**HTML Essential Training, Part 3 - James Williamson**

***QA***

**1) What is the attribute of the <a> element (anchor tag) that identifies where the user is directed when the link is clicked?**

The Hypertext Reference (href) attribute identifies where users are directed when clicking links.

**2) What is the purpose of the *title* attribute?**

The title attribute provides information that helps make links more accessible. They provide information that can be read and interpreted by assistive devices, search engines, and screen readers.

**3) [Critical Thinking] Create the exact syntax with a *document relative* link to a page on a site with an appropriate title attribute.**

<p><a href=”../my\_file1.htm” title=”This is a link to a page that is one directory up”>link text</a></p>

<p><a href=”../../my\_file2.htm” title=”This is a link to a page that is two directories up”>link text</a></p>

<p><a href=”my\_file3.htm” title=”This is a link to a page that is in the same directory”>link text</a></p>

<p><a href=”my\_directory/my\_file4.htm” title=”This is a link to a page that is one directory down”>link text</a></p>

**4) [Critical Thinking] Create the exact syntax with a link with an absolute url to a page on another site, that pops up into a new tab or a new window.**

<p>This is a link for <a href=”<https://www.wikipedia.org/>” title=”Visit Wikipedia.org” target=”\_blank”>Wikipedia.org</a></p>

**5) [Critical Thinking] What does the HTML *download* attribute do for us?**

It can be used to force a downloadable file to be downloaded, rather than just opened up in a browser like in the case of PDFs. It can also be used to force a file name for a downloaded file, which is especially useful in the case of auto-generated filenames when using JavaScript.

**6) When creating a link to a page region, what attribute is used to target the fragment of the page?**

Hypertext Reference (href) is used.

**7) Which tag is used to designate an *unordered* list?**

<ul></ul>

**8) [Critical Thinking] What’s the difference between an ordered list and an unordered list?**

Ordered lists can have more semantic value in the way that they present information to users. They also have more options for visual modifications beyond variances in bullet types. The sequence in which they are sorted can be modified and the characters used to denote list items can be customized using the *type* attribute.

**9) [Critical Thinking] What is the relationship between a <dt> and a <dd>?**

The relationship between terms and descriptions can be thought of as parent-child relationships, where descriptions are children of parents. There can be multiple parents for single children, and multiple children for single parents.

**10) [Critical Thinking] Which selector does the author use to target fonts on the entire page?**

The author uses the ***body*** selector with the ***font*** property value. They later go in and change font settings per heading as well.

**11) Create the exact syntax for an HMTL *comment*.**

<!-- This is commented out →

**12) Which attribute do we use to apply inline styles?**

The “style” attribute

**13) [Critical Thinking] Although the author shows inline styles, why does the author advocate not to use them?**

Because it’s not scalable. It would be highly inefficient to hardcode all of the styles individually as opposed to styling an entire page using CSS.

**14) Write an example of an element selector?**

Examples of element selectors would be h1..h6, p, body

h2 {color: red;}

p {font-weight: normal;}

**15) [Critical Thinking] Write an example of a CSS selector that applies only to <p> tags with a class named notice?**

p.notice {property: value;}

**16) [Critical Thinking] Why would you declare more than one font in a font-family CSS rule?**

It’s good to declare multiple fonts in case a user doesn’t have the specified fonts installed on their system. By declaring fallback fonts, we can ensure that we still get something similar or *close enough* to the initially declared fonts.

**17) [Critical Thinking] Why does the author prefer ems instead of pixels for the font-size?**

Because the optimal size in pixels will vary from one device to another depending on screen size. 8 pixels on a phone is much easier to read than 8 pixels on a 20” monitor. Ems are variable and more modular/scalable than specifying the pixel size.

**18) [Critical Thinking] What happens when the author uses the margin property and only sets 3 values?**

The first value sets the top margin, the second value sets the left/right margins, and the last value sets the bottom margin.

**19) [Critical Thinking] Why does the author warn about using *reserved words* for colors?**

The actual hexadecimal/rgb value of a color keyword may vary from browser to browser. “gold” in one browser may be brighter or darker than “gold” in another browser.

**20) [Critical Thinking] What is the purpose of the *rel* attribute?**

Rel tells user agents what the relationship between a linked document and the parent document is. Based on this information, the user agent can decide what to do with the file/how to treat it.

