Hyper Text Markup Language
HTML is a markup language. It tells your browser how to structure the webpage.
HTML consists of a series of elements, which you use to enclose, or “mark up” different parts of the content to make it appear or act a certain way.
HTML Tags
tag = < + tag name + >
My cat is very curious.
My cat is very curious.
My cat is very curious.
My cat is very curious.
My cat is very curious.
<!DOCTYPE html>
<html>
    <head>
        <title>My Cool Page</title>
    </head>
    <body>
        the HTML document
    </body>
</html>
<!DOCTYPE html>
<html>
  <head>
    <title>My Cool Page</title>
  </head>
  <body>
  
  </body>
</html>

The **doctype declaration** tells the browser to interpret the page as HTML5.
The `<html>` tag is a wrapper that surrounds the entire document.
The `<head>` contains all the meta stuff you don’t show on the page.
<!DOCTYPE html>
<html>
<head>
  <title>My Cool Page</title>
</head>
<body>

</body>
</html>

The <title> is what shows up on the tab (and in google search results).
The `<body>` contains all the elements that are visible on the page.
<!DOCTYPE html>
<html>
  <head>
    <title>My Cool Page</title>
  </head>
  <body>
  
  </body>
</html>

The document has a tree structure. Elements are nested within each other. Use indentation to keep nesting clear.
Structural Tags
The `<header>` is a large strip across the top of the page that contains title, logo, maybe navigation.
The `<nav>` links to site’s main pages, consistent across pages. It may be part of the header.
The <footer> bottom strip contains common, noncritical information.
<!DOCTYPE html>
<html>
  <head>
    <title>My Cool Page</title>
  </head>
  <body>
    <header>
      Welcome to my cool page!
      <nav>Link1 Link2 Link3</nav>
    </header>
    <footer>
      Updated on September 27, 2016.
    </footer>
  </body>
</html>
There are over 100 tags. You don’t need to know all of them.

<body>
  <h1>All About Cats</h1>
  This site is all about cats.
  <h2>Cat Anatomy</h2>
  Cats have a strong, flexible body.
  <h2>Cat Breeding</h2>
  Cats have a high breeding rate.
</body>

The header tags (<h1>, <h2>, ..., <h6>) are used for headings. The number is based on hierarchy of important.
<body>
  <h1>All About Cats</h1>
  <p>This site is all about cats.</p>
  <h2>Cat Anatomy</h2>
  <p>Cats have a strong, flexible body.</p>
  <h2>Cat Breeding</h2>
  <p>Cats have a high breeding rate.</p>
</body>

The <p> tag is used to enclose a paragraph of text.
The `<div>` tag is the generic container for flow content, which does not inherently represent anything.
<div>blah blah <span>something different</span> blah blah</div>

The <span> represents a span of text stylistically different from normal text
<article> encloses a block of related content that makes sense on its own without the rest of the page.

<section> is similar to <article>, but it is more for grouping together a single part of the page that constitutes one single piece of functionality.
Styling Tags
My cat is very curious.

The <b> tag is used for bold text.
My cat is <i>very</i> curious.

My cat is <i>very</i> curious.

The <i> tag is used for italicized text.
My cat is very curious.

The \texttt{<br>} tag can be used to add a line break in the page.
All whitespace (line breaks, multiple spaces, tabs) is effectively collapsed into single spaces.
Lists
The `<ul>` tag creates an unordered list. It includes nested `<li>` tags for list items.
<ol>
  <li>Apple</li>
  <li>Banana</li>
  <li>Guava</li>
</ol>

The `<ol>` tag creates an ordered list. It includes nested `<li>` tags for list items.
Images
The `<img>` tag represents an image on the page. It does not have a closing tag.
Attributes add additional information to an HTML tag. In this case, the `src=""` attribute specifies the image file to display.

```html
<img src="rainbow.jpg">
```
The link target can be a “relative location” (meaning it includes the path and file relative to the location of index.html.)
Or the link target can be a “fully qualified URL” (meaning it includes the HTTP://)
The `width` and `height` attributes specifies the width and height in pixels to display the image at. They are optional.
The `alt` attribute specifies alt text to be displayed if the user chooses not to display images, or if the browser cannot display the image because it is invalid.
Hyperlinks
The `<a>` tag is used to create a hyperlink.
The `href` attribute specifies where the link directs to.

```html
<a href="http://example.com">my link</a>
```
The link target can be a fully qualified url or a relative location.