

UNIT-4 HTML

What is HTML?



- HTML is the language for describing the structure of Web pages. HTML gives authors the means to:
- Publish online documents with headings, text, tables, lists, photos, etc.
- Retrieve online information via hypertext links, at the click of a button.
- Design forms for conducting transactions with remote services, for use in searching for information, making reservations, ordering products, etc.
- Include spread-sheets, video clips, sound clips, and other applications directly in their documents.
- With HTML, authors describe the structure of pages using *markup*. The *elements* of the language label pieces of content such as “paragraph,” “list,” “table,” and so on.

HTML Basics



- HTML stands for Hypertext Markup Language
- HTML consists of Tags and values
- Tags have Attributes specified as `` where size is the attribute and +1 is the value of the attribute. that are specified in the open bracket.

HTML Snippet



- In the following HTML snippet name the following: tag, attribute, attribute value and value: `Test font`
 - Tag = font
 - Attribute = size
 - Attribute value = +1
 - Value = Test font
 - Why does `` appear at the end?
 - To close out the tag in the HTML code

Static vs. Dynamic Websites



- Static Websites

- Never change
- Unless the HTML code is changed and uploaded to web server

- Dynamic Websites

- Can change based on an event or data based on code in the website
- Common occurrences of this are dates/times on a website

Important Code



- ```
<!DOCTYPE html>
<html lang="en">
<head>
 <title>Title of the document</title>
</head>
<body>

</body>
</html>
```
- This HTML code indicates the title of the web page is Important Code
- The `<head>` element is a container for metadata (data about data) and is placed between the `<html>` tag and the `<body>` tag.
- Metadata is data about the HTML document. Metadata is not displayed.
- Metadata typically define the document title, character set, styles, scripts, and other meta information.

# <body></body> tag



- The <body> tag defines the document's body.
- The <body> element contains all the contents of an HTML document, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
- Note: There can only be one <body> element in an HTML document.



# <ul></ul> tag



- An unordered HTML list:
- <ul>
- <li>Coffee</li>
- <li>Tea</li>
- <li>Milk</li>
- </ul>
- The <ul> tag defines an unordered (bulleted) list.
- Use the <ul> tag together with the <li> tag to create unordered lists.
- Tip: Use CSS to style lists.
- Tip: For ordered lists, use the <ol> tag.



# <li></li> tag



- The <li> tag defines a list item.
- The <li> tag is used inside ordered lists(<ol>), unordered lists (<ul>), and in menu lists (<menu>).
- In <ul> and <menu>, the list items will usually be displayed with bullet points.
- In <ol>, the list items will usually be displayed with numbers or letters.
- Tip: Use CSS to style lists.

# <a></a> tag



- The <a> tag defines a hyperlink, which is used to link from one page to another.
- The most important attribute of the <a> element is the href attribute, which indicates the link's destination.
- By default, links will appear as follows in all browsers:
  - An unvisited link is underlined and blue
  - A visited link is underlined and purple
  - An active link is underlined and red

# <a href....</a>



- How to open a link in a new browser window:
- `<a href="https://www.w3schools.com" target="_blank">Visit W3Schools.com!</a>`
- The hyperlink reference is to the website, the target opens the link in a new browser window and the text Visit W3Schools.com! is the text listed which is linked to the website.

# HTML Simple Page



```
<html>
 <head>
 <title>Your Name</title>
 </head>
 <body>

 Bulleted Text
 Website

 </body>
</html>
```

# Important Tags



- `<p></p>` for writing a paragraph with text
- `<b>` - Bold text
- `<strong>` - Important text
- `<i>` - Italic text
- `<em>` - Emphasized text
- `<small>` - Smaller text

# <b> and <strong> tags



- In order to bold text you can use either the <b> or <strong> tags
  - <b>Marino</b> will show up as **Marino**
  - <strong>Marino</strong> will show up as **Marino**
  - Notice they are both merely bold!

# <i> and <em> tags



- In order to italicize text you can use either the <i> or <em> tags
  - <i>Marino</i> will show up as *Marino*
  - <em>Marino</em> will show up as *Marino*
  - Notice they are both merely italic!



