NestedTags/Spaces/Comments

- Nested tags are possible but don’t overlap sets of them. Avoid the following:

  `<em><strong>Message</strong></em>`

- **Browser Processing**
  - Multiple spaces are converted to one space.
    
    John Mary Peter
    
    John Mary Peter
  - Line returns are ignored.

- **Comments**
  - Represented by `<!-- -->` Note: (two sets of double -)
  - Examples
    
    <!-- The html code example starts at this point -->
  - Comments can not be nested.
HTML Editors

- **Text Editor**
  - Any text editor (e.g., wordpad, notepad, pico, etc.)

- **HTML Editors**
  - Utilities designed to write HTML
  - Examples: CoffeeCup HTML Editor, HTMLjive

- **Authoring tools**
  - Frontpage
  - Dreamweaver – Fairly complex.

- List of editors can be found at:

- Recommended:
  - Komodo Edit [http://www.activestate.com/Products/komodo_edit](http://www.activestate.com/Products/komodo_edit)
Frequently Used Tags

- **Heading tags**
  - `<h1> text </h1>`
  - `<h2> text </h2> ... and so on until `<h6> text </h6>`
  - Higher numbers imply smaller headers.

- **Paragraph tag**
  - `<p> paragraph </p>`

- **Code** – Use to define computer code
  - `<code> </code>`

- **Horizontal Line** - `<hr />`
Frequently Used Tags

- **Emphasis**
  - `<em> text here </em>` Text usually rendered in italics
  - `<strong> text here </strong>` Text usually rendered in bold

- **Super/Sub script**
  - `<sub> text here </sub>`
  - `<sup> text here </sup>`

- **Quotations**
  - `<q> quote here </q>`

- **Line Breaks**
  - `<br />`

- **Verbatim (text displayed exactly as it appears)**
  - `<pre> text here </pre>`

- **Example:** `HtmlDoc.html`
Lists

- **Unordered lists**
  - `<ul> </ul>` tags to represent beginning and end.
  - `<li> </li>` to represent elements in the list.
  - Example: Lists.html

- **Ordered lists**
  - `<ol> </ol>` tags to mark beginning and end.
  - `<li> </li>` to represent elements in the list.

- **Definition lists**
  - Consist of terms and definitions like in a glossary.
  - Tags - `<dl> </dl>`
  - Terms specified using `<dt> </dt>` and definitions with `<dd> </dd>`
  - Example: Lists.html

- **Nested lists**
Image Inclusion

- We can include an image using the img tag

```html
<img src="testudo.jpg" width="84" height="111" alt="Testudos' image"/>
```

- **Example: Image.html**

- Although the width and height attributes are not required they are highly recommended. (They can also be set through CSS).
Links

- Link – connection between web resources.
- Hypertext links are created using the `<a>` (anchor) tag.
- The link can be text:
  - Notice that you **need to** specify the protocol (http://)
- Example: Links.html
- The URL can be absolute or relative.
- The link can be an image:
  `<a href="http://www.umd.edu"><img src="testudo.jpg" alt="Testudos' image" /></a>`
To define a table we use the `<table>` tag
- Border attribute controls table’s border.
- By default borders are not visible.

Basic tags are associated with tables
- `<tr>` - defines a row.
- `<td>` - defines a data element.
- `<th>` - define a header data element.
- `<caption>` - provides a caption for the table.
  - Must appear after the `<table>` tag.
  - Must be used only once.

Example: `Tables.html`
Character Entity References

- Special Characters can be specified by
  - Name specification - &name;
  - Numeric specification - &##xxx;
- Commonly used characters
  - Copyright &copy;
  - Registered Trademark &reg;
  - &amp;
  - &lt;
  - &gt;
  - Non break space &nbsp;
- Example: CharacterReferences.html
- Complete list at: http://www.w3.org/TR/html4/sgml/entities.html
Block Elements/Inline Elements

• Comparison
  • Block elements begin on new lines whereas inline elements don’t.
  • Block elements create larger structures (allow you to define the large structure of your document) whereas inline elements don’t.

• Block Elements Examples
  Paragraphs (<p>), Headings, Lists, Tables, Division (<div>), Block Quotations, Preformatted Text (<pre>)

• Inline Element Examples
  Anchors (<a>), Images (<img>), Line Breaks (<br />)

• Block elements may contain other block elements, inline elements, and data. Some block elements may not contain other block elements.
• Inline elements may contain inline elements and data.
Inline Elements in Block Elements

- Why the following example does not validate?
- `<img>` should be in a block element (e.g., `<p></p>`)  
- Example: `validationProblem.html`
Suggestions for Writing HTML Code

- Add the corresponding end tag immediately.
- Use indentation.
- Have a consistent style.
- Use comments to separate sections of your code.
- Validate your code as you develop it (not at the end).
Googles Page Creator

- You need a gmail account.
- Provides free hosting.
- Your address will be:
  - [http://YOURGMAILID.googlepages.com](http://YOURGMAILID.googlepages.com)
**CSS (Cascading Style Sheets)**

- **Official W3C standard for controlling presentation**
- **Specification:** [http://www.w3.org/TR/CSS21/](http://www.w3.org/TR/CSS21/)
- **Style Sheets**
  - Text file with rules. It includes no html.
  - Style sheets files use a .css extension.
  - Allows you to apply typographic styles (font size, line spacing, etc.)
  - Allows you to apply spacing instructions.
  - Allows you to have page layout control.
  - Smaller html files by avoiding redundancy in style specification.
  - Easy update a collection of pages by updating only a single file.
  - Example: ExternalFile.css
Rules

- Rule - Basic element of a style sheet.
- Rule - describes the formatting associated with a page element.
- Rule format

selector declaration

selector – identifies what should be styled in a web document (e.g., h1, p).
declaration – what and how that portion of the web document should be modified.
- declaration - consists of property: value pair(s) enclosed in { }
- Examples:

  h1 {color: green}
  p {
    font-size: 10px;
    color: red;
  }

- Notice there is a space after the colon (;)
- Popular properties – color, font-family, font-size, text-decoration
- HTML Dog CSS Properties –
CSS Validator

- [http://jigsaw.w3.org/css-validator/](http://jigsaw.w3.org/css-validator/)
- Notice you have three choices
  - by URI
  - by File Upload
  - by direct input
Colors

- You can specify colors using one of the following predefined colors:
  yellow, white, teal, silver, red, purple, orange, olive, navy, maroon, lime, green, gray, fuchsia, blue, black, aqua

- Source for colors
  http://www.w3schools.com/html/html_colors.asp

- You can specify a color by indicating the red, green and blue components. For example, all the following are equivalent:
  - red
  - rgb(255,0,0)
  - #ff0000
Kinds of Selectors

- **Type Selectors** – Those based on the name of an HTML tag
  - `p { color: red; }`

- **Pseudo-classes** – attached to selectors to specify a state. Four popular pseudo-classes are
  - `a:link` – initial color of a link.
  - `a:visited` – color for a visited link.
  - `a:hover` – color when mouse hover over link.
  - `a:active` – color during the clicking of the link.

- **Class Selectors** – Allow us to apply the same CSS rule to different elements
  - Use to create a style you need to apply many times in your document.
  - Created with a period (also known as full stop).
  - Example: `classIdSelectors.html`, `Selectors.css`

- **ID Selectors** – Like class selectors but appear only once in the document
  - Used when you need to apply a style only once in your document
  - Created using `#`
  - Example: `Selectors.html`, `Selectors.css`