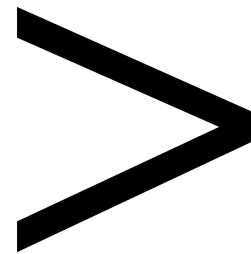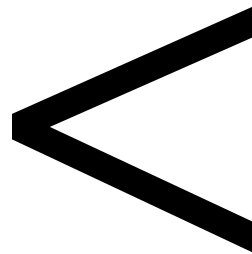# HTML

how to meet ladies

What is HTML

- Hypertext Markup Language

- Made up of 'tags' or elements

- Structured

  - Makes up the building blocks or bones of a website

- Web Browser -> Sends to request to web server -> Sends HTML to web browser -> Web browser processes HTML and displays website

- HTML5

<

>

HTML elements <u>always</u> live within angled brackets!

\<html\>

HTML elements <u>always</u> have an opening tag consisting of an opening angled bracket, the element being defined, and a closing angled bracket

</html>

HTML elements <u>usually</u>* have a closing tag consisting of an opening angled bracket, a forward slash, the tag being closed, and a closing angled bracket

*There are very few exceptions to this rule but some HTML tags do not use a closing tag. These are generally inline elements that define something on their own without additional content inside such as form input fields, line breaks, and horizontal rules.

Attribute   Value

<img src="img/image.jpg">
<p title="Paragraph 1"></p>

Attributes give additional information about an element. attributes are always included in the opening HTML tag and consist of a lowercase attribute name, followed by an **=** sign and a value wrapped in **" "**

```
<html>

    <body>

        <h1>Important Heading</h1>

        <p>A paragraph functions the same way
        a paragraph in a newspaper, magazine,
        or any written word document works. It
        can be as short or as long as necessary,
        but is usually closed once a single
        thought is complete.</p>

    </body>

</html>
```

<html></html> tags tell the browser that everything inside should be read as HTML code. All html documents must include this!

<body></body> tags tell the browser that everything inside should be rendered inside the browser window. HTML outside the main body is not rendered by the browser.

<h1></h1> - <h6></h6> tags tell the browser that everything inside is a heading descending in importance

<p></p> tags tell the browser that everything inside is a paragraph or block of text

HTML Tags act like containers. They tell the browser how to interpret the content that lies between the opening and closing tags.

```html
<!doctype html>
  <html lang="en">
  <head>
  <meta charset="utf-8">
  <title>Page title</title>
  <link rel="stylesheet"
                  href="style.css">
  <script src="script.js"></script>
</head>
<body>
... <!- The rest is content --> ...
</body>
</html>
```

HTML5 Document Structure

<!doctype html>

- The !doctype declaration is not a traditional HTML tag.
- It has <u>no closing tag</u>
- The !doctype declaration **<u>MUST</u>** be the first thing on your HTML page (before the opening <html> tag)
- This declaration tells the browser what version of HTML to use to render the page! For HTML5 this is simply <!doctype html>

Tag Attribute Value

<html lang="en">

- The <html> tag marks the start of the HTML document
- It has a closing </html> tag at the very end of the document
- The lang attribute describes the default language of the HTML page. In this case the value en tells the browser to default to English
- The lang attribute is not strictly necessary, but it's a good habit to describe defaults!

<head>

- The <head> tag marks the head of the HTML document. It has a closing </head> tag.
- The HTML head is not a traditional "heading", but instead describes the website to the browser.

<meta charset="utf8">

- The <meta> tag is included <u>only</u> in the <head></head> of the HTML document.
- It describes meta information about the website to the browser.
- There is no ending tag for <meta>
- The charset attribute defines the default character encoding for the browser to render the text of the HTML page in
- The utf8 value denotes Unicode character encoding. This is the most popular encoding found on the web.

<title>

- The <title> tag defines the main title of the webpage.
- There is an end </title> tag after the title.
- This is the title that will show up at the top of your browser as well as in search results.

`<link rel="stylesheet" href="style.css">`

- The `<link>` tag links outside resources to the HTML document.
- There is no ending tag for `<link>`
- The rel attribute defines the relationship of the outside resource. The stylesheet value tells the browser that what we are linking is…a stylesheet.
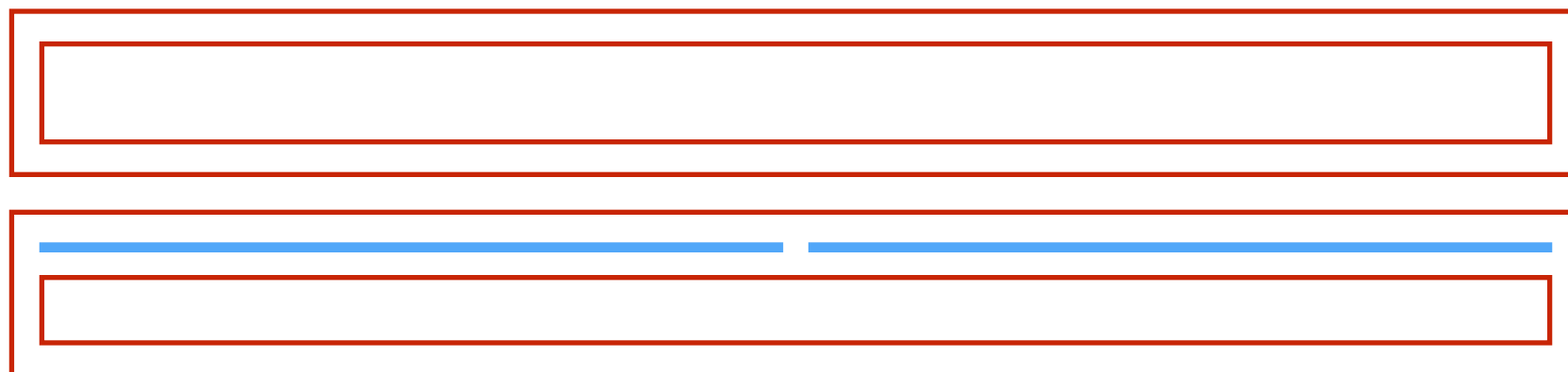- The href attribute defines the link (reference) to the resource while the style.css value is the path.