# <small> tag



- This merely makes your text smaller without having to utilize the size attribute or similar attributes within HTML code
- Ideally, you use this tag to deemphasize something [things that are not important]

# In Class Exercise



- Using the information taught in class create an HTML file index.html where you have a paragraph describing yourself.
- Also, create a menu with the following links: Home, Favorite Sports Teams, and Contact Me
- Have the Favorite Sports Teams have a dropdown menu of at least three teams you like. (Examples can include teams from Baseball, Football, Soccer, Basketball, Hockey, College, High School, etc.)

# In Class Exercise Getting Started



- To write a paragraph use the `<p>...</p>` tag

```
<html>
 <head>
 <title>Your Name</title>
 </head>
 <body>
 <p>Put paragraph here</p>
 </body>
</html>
```

# In Class Exercise Getting Started



- To create your links use the `<ul>` and `<li>` tags
- Your code should go in the header section `<head>`

```

```

```
 Home
```

```
 Favorite Sports Teams
```

```
 Contact Me
```

```

```

# In Class Exercise Getting Started



- You should use the `<select>` tag for your dropdown

```
<select name="teams" id="teams">
```

```
<option value="1">Team 1</option>
```

```
<option value="2">Team 2</option>
```

```
<option value="3">Team 3</option>
```

```
</select>
```

# In Class Exercise Getting Started



```

 Home
 Favorite Sports Teams
<select name="teams" id="teams">
 <option value="1">Team 1</option>
 <option value="2">Team 2</option>
 <option value="3">Team 3</option>
</select>
 Contact Me

```

# In Class Exercise Visual



- Home
- Favorite Sports Teams  

Team 1 ▼
- Contact Me

Put paragraph here



# Advanced HTML

# Review



- HTML stands for Hypertext Markup Language
- HTML consists of Tags and values
- Tags have Attributes specified as `<font size="+1">` where size is the attribute and +1 is the value of the attribute. that are specified in the open bracket.
- Static websites never change unless you edit the code and upload updated version
- Dynamic websites can change based on an event or data embedded within the code; common with dates and times

# HTML Snippet



- In the following HTML snippet name the following: tag, attribute, attribute value and value: `<font size="+1">Test font</font>`
  - Tag = font
  - Attribute = size
  - Attribute value = +1
  - Value = Test font
  - Why does `</font>` appear at the end?
    - To close out the tag in the HTML code

# Common HTML Tags



- `<html>...</html>` - begins and ends the entire HTML document
- `<head>...</head>` - defines information about the document
- `<body>...</body>` - defines the document's body
- `<p>...</p>` - defines a paragraph
- `<ul>...</ul>` - defines an unordered list
- `<ol>...</ol>` - defines an ordered list
- `<li>...</li>` - defines a list item
- `<a href>...</a>` - hyperlink
- `<img src..../>` - defines an image

# courses.shu.edu



- Your own web space
- <http://courses.shu.edu/BITM3730/marinom6/>
- Above is my web space
- Yours will be the same except your Pirate Net username will replace marinom6

# courses.shu.edu



- This is where your project website will be stored
- Everything will be uploaded to your web space
- This allows for your website to be LIVE

# Project Proposal Examples



- <https://elementor.com/blog/website-proposal/>
- <https://www.invisionapp.com/inside-design/web-design-proposal/>
- <https://www.godaddy.com/garage/write-web-design-proposal/>
- <https://learn.g2.com/website-proposal>



# HTML Headers



- `<h1>...</h1>`
- `<h2>...</h2>`
- `<h3>...</h3>`
- `<h4>...</h4>`
- `<h5>...</h5>`
- `<h6>...</h6>`

# Styles & Fonts



## Styles

- `<h1 style="color:blue;">This is a heading</h1>`
- `<p style="color:red;">This is a paragraph.</p>`

## Fonts

- `<h1 style="font-family:verdana;">This is a heading</h1>`
- `<p style="font-family:courier;">This is a paragraph.</p>`

# Text Size & Alignment



## Size

- `<h1 style="font-size:300%;">This is a heading</h1>`
- `<p style="font-size:160%;">This is a paragraph.</p>`

## Alignment

- `<h1 style="text-align:center;">Centered Heading</h1>`
- `<p style="text-align:center;">Centered paragraph.</p>`

# Language



- `<html lang="en">`
- <https://www.tutorialrepublic.com/html-reference/html-language-codes.php>
  - All language codes listed above

