser to look in the folder above the one you’re currently in. You’ll use the ../ to specify this.

step 6. Navigate into the OtherWebPages folder and open tba.html.

step 7. create a link to the page you’d been working on. Add the following to tba.html:

<p> This is a link back to your main page: link to main page</p>

Save tba.html. Open it in the browser. Click on “link to main page”. It should take you back to the page you’d been working on.

step8. Inside OtherWebPages create a new folder called DeeperPages.

step9. Use the template to create yet another new web page. Give your new web page a paragraph and save your new web page in the folder DeeperPages. Call your new web page *wba.html*.

step10. Back in the web page you’ve been working on add the following link:

<p> This is a link to a web page in a folder in a folder (remember, we always start looking in the folder this web page is in and move from there): link to wba </p>

Save and view in browser. Click on “link to wba”. Your browser should bring up the wba.html page.

step 11. Navigate into the OtherWebPages folder and then into the DeeperPages folder and open wba.html.

step 12. create a link to the page you’d been working on. Add the following to wba.html:

<p> This is a link back to your main page: link to main page</p>

Save wba.html. Open it in the browser. Click on “link to main page”. It should take you back to the page you’d been working on.

You’ve now created an absolute link on your web page, as well as a number of relative links to web pages in different folders. In essence, you’ve created a web site.

Turning an image into a link:

You may want to make a picture be something you can click on to take you to another web page. You’ve seen this on numerous pages – buttons you click on, logos you click on, etc. To turn an image into a link is fairly simple. Create the link:

<p> what you click on goes here </p>

Then add the image:

Now copy the image into the area that says, “what you click on goes here” in the link:

<p> </p>

Now when you save the file and bring it up in the browser, you can click on the kittens picture and you should go to the lolcats web site.

Links within a page:

You can create a link from one place in your web page to another place within the same web page. Think of Wikipedia, which has an index that you can click on to take you to certain places within the page.

To create a link within one web page, you need to do 2 things: Create a place to link to, and then create a link to that place. For example, you may want to place a marker at the very top of a web page, and then at the bottom create a link to that marker at the top of the page. This is what we’re going to do first:

Step 1: Within your firstwebpage.html, at the very top (right below the <body> tag), add the following marker:

<p></p>

(Note, you can give the id any name you want, as long as it doesn’t have spaces or special characters and it isn’t used anywhere else as an id on your web page)

Step 2: Now scroll down to the very bottom of your web page, right before the </body> tag.

Step 3: Add a link here:

**<p>
 Back to top
</p>**

Step 4: Save the file and view it in the browser. Scroll down to the bottom of your web page. Try clicking on the link "Back to top". Does it take you to the top?

(Note, if your web page is short enough that it all fits inside the browser window, without a scroll bar on the right, you might not notice that you are, in fact jumping back to the top. If this is the case, you might have to do something a bit funky like,

```
<p>
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <br >
  <a href = "#topofpage"> Back to top
</a>
</p>
```

in order to see that you are, in fact, jumping to the top.

Links to a place within another web page

To create a link to a place within another page, you'll first have to create another page.

Step 1. First add a marker at the bottom of the firstwebpage.html. So your code might now look like:

```
...
  <br >
  <a href = "#topofpage"> Back to top
</a>
</p>
<p><a id = "bottom"></a></p>
```

Step 2: Open the file samedirectory.html. Within that web page, add the following link:

```
<p><a href = "firstwebpage.html#bottom">link to bottom of firstwebpage </a>
</p>
```

Step 3. Save the file and click on the link. Does it take you to the bottom of your first web page?

Strong and br tags

Another example of a tag that must go inside other tags is the ** tag**, which is for text you want emphasized within a paragraph. To include this tag, you'd do the following:

`<p>This is even more emphasized</p>`

To include a line break (or new line), you can use the **
 tag**. This is another tag that only has an opening, with no closing. To see what this tag does, try including the following on your web page:

```
<p>    I do not like them here nor there.  
    I do not like them anywhere.  
    I do not like green eggs and ham.  
    I do not like them Sam I am.  
</p>
```

Include this in your web page, then save it and view it in the browser. Does this look like you'd hope? Now modify the code by adding line breaks:

```
<p>    I do not like them here nor there. <br>  
    I do not like them anywhere. <br>  
    I do not like green eggs and ham. <br>  
    I do not like them Sam I am. <br>  
</p>
```

Save it and view it in the browser. See the difference?

