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This slide deck consists of slides used in 2 lecture videos in Week 3. Below is a list of shortcut hyperlinks for you to jump into specific sections.

- (page 2) Week 3: WA4E/HTML - HyperText Markup Language (Part 1)
- (page 11) Week 3: WA4E/HTML - HyperText Markup Language (Part 2)

HTML

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www.dj4e.com

<https://www.dj4e.com/code/html.zip>



Time



Browser

D
O
M

Parse
Response

JavaScript

Web Server

Django

Parse
Request

Views

static
files

django
code

Database Server

Sqlite or
PostgreSQL



RRC/HTTP

SQL

HTML

- A way of marking up text to indicate that some text is different than other text
- We “tag” portions of the text to communicate meaning

<p>You can add a style like
bold to some
text by enclosing it in the
appropriate
tag.</p>

You can add a style like **bold** to some text by enclosing it in the *appropriate* tag.

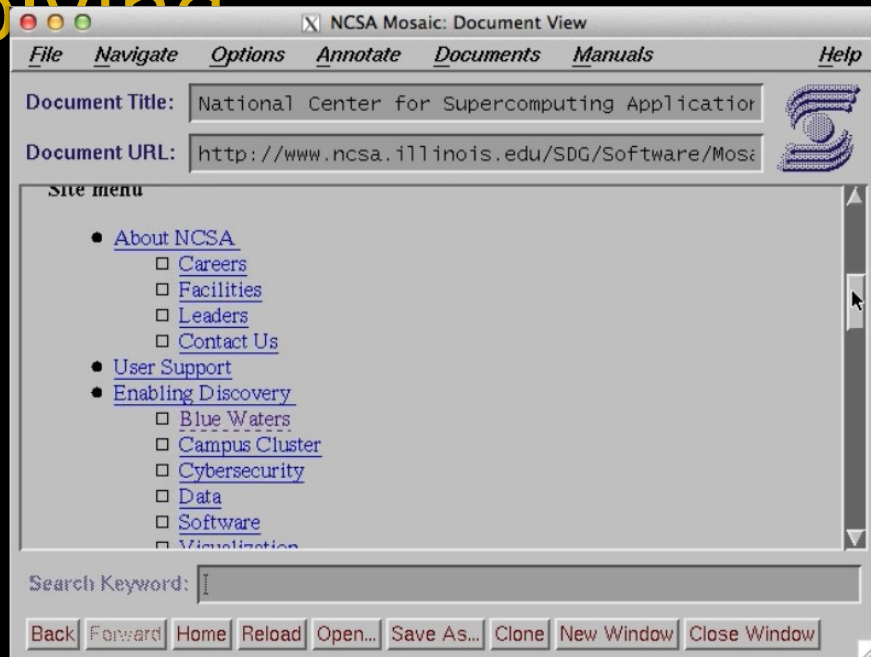
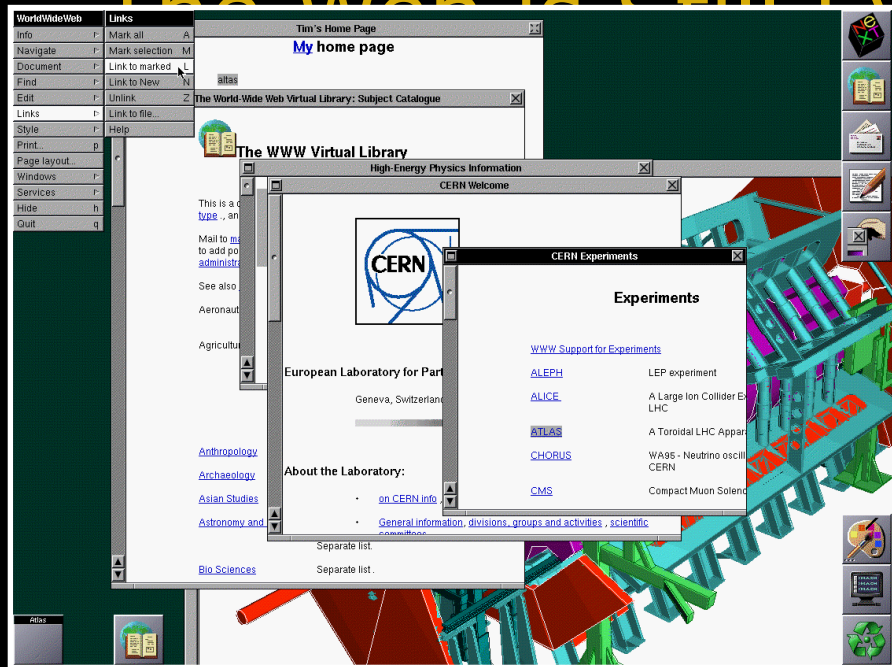
The Web is Still Evolving