# Using Images



- ``
- `img src` – image source
- `alt` – description
- width and height should be altered depending on needs

# Images As Background



- `<div style="background-image: url('img_girl.jpg');">`
- `<style>`
- `div {`
- `background-image: url('img_girl.jpg');`
- `}`
- `</style>`

# Repeat Background



- `<style>`
- `body {`
- `background-image: url('example_img_girl.jpg');`
- `background-repeat: no-repeat;`
- `}`
- `</style>`



# Building Tables



- Why build a table?
- Easiest way to organize info in an HTML file
  - Assuming not using XML or JSON [covered later in the course]

# Tags for building a table



- `<table>...</table>` - defines a table
- `<tr>...</tr>` - defines a table row, must appear within a table
- `<td>...</td>` - defines a table column, must appear within a table row
- `<th>...</th>` - defines a table header

# <table></table> tag



- The <table> tag defines an HTML table.
- An HTML table consists of one <table> element and one or more <tr>, <th>, and <td> elements.

# <tr></tr> tag



- The <tr> tag defines a row in an HTML table.
- A <tr> element contains one or more <th> or <td> elements.

# <td></td> tag



- The <td> tag defines a standard data cell in an HTML table.
- An HTML table has two kinds of cells:
  - Header cells - contains header information (created with the <th> element)
  - Data cells - contains data (created with the <td> element)
- The text in <td> elements are regular and left-aligned by default.
- The text in <th> elements are bold and centered by default.

# <th></th> tag



- The <th> tag defines a header cell in an HTML table.
- An HTML table has two kinds of cells:
  - Header cells - contains header information (created with the <th> element)
  - Data cells - contains data (created with the <td> element)
- The text in <th> elements are bold and centered by default.
- The text in <td> elements are regular and left-aligned by default.

# Building an HTML file with a Table



Begin with basic code:

```
<html>
```

```
<head>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=windows-1252">
```

```
<title>New Page 1</title>
```

```
</head>
```

```
<body>
```

```
</body>
```

```
</html>
```



# Add Your Header



- `<title>New Page 1</title>`
  - `</head>`
  - `<h1 align="center">Your Schedule</h1>`
  - `<body>`
- 
- By adding the `<h1></h1>` code you have created an overall header

# Begin creating your Table



- `<body>`
  - `<table border="0" width="100%">`
  - `</table>`
  - `</body>`
- 
- You can play around with the thickness of the table's border by changing “0” to different sizes

# Building the Table's Data



- `<table border="0" width="100%">`
- `<tr>`
- `<th>Course Name</th>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `</tr>`
- `</table>`

# Building the Table's Data



- `<tr>`
- `<th>Instructor</th>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `</tr>`

- `<tr>`
- `<th>Number of Credits</th>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `</tr>`

# Visual Table



## Professor Marino's Schedule

Course Name				
Instructor				
Number of Credits				

# Visual Table Notes



- Sizes of the cells in each row will change when you replace the `&nbsp;` code with actual text
- What do you do if you are taking more than 4 courses?
  - You will need to add an additional `<td></td>` for each section [Course Name, Instructor, and Number of Credits] until you have enough cells to cover all of your courses for the table you create in Assignment 2

# <div></div> tag



- The <div> tag defines a division or a section in an HTML document.
- The <div> tag is used as a container for HTML elements - which is then styled with CSS or manipulated with JavaScript.
  - The <div> tag is easily styled by using the class or id attribute.
  - Any sort of content can be put inside the <div> tag!
- Note: By default, browsers always place a line break before and after the <div> element.
- For our purpose, it is important to note the <div> tag serves as a break for a paragraph [<p></p> tag]



# HTML Review



- `<a href="websitelink.com">Website Link</a>` serves as code for hyperlinking a website
  - As discussed href is “hyperlink reference”
- The `<h1></h1>` tag represents a header
  - `<h2></h2>`, `<h3></h3>`, etc. also exist and get smaller

# Keep in Mind Now, but for Later



- `<form>...</form>` - defines a form
- `<input type.../>` - defines a form input
- button  
checkbox  
file  
hidden  
image  
password  
radio  
reset  
submit  
text

# In Class Exercise



Create an HTML page called gallery.html with 16 images displayed.

