

# Introduction to HTML

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# What is HTML?

- Hyper Text Markup Language.
- Computer language used for writing web page
- Collection of tags showing various screen objects on a web page.
- Recognized by web browser.
- With file extension: .htm, .html

# What is Web Page?

- Basic file unit that makes up a web site.
- Mostly composed of HTML files.
- Created by typing the page in a text editor.
- Can be viewed by web browser or interpreted by any program that recognize html tags.

# Example of HTML page



# Creating a HTML File

- Open Notepad.
- Type in text and HTML tags.
- Click on “File -> Save As”. Type in file name and path, and click “Save”.
- View the same file using a web browser.

# HTML Document Structure

```
<html>  
<head>  
<title> Page Title </title>  
</head>  
<body>  
Content goes here  
</body>  
</html>
```

# HTML Tags

- Identify screen objects and describe to browser how the objects should appear.
- Tag usually goes in pair: an open tag (`<b>`) followed by a close tag (`</b>`) with text in between.
- Can have single tag: `<br>`, `<hr>`
- Tags are not case sensitive.
- Recognized by web browser.
- May behave differently on different browsers.

# Basic HTML Tags

- `<!doctype html public "-//w3c//dtd html 4.0 transitional//en">`
  - Preamble that identifies the content as HTML.
- `<h1>...</h1>`, ..., `<h6>...</h6>`
  - Six different levels of heading from high to low.
- `<p>...</p>`, can be single or in pair
  - Marks paragraph. Includes vertical whitespace unlike `<br>`.

## Basic HTML Tags (cont.)

- `<hr>` horizontal rule
- `<br>` new line
- `<b>...</b>`, `<strong>...</strong>`  
make text in between bold.
- `<i>...</i>` make text in between  
italic.
- `<!-- ... -->` turn text in between to  
comment.

# HTML Organization

- Spacing
  - Organize your work.
  - Make your file readable.
  - Make no functional difference to the browser.
- Comments
  - `<!-- ... -->` treats text in between as comment.
  - Put notes in codes
  - Make no functional difference to the browser.

# Effect of Tags on Text

- `<p> ... </p>` makes the text in between as a paragraph.
- `<center> ... </center>` aligns the text in between to the center.
- `<p align="right"> ... </p>` aligns the text in between to the right.

# List

- Unordered list
  - <ul>
  - <li> Tenderfoot </li>
  - <li> Second Class </li>
  - </ul>
  - Show line item follow after a bullet.
- Ordered list
  - <ol>
  - <li> Alameda </li>
  - <li> Santa Clara </li>
  - </ol>
  - Show line item follow after a number.

# Table

- `<table> ... </table>` shows content as table.
- `<tr> ... </tr>` shows content as a row in the table.
- `<th> ... </th>` shows content as header of the column in the table.
- `<td> ... </td>` shows content as data on the column of a table
- Overall table structure:

```
<table>  
<tr><th> ... </th><th> ... </th></tr>  
<tr><td> ... </td><td> ... </td></tr>  
<tr><td> ... </td><td> ... </td></tr>  
<tr><td> ... </td><td> ... </td></tr>  
</table>
```

# Table Example

```
<table>  
<tr><th> Col1 </th><th> Col2 </th></tr>  
<tr><td> cell-1-1 </td><td> cell-1-2 </td></tr>  
<tr><td> cell-2-1 </td><td> cell-2-2 </td></tr>  
<tr><td> cell-3-1 </td><td> cell-3-2 </td></tr>  
</table>
```

# Hyperlink (aka Anchor Tag)

- Change and show a new page on the browser.
- `<a href="..."> ... </a>`
  - Use the text in between as name, show the page assigned to "href" on the browser.
- `<a href="http://troop103fremont.wordpress.com"> Troop103 Blog </a>`
- `<a href="mailto:andrew.acyk@gmail.com"> Email Andrew </a>`

# Image

- Can be a graphic (.jpeg, .gif) or a photo (.jpeg)
- `<img>` is a single tag
- ``
  - Show image file "this\_image.gif". File in the same directory of the image.
- `<a href="http://www.troop103.org"></a>`
  - Use image file as hyperlink. Click on the image will show the new page (<http://www.troop103.org/index.htm>) defined by the hyperlink.

# How to Convert Text to HTML

- First write and type the entire text in the editor.
- Text will show no white spaces and wrapping around continuously on the browser without HTML tags.
- Add `<!doctype ...>` line to the top.
- Identify headers and add `<h?> ... </h?>` tags.
- Identify lines that need to be separated and add `<br>` tags.
- Identify paragraphs and add `<p> ... </p>` tags.
- Identify words that need to be bold and add `<b> ... </b>` tags.
- Identify list of items and add `<ol> ... </ol>` or `<ul> ... </ul>` tags.
- Identify table and add all the table tags.
- Identify hyperlink and add `<a> ... </a>` tags.
- Identify locations for image and add images and `<img>` tags.
- Added other html tags as required.
- Save the file with `.htm` extension. Open it on a browser. Check that every tag is working. If not, fix the problem tag. Save the file after complete.

# Conclusion

- Learn HTML and web page
- Learn the following HTML tags:  
<h?> ... </h?>, <br>, <p> ... </p>, <b> ... </b>, <ol> ... </ol>, <ul> ... </ul>, <table> ... </table>, <tr> ... </tr>, <th> ... </th>, <td> ... </td>, <a> ... </a>, <img>, etc ...
- Learn how to create a HTML file.
- Learn how to convert a text file to HTML file.

# Reference

- [www.w3schools.com/tags/default.asp](http://www.w3schools.com/tags/default.asp)
- [reference.sitepoint.com/html](http://reference.sitepoint.com/html)
- [www.htmlref.com](http://www.htmlref.com)
- HTTP2.ppt from Stanford University
- IntroHTML.ppt from Vincci Kwong