Tags that need to go inside other tags:

For validation, certain tags must go inside of other tags. The ones we've seen so far that **must** go inside other tags include:

- `<a>` and `` can and must go inside of just about any tag, most frequently
 - the `p` tags
 - the `h1` through `h6` tags
 - the `li` tags, or
 - the `td` tags.
- `` and `
` must go inside other tags, usually `<p>` tags but also `h1` – `h6`, `li`, and `td`
- `` must go inside either `` or ``
- `<td></td>` must go inside of `<tr></tr>`
- And `<tr></tr>` must go inside of `<table></table>`

Forms:

How Forms Work:

1. You fill out form on Web page and hit submit
2. Browser sends content of form to Web server
3. Server receives form and data and passes it to the appropriate web application (software program someone wrote) to be processed
4. Web application creates a brand new XHTML page
5. Server sends new XHTML page back to Browser
6. Browser gets response and displays it.

We aren't worrying about writing the web application on the server side yet (step 3, above), which means we won't be processing the forms yet.

Instead we will be mailing the content of the form to someone or you can create a new mail address just to receive the form information.

Part I. How forms work:

Notes about forms:

- All forms start with `<form>` and end with `</form>`. These tags only occur **once** for each form.
- Inside the form tags, you can include paragraphs, headers, etc.
- **All forms should have 1 (and only 1) "submit" button (e.g., `<input type = "submit"...>`) inside the form tags (usually right above the `</form>` tag)**
- The submit button takes the content of the form and does whatever action you told it to do when you started the form

Mailing a Form:

For our purposes, we'll use a quick and dirty way of mailing the content of the form to someone.

1. In a web page (either a new web page, created from your template, or the web page in which you created the last form), create a new form by:

a. In your web site (and not within any other tags!) place the following first line: (This is creating a new form. Everything between this line and `</form>` is the new form you are creating.)

```
<form>
```

b. inside the form, **include a text field:**

Add:

```
<p>Your Name: <br >  
<input type = "text" size = "20" name = "VisitorName"> <br >
```

- `<input` means it's a form element (like a button or a box) that takes input from someone who's viewing your web page.
- `type = "text"` means it's a text box
- `size="20"` is the length of the box.
- `name = "VisitorName">` is the name given to the field when it's mailed to you.

c. inside the form, **Add a submit button:**

Add:

```
<input type = "submit" value = "This form does nothing yet">
```

- `type = "submit"` means when you click on the button formed by this, action will be taken. (the action specified at the beginning of the form, or `"mailto:youremailaddress@udel.edu"` .
- `value="This form does nothing yet"` is just the text put onto the button.

d. Close the form: Add:

```
</form>
```

e. save the file. View it in a browser. You should see a textbox. Type in a name and click on the "Email This Form"

button. Check your email.

f. In the **submit** button code (in the form), change "Email This Form" to "Send me a message"

g. Save and view in browser. See the difference?

h. In the submit button code in the form, try changing 20 to 40.

i. Save and view in browser. See the difference?

j. In the text box code, add a default value:

To add a default value for the textbox, we need to add a value to the value. Modify your textbox so that it looks like look like:

```
<input type = "text" size = "20" value = "Henrietta  
Messerschmidt" name = "VisitorName" >
```

k. Save and view in browser. See the difference?

2. Add a Radio Button:

a. Inside the form you just created (i.e., between the opening and closing form tags), add the following code:

```
<input type="radio" name="hotornot" value="hot" > hot button<br >  
<input type="radio" name="hotornot" value="med" > medium button<br >  
<input type="radio" name="hotornot" value="cold" > cold button<br >
```

b. save and view in browser. This is a Radio Button. Notice that the text that shows up is actual text (e.g., "hot button") OUTSIDE the input form tag, and not the value (e.g., "hot")

c. Hit submit. Notice what your email looks like.

d. To add a default value, modify the cold radio button as such:

```
<input type="radio" name="hotornot" value="cold" checked = "checked" >
```

e. Save and view in browser. Notice how we set a default checked button.