***Video Notes***

[Exploring the anchor element (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/exploring-the-anchor-element) (2:58) HTML Essential Training - James Williamson

* How to create links
  + Anchor Element <a>
    - Surrounds clickable link
    - Attributes
      * href attribute tells browser where to go
        + Short for Hypertext Reference
      * target attribute controls where page opens within frame set
        + Frames not commonly used in modern web design
        + Target attribute was removed a while back, but returned to HTML 5 for use in web applications
      * rel attribute describes relationship of target object to link object
      * title attribute gives title that can be read and interpreted by assistive technology, search engines, and screen readers
  + Link Element
    - Used to request external elements for a page rather than creating clickable links

[Linking to pages within your site (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/linking-to-pages-within-your-site) (10:21) HTML Essential Training - James Williamson

* Linking to pages within own site - most common usage of anchor element
* How links are resolved - necessary to understand in order to create internal links
* How to create internal links within a site
  + Understand file structure
    - Sites commonly have multiple directories and subdirectores
      * Linking between internal pages requires coding to move throughout directories
    - Accessing files in the same directory
      * <p>Link to the <a href=”same.htm” title=”link to page in same directory”>same.html</a> page, in the same directory</p>
      * When linking to another page within same directory, you only need the filename
    - Document relative links: Path to these files is relative to the file in which they are found
      * Directions are relative to the current page where the links are being created
      * Going down directories:
        + <a href=”info/extras/resources.htm” title=”Down two directories”>resources.htm</a>
        + Names of nested folders are needed to direct to the file
      * Going up directories:
        + <a href=../links.htm title=”Going up one directory”>
        + Dot dot forward slash used to move up a directory
      * Bottom-level page: A page that is in the deepest nested directory
        + Moving up multiple levels requires multiple dot-dot-forward-slash chains
        + ../../file.htm
* Anchors can be wrapped around almost any html content
  + Single page names, passages, images,
  + Prior to HTML 5 anchor had to sit within block-level elements
  + In HTML 5, anchor tags can wrap around block-level elements
    - Can create large, clickable sections
      * Might not be supported by all browsers

[Linking to external pages (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/linking-to-external-pages) (4:18) HTML Essential Training - James Williamson

* Redirecting to external sites (Absolute links)
  + Requires full URL including protocol used e.g. http or https
  + <p><a href=”<http://www.external_site.com/>” title=”Visit external site”>Example Link</a></p>
    - Last forward slash is not necessary, just indicates a top-level link
  + Targets were originally designed to use with framesets
    - target=”\_blank” opens link in new tab or window, depending on browser setting

[Linking to downloadable resources (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/linking-to-downloadable-resources) (5:19) HTML Essential Training - James Williamson

* Give users ability to download file from a site
  + Scripting *may* be used to help achieve this with security
  + <p>Download our <a href=”\_assets/syntax.zip” title=”HTML syntax reference”>HTML syntax reference!</a></p>
    - If points to file type not recognized by browser, it will be downloaded automatically
    - If browser downloads exe, it may run other security protocols to ensure user meant to download it
    - PDFs may be automatically opened rather than downloaded, depending on browser
      * To force a resource to be downloaded, use download attribute
      * <p>Download our <a href=”\_assets/syntax.zip” title=”HTML syntax reference” ***download***>HTML syntax reference!</a></p>
    - JavaScript may be used to package page as a file automatically for download
      * In these cases, file names may be odd but a download file name can be forced with the attribute
        + e.g. download=”HTML\_syntax”

[Linking to page regions (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/linking-to-page-regions) (9:46) HTML Essential Training - James Williamson

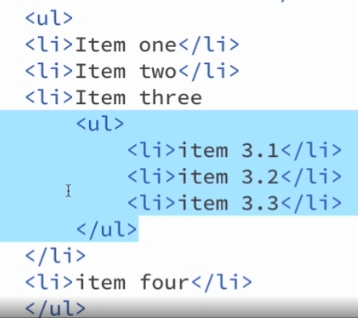
* Anchors also allow users to jump to specific sections of a site/page, in addition to external/internal links
  + Fragment identifiers are sections of a site that can be navigated to
    - Let us jump to sections on same page
    - Extremely useful for vertical scrolling
      * Webcomics? Table of Contents?
    - Can also jump to specific sections of external/internal links as well
  + Two-step process
    - ID of section is needed
      * ID needs to exist in destination section attribute
        + <h3 id=”three”>Section 3</h3>
        + ID names: don’t include whitespace, keep them simple, cap-sensitive