<script src=“script.js”>

- The <script> tag defines a piece of client side Javascript code to be included in the webpage.
- The src attribute defines the link to the resource. The script.js value is the path.
- There is an ending </script> tag.
- This is because Javascript can be written directly inside the <script></script> tags without a src defined.

<body>

- The <body> tag marks the start of what will be rendered in the main browser window.
- There is an end </body> tag where the browser should stop rendering content.

Block Level Elements

- Block level elements start on a new line (Think stacking boxes)

- Block level elements can contain inline elements as well as other block level elements (text inside a box or box inside a box)

Block Level Elements

\<div\> \</div\>
Used for content "divisions". The most common block level element you will see. Generic block container.

\<h1\> \</h1\> - \<h6\> \</h6\>
Used for headings. Ranked from most to least important. Think of a traditional document outline. A \<h#\> tag applies information to it's parent.

\<p\> \</p\>
Paragraph tag. Defines a block of text

\<ol\> \</ol\>
"Ordered" list.
1. List Item 1
2. List Item 2
3. List Item 3

\<li\> \</li\>
List item. Must be used within a list element.

\<ul\> \</ul\>
"Unordered" list.
• List Item 1
• List Item 2
• List Item 3

\<header\> \</header\>
HTML 5. Header grouping that applies to it's parent. Can contain \<h#\> tags as well as subtitles, meta information, etc.

\<article\> \</article\>
HTML 5. Semantic container denoting the content inside is an "article" of content

\<section\> \</section\>
HTML 5. Semantic container dividing a document into logical "sections". Think of a document outline and the many sections. Should NOT be used like a generic \<div\>

\<aside\> \</aside\>
HTML 5. Semantic container separating a piece of content from the main content of the website. Can be used for sidenotes or even sidebars as long as the content is related.

\<main\> \</main\>
HTML 5. Semantic container denoting the main content of a website.

Block Level Elements cont.

<footer> </footer>
HTML5. Opposite of the <header> the footer contains information at the end of a section.

<blockquote> </blockquote>
Used for long (not inline) quotes such as the pull-quotes seen in traditional publications.

<nav> </nav>
Contains navigation.

<hr>
Visual horizontal rule. Used to semantically break up content.

<form> </form>
Used to define an HTML input form.

<table> </table>
Used to define a tabular display of data. Should not be used for layout unless the content is tabular in nature.

Inline Level Elements

- Inline elements do not begin on a new line. They only take up the space of their content. They will try to sit next to each other on the same line if there is enough room.

- Inline level elements can only contain content or other inline elements.

Inline Level Elements

** ***
Used to *style* text as bold. This is an older tag and in HTML5 we have…

** **
Defines text as strong. This isn't a style, it's a semantic definition.

<i> </i> *
Used to *style* text as italic. This is an older tag and in HTML5 we have…

** **
Puts emphasis on content. This isn't a style, it's a semantic definition. Not to be confused with the unit of measurement.

<small> </small>
Opposite of strong. Intended for short runs of text. Not presentational.

<q> </q>
Inline quotes, not block level.

<cite> </cite>
Citation of outside resource. Used inside block quotes or just to cite the title of a resource.

**<a> **
Anchor tag most commonly used for links to outside pages or to locations on the current page.

** **
Generic inline level container.

**
**
Line break

Inline Level Elements cont.

<img>
Used to display images.

<input>
User input inside of a form.

<select> </select>
Dropdown field in a form.

<option> </option>
Options defined inside of a <select></select> tag.

<textarea> </textarea>
Large text block input used in forms.

Common Attributes

alt=" "
Alternative Text. Used on images, videos, audio, etc. Used for screenreaders and accessibility.

href=" "
Hypertext Reference. Used inside of <a> tags most commonly to define the link path.

title=" "
Describes extra title information about an element. Displayed as a tooltip.

src=" "
Used in media tags such as <img> to define the source path of the media.

style=" "
Inline CSS styles.

target=" "
Used on links to define where the link should open.
_blank = new window
_self = same window

class=" "
Gives an element a definable "class". Used in CSS and javascript to target elements. Classes are re-usable and can appear multiple times on a page.

id=" "
Gives an element a unique ID. Used in CSS and javascript to target elements. IDs are unique and can only be used once per page.