3. Add a Checkbox:

a. Inside the form, add the following code:

```
<input type= "checkbox" name="spice" value="salt" > Salt <br >  
<input type= "checkbox" name="spice" value="pepper" > Pepper <br >  
<input type= "checkbox" name="spice" value="garlic" > Garlic<br >
```

b. save and view in browser.

c. NOTE: To add a default value, modify the pepper and garlic buttons. as such:

```
<input type= "checkbox" name="spice" value="pepper" checked =  
"checked"> Pepper<br >  
<input type= "checkbox" name="spice" value="garlic" checked =  
"checked"> Garlic<br >
```

d. Save and view in browser. Hit submit. Notice what your email looks like.

3. Add a Select Box:

a. Inside the form, add the following code:

```
<select name="characters">  
<option value="Eric"> Eric Idle </option>  
<option value="TGilliam"> Terry Gilliam</option>  
<option value="John"> John Cleese</option>
```

```
<option value = "Michael">Michael Palin </option>
<option value = "Graham">Graham Chapman </option>
<option value = "TJones">Terry Jones </option>
</select>
```

b. save and view in browser. Hit submit. Notice what your email looks like.

3. Add a **Text Area**:

a. Inside the form, add the following code:

```
<textarea name="comments" rows="10" cols="48">Default text goes
here</textarea><br >
```

b. save and view in browser. Hit submit. Notice what your email looks like.

c. change the size of the text area by changing the number of rows and columns. Try it.

d. save and view in browser.

That's it for forms!!

Other HTML Tags:

Audio Tags (works in html5):

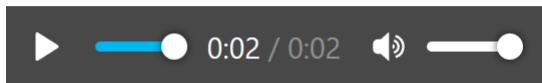
You can include audio using the audio tag. The types of audio files that we know will work are .mp3, .wav, and .ogg. An example would be:

```
<audio controls>
```

```
<source src = "meow.mp3" type = "audio/mpeg">
```

```
</audio>
```

The audio tag results in something that looks like this:



Video Tags (works in html5):

You can include audio using the video tag. The only type of audio files that we know will work in all 4 of the main browsers is .mp4. An example would be:

```
<video width = "300" height = "150" controls>
```

```
<source src = "cow.mp4" type = "video/mp4">
```

```
</video>
```

The video audio tag results in something that looks like this:



Setting the viewport:

In order to set the viewport to the user's visible area of a web page (depending on whether you're on a cell phone or a iPad or a laptop), you want to add a meta tag to the head section of your web page. This will automatically set the web page's dimensions to the dimensions of whatever device the page is being viewed on. Include the following line in the head section of your web page:

```
<meta name = "viewport" content = "width=device-width, initial-scale=1.0">
```

Comments:

Comments are, in essence, notes that you write to yourself that you don't intend for the rest of the world to see. You can use a comment to remind yourself to add code or pictures later, to fix a problem, or to remind yourself what you were trying to accomplish when you designed the page. Comments can also help other people who will be working on the page with you or will be working on the page in the future.

An example of a comment might be something like:

```
...  
<h3> Pictures of Lilly  
</h3>  
<p> These are pictures of my adorable new puppy Lilly. She's only 9 weeks old!  
<!--Reminder: Add those pictures we took of Lilly on her first day in the pool -->  
</p>  
...
```

Comments start with

```
<!--
```

and they end with

```
-->
```

You can put them pretty much anywhere they'll be helpful to you or others.

- 1: Add a comment to your forms web page.
2. Save and view in browser

Important Note:

Comments can be used around code in your web page to make the browser ignore part of the web page. This is incredibly useful when you're trying to figure out exactly where a problem is in your code. For instance, sometimes when you are validating your web page, the error message w3c.org's validator gives you is unclear. You can put comments around sections of your page and revalidate until you get rid of the error. Then you will know exactly where the error is in your code, which makes fixing the error a lot easier!!

Special Characters:

As you know, the browser ignores spaces, tabs, and carriage returns (when you create a new line). We know the tag to create a new line is `
`.

What if you want to add spaces, and you don't want the browser to ignore them? For instance, if you've got

```
<p> This is delayed gratification! </p>
```

The browser will show,

This is delayed gratification!

which probably isn't what you want. You can force the browser to add spaces using:

```
<p> This is &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; delayed gratification! </p>
```

Each ` ` is interpreted as a space by the browser.

There is a list of special characters and how you can include them at:

<http://www.utexas.edu/learn/html/spchar.html>

That's it.

There are more html tags (e.g., `<code>`, `<address>`, etc.), but we've covered all the basic, most frequently used tags. These tags should work with almost all versions of html.

For more information on html tags:

<http://www.w3schools.com/tags/default.asp>