Best to use either all lowercase or camel-case in order to keep IDs standardized

* + - <p><a href=”#one” title=”my title”>Link to section one</a></p>
      * Octothorpe, or hash/pound character, used to denote destination section ID
    - Back button can be used to navigate back up, but not ideal for UX
      * Should create a “Back to top” link when jumping down
  + Link to section on another internal page
    - <p>Link to <a href=”destination.htm#two” title=”Navigate to section two of destination.htm page”>destination section.</a></p>
  + Link to section in external link
    - Fragment identifier may show up in URL or source code (visible in inspector)
  + Be thoughtful when using fragment IDs
    - Might not be apparent to a user where it is that they’ve jumped to in a page
    - Be sure to eliminate this confusion as best as possible if using fragment links

[Unordered lists (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/unordered-lists) (6:05) HTML Essential Training - James Williamson

* Lists are used to organize content
  + Primarily used to semantically group information
    - Links can be organized in lists
* HTML has 3 types of lists
  + Unordered list
    - Represented by bullets
    - Created using unordered list tag <ul>
      * Parent tag describes what type of list follows
    - Listed items are denoted with <li> tags
    - Nested lists/Sublists
      * Sublists can be indented to improved legibility when coding
      * Nested items fit into <ul> tags which are nested within the <li> tags of their parent



* + - * Very flexible and useful, one of most commonly used HTML elements

[Ordered lists (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/ordered-lists) (4:00) HTML Essential Training - James Williamson

* Ordered lists are very similar to unordered lists
  + Share almost identical syntax
  + Parent tag changes to <ol> from <ul>
  + Visual difference:
    - Uses numbers an bullets rather than just bullets
    - Has distinct sequence to items in list
      * Sequence can be controlled
  + Attributes
    - start=”*i*” where index *i* is an integer
    - reversed - determines whether the numbering order is reversed or not
    - type=”*v*” where value *v* is equal to one of the following: 1, i, I, A, a
      * Arabic numerals, roman numerals (upper/lower), alphabet (upper/lower)
  + When to use instead of unordered list?
    - When sequence of items adds to semantics

[Definition lists (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/definition-lists) (7:49) HTML Essential Training - James Williamson

* Description lists (HTML 5), aka Definition lists (prior to HTML 5)
  + Lists consisting of two-part items
    - Terms and descriptions
    - Like dictionaries irl or dictionaries in Python
    - Very flexible semantic element
  + Description list parent tag is <dl>
    - Rather than list items <li>, each item is made up of multiple items
      * <dt> = term
        + Always come before <dd>
        + Typically endered as top-level items by default
      * <dd> = description
        + Typically rendered as inset items by default
    - Definitions/descriptions may have multiple terms associated with them
      * Definition lists can contain more complicated structure within them, such as paragraphs
    - Terms may have multiple descriptions associated with them as well
  + Uses
    - Glossaries, dictionaries, FAQs, metadata, credits
    - Also used for dialogue, although this is discouraged, but no suitable alternative exists

[HTML and CSS (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/html-and-css) (5:34) HTML Essential Training - James Williamson

* HTML and CSS go hand-in-hand and are commonly learned together
  + Firefox has style toggling capability that Chrome did not during the time of recording (may have it now)
  + Most browsers agree on default styling resulting in consistency in “unstyled” pages
  + CSS overwrites default styling with our own styles
  + HTML style tag allows for CSS to be written within an HTML file
    - Cascading Style Sheets (CSS)
      * Consists of rules and selectors
        + Selectors contain property : value pairs
  + Search engines, page readers, etc. read page content exactly the same despite CSS styling

[Creating inline styles (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/creating-inline-styles) (4:13) HTML Essential Training - James Williamson

* How inline styles are written
  + Written directly inline with HTML file
  + Can be written using ***style*** attribute within HTML elements
    - <h2 style=”color:red;”>Style me using the “style” attribute.</h2>
      * Property on left, value on right separated with colon
      * Semi-colons denote when a property-value statement has ended
      * No limit to how many properties can be included in a style attribute
        + Just a matter of knowing what properties apply to what elements
* When inline styles are appropriate to use
  + Usage is heavily frowned-upon for how inefficient it is
  + Useful for html emails

