Demo: html5 structure

Simple Text/Web Editor
- TextEdit - make plain text (osx)
- Notepad++ (windows)
- TextWrangler (osx)
- Coda (osx)
- Sublime Text (osx & windows)
- Brackets (osx & windows)

General Workflow (nomadic version)
- Set up/verify web folder on local hard drive
- Set up FTP (file transfer protocol) client
- Download web files (html, css, jpg, gif, png) from server to local folder
- Open/create web files from the local web folder (ONLY)
- Edit web files
- Test locally in browser (chrome)
- Chrome inspect element
- Validate code (w3c validator)
- Upload web files from local drive to server
- Test live in browser (multiple browsers)

What is html?
- acronym for hypertext markup language
- hypertext means the ability to link to other documents.
- markup is a language for describing web pages.
- markup tags define the semantic structure of content in web pages
- “view source” in any browser to see the html markup of a webpage

html tags
- html markup is called “tags”
- tags are special keywords surrounded by angle brackets
  - <html> <body> <head> <title>
- html tags normally come in pairs
  - <p> ..... </p>
  - exception is “empty tags”
    - <meta> <br> <img>
    - no closing tag because they don’t enclose anything they are “empty”
- First tag = start or open tag
- Second tag= end or close tag

html document = web page
- html documents contain html tags and plain text to describe web pages
- Web browsers (Chrome, Safari, Firefox, IE, Opera) read html documents and display them as web pages.
- Browsers use tags to interpret the structure (outline) of web page to create the DOM (document object model)
Example of bare minimum html document:
<!doctype html>
<html>
<head>
  <meta charset="utf-8">
  <title>Hello World</title>
</head>
<body>
  Hello World!
</body>
</html>

html example explained
- <doctype html> = specifies html5 rule set
- <html> = html document
- <head> = instructions for the browser
  - meta, title, css, javascript
- <meta charset="utf-8"> = specifies character encoding
- <title> = title of document
- <body> = visible page content

File extensions
- .html or .htm
- .html more popular = better

CaSE SeNSITiViTy
- html5 is no longer case sensitive (however)
- most developers keep their tags in lowercase for consistency (and as a nod to predecessor xhtml)
- good writing style

Doctype declaration
- you MUST specify the doctype in all of your html documents
  - tells browser what type of document to expect and what rules to follow.
  - consistent rendering across browsers
  - otherwise you get quirks mode
    - emulates 1990’s era browser
    - not good
- the doctype declaration MUST be on the first line in your html document and before the <html> tag.
- doctype declaration for html5
  <!doctype html>
- simplified version of previous doctypes
  <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML+RDFa 1.0//EN" "http://www.w3.org/MarkUp/DTD/xhtml-rdfa-1.dtd">

Structure
- information
  - most important feature of webpage
- webpages are structured in outline form
  - headings
  - paragraphs
  - lists
- figures ( informational images )
- parent-child relationships
  - most html elements can be nested (can contain other html elements).
- good structure
  - ACCESSIBILITY
  - SEO
  - DOM

**html5 structural markup**
- `<header>`
- `<nav>`
- `<section>`
- `<main>`
- `<article>`
- `<aside>`
- `<footer>`

**Generic structure tags**
- `<div>` (block level)
- `<span>` (inline)
- used with CSS for design

**html headings**
- think outline – use html headings for the purpose of headings only
  - DO NOT use headings to make text big or bold (presentational)
- search engines use headings to index your pages (SEO)
- use headings in order of hierarchy:
  ```html
  <h1>This is a heading</h1>
  <h2>This is a sub heading</h2>
  <h3>This is a sub sub heading</h3>
  ```

**html paragraphs**
- `<p>This is a paragraph.</p>
- `<p>This is another paragraph.</p>`

**html links**
- absolute link
  - full http address
  - link to external website
  ```html
  <a href="http://www.w3schools.com">link</a>
  ```
- relative link
  - local .html address
  - link to internal web page
  - internal site navigation
  ```html
  <a href="index.html">home</a>
  ```

**html attributes**
- html elements can have attributes
- provide additional information about an element
- always specified in the start tag
  ```html
  <tag attribute="value"/>
  ```
- attributes must have values
- values should be in quotes (writing style)
html images (informational)
• informational imagery using the img tag should be in <figure> tags
<figure>
<img src="img/w3schools.jpg" alt="accurate description of image">
</figure>
• img tag creates a placeholder for images
• src attribute fills placeholder with image
  o common for images to reside in an img (images) folder
• alt attribute specifies an alternate text for an image
  o required for validation
  o visible when image cannot be displayed (broken)
  o useful for people with disabilities (accessibility)
  o also useful as keywords for search engines (seo)
• design (non-informational) imagery is handled by css
  o placed in background of elements
  o displayed visibly but hidden semantically

html comments
• inserted into the HTML code as programmer’s notes
• makes code more readable or understandable
• ignored when rendered by the browser and are not displayed
  <!-- This is an html comment -->

Lists
Ordered <ol>
  <li></li>
  <li></li>
  <li></li>
</ol>
Unordered <ul>
  <li></li>
  <li></li>
  <li></li>
</ul>

special characters
&lt; is the same as <
&gt; is the same as >
&amp;#169; is the same as ©
&amp;nbsp; non-breaking space