# Building our Gallery



- `<table border="0" width="100%">`
- `<tr>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `<td>&nbsp;</td>`
- `</tr>`
- `</table>`

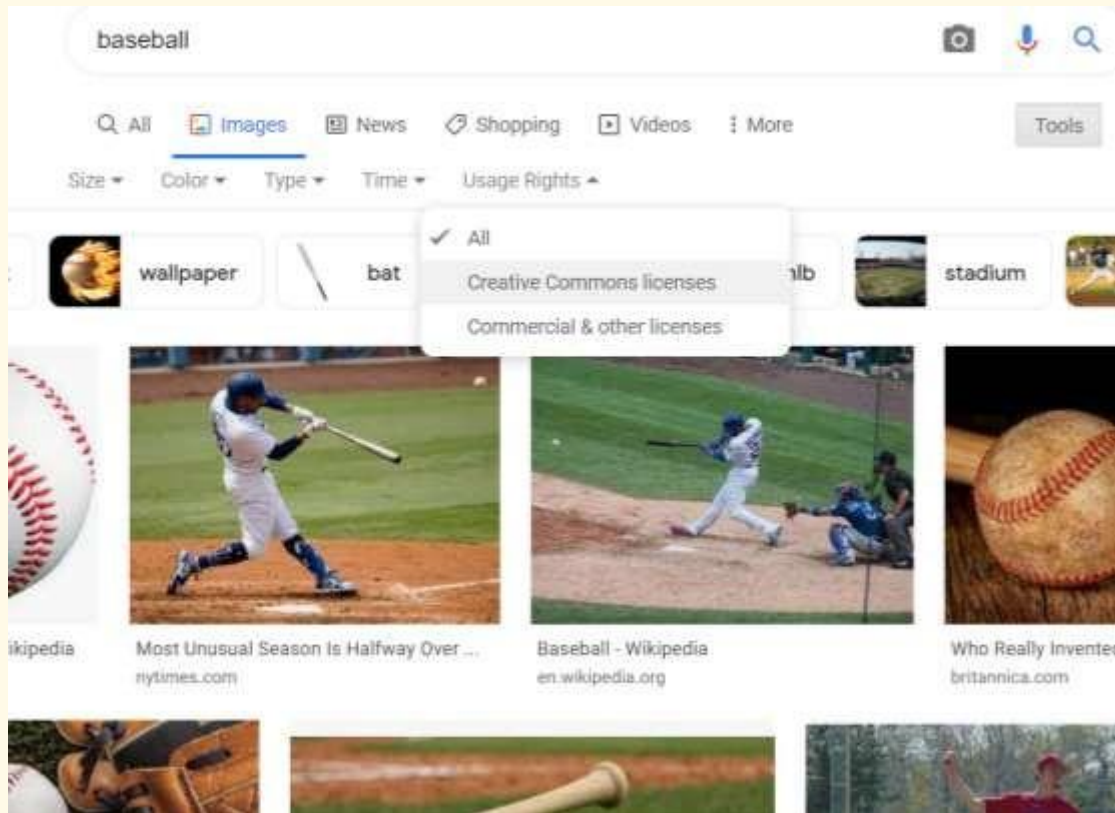
Change the highlighted 0 to a larger number so we can see the border

# Picture Gallery



- The code on the previous slide only gives us 4 boxes
- How do we get our 16?

# Where do we get Images?



- <https://www.freeimages.com/search/baseball>
- Or search Google for free use images

# Current Gallery View






# Embedding Images



- ``
- Where img src is your image source
- alt is your alternate description of the image
- width and height should be modified so that all pictures line up


# How it looks?



- `<td></td>`
- Use the direct image source for now, once we have an image saved to our web space the img src is much shorter like in previous example

# Visual



# My Example Gallery Visual



# Of Note



- You don't need to use alt tag if you don't want to
- You can remove the table border once all 16 images are there
- You want to use the same height for each image

# HTML Assignment



- Create a file called gallery.html to be uploaded to your courses.shu.edu webspace.
- gallery.html should contain an introduction to yourself followed by a table including your course schedule and an image you feel represents each of your classes. For example, if you feel a course is chaotic you might use an image of people playing dodgeball.
- This combines what you did on 8/29 and 9/12 in class.