*The author explains that we should always use cascading stylesheets as our first choice since our styles apply to all our site pages at once. On occasion, you will use an inline style, as shown in these videos. The use case for this is when working with a CMS, where we don’t have access to the stylesheet. However, this is a rare situation, so don’t apply this technique across all of your pages!*

[The style element (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/the-style-element) (6:20) HTML Essential Training - James Williamson

* <style> element
  + Fits into head of document
  + Best to write opening and closing tags before writing out tag
  + CSS syntax
    - To target element, use ***element selector***
      * Tells browser or user agent which element is to be styled
      * Global selector:
        + element\_selector {property: value;}
        + h2 {color: red;}
      * Class Selector:
        + .class\_selector {property: value;}
        + .alert {color: red;}
        + Class attribute must be applied

<element class=”class”>

<h1 class=”alert”>

* + - * Combination selector:
        + element\_selector.class\_selector {property:value;}
        + ***Global style***: applies to all instances of a selected element[Controlling typography (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/controlling-typography) (11:58) HTML Essential Training - James Williamson
* Controlling typography
  + “width” property sets element to take up *value* amount of page, in percentage
  + “margin” property goes: top, right, bottom, left (clockwise)
    - margin: 0 auto;
      * Can give shorthand params like above, where 0 is the margin for top/bottom, and left/right margins are auto-set
    - margin: 1em 0 .4em
      * 1em is top, 0 is right/light, 0.4em is for bottom
    - margin-side can be used to specify a specific side
      * margin-bottom: 0;
  + “font-family”
    - h1 {font-family: Georgia, “Times New Roman”, serif;}
      * Georgia is a ***system-font***, which exists on almost all distributed fonts
        + Traditionally, CSS can’t install fonts for clients
        + GoogleFonts, EdgeFonts, TypeKit allows use of fonts not pre-installed on a user system
      * Here, Times New Roman is a ***fallback font*** which is used if a system doesn’t have the first font
        + Quotations are necessary for multi-worded font names
      * Here, serif is a secondary fallback font which specifies a user-agent to just pick a serif font if the other two aren’t available
  + font-size: 2em;
    - 2em = 2 x default\_font\_size
  + font-weight: normal;
  + font-style: italic;
  + line-height: 1.6;
  + text-align: justify;
    - Sets edges of paragraphs’ alignment
* Much of CSS revolves around learning what font styles and properties are available
* Conflicts in CSS are resolved based on whichever rule is more specific (child rule overrides parent)

[Adding color (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/adding-color) (6:56) HTML Essential Training - James Williamson

* Color of elements can also be defined through style
  + There is nothing you can’t style with CSS
  + Hexadecimal notation
    - background-color (or just background): #777;
      * “#777” is an example of hexadecimal notation
        + Breaks down values of Red Green and Blue (RGB)
        + Each color component gets a hex value between 0-225
        + #777 is also an example of shorthand notation
        + #336655 == #365
    - foreground color can be set with “color”
  + Keyword notation
    - border-bottom: 10px solid gold;
      * 10px = width
      * solid = style
      * gold = color
        + gold is an example of a reserved keyword
        + Keywords aren’t always consistent across browsers
        + “gold” may vary from browser to browser
  + RGB notation
    - background: rgb(44,45,140)
      * Allows us to specify rgb value

[Externalizing styles (Links to an external site.)](https://www.linkedin.com/learning/html-essential-training-2017/externalizing-styles) (6:57) HTML Essential Training - James Williamson

* External style
  + Easier to apply to multiple pages than inline styles
    - Creating a CSS
      * Save file as .css
      * CSS files are basic text documents
      * All inline style is already written in CSS, so it can be cut and pasted
    - Applying CSS
      * HTML <style> tag is no longer needed in html file
      * <link rel=”stylesheet” href=”styles.css”>
        + <link> tag (doesn’t require closing tag) can be used to link CSS file

Belongs just below <title> element

* + - * + “rel” attribute tells user-agent what relationship between linked document and parent document is
        + “href” attribute gives link to actual file, same as when used in anchor element
    - CSS files usually exist in their own folder
    - a:hover {property: value;}
      * Sets style for when anchor elements are hovered over