- Invented in early 1990s
- Became popular in 1994
- Robert Cailliau – co-founder of the World Wide Web



<https://www.youtube.com/watch?v=x2GylLq59rI>

The Web is Still Evolving



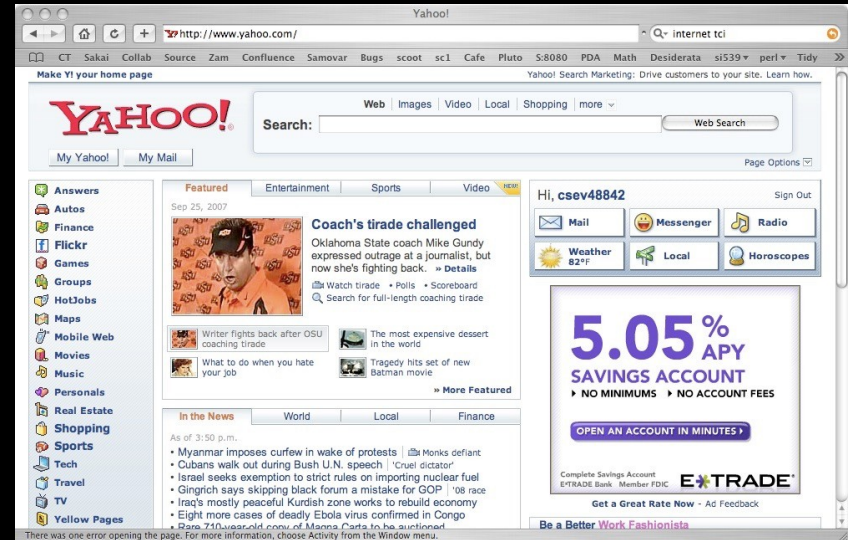
http://www.w3.org/History/1994/WWW/Journals/CACM/screensnap2_24c.gif



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- **Business and Economy [Xtra!]** - [Companies](#), [Investments](#), [Classifieds](#)...
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- **Education** - [Universities](#), [K-12](#), [College Entrance](#)...
- **Entertainment [Xtra!]** - [Cool Links](#), [Movies](#), [Music](#), [Humor](#)...
- **Government** - [Politics \[Xtra!\]](#), [Agencies](#), [Law](#), [Military](#)...
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- **Reference** - [Libraries](#), [Dictionaries](#), [Phone Numbers](#)...

1996

HTML has evolved a *lot* over the years - as computers and networks have gotten faster



200

7

<http://replay.waybackmachine.org/19961022175643/http://www10.yahoo.com/>

The Good Old Days

`<H1>Tacky HTML</H1>`

Hi there.

`<p>`

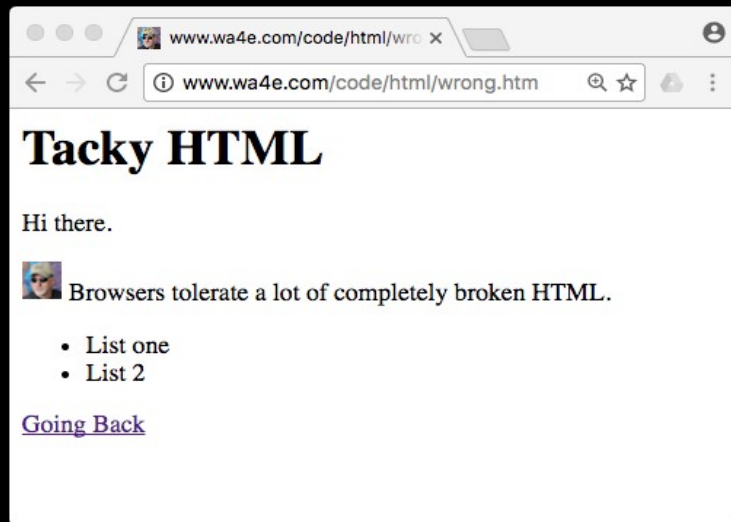
Browsers tolerate a lot of
completely broken HTML.

``

`List one`

`List 2`

``



World Wide Web Consortium



- Formed by Tim Berners-Lee of MIT (formerly of CERN)
- Founded to develop standards around HTML, CSS, XML, etc.
- Insure that the web was based on open standards rather than proprietary vendor products - a bit like cat herding

<http://www.w3.org/Consortium/facts>

Following the Rules

<h1>Tacky HTML</h1>

Hi there.

<p>

Browsers tolerate a lot of completely broken HTML.

</p>

List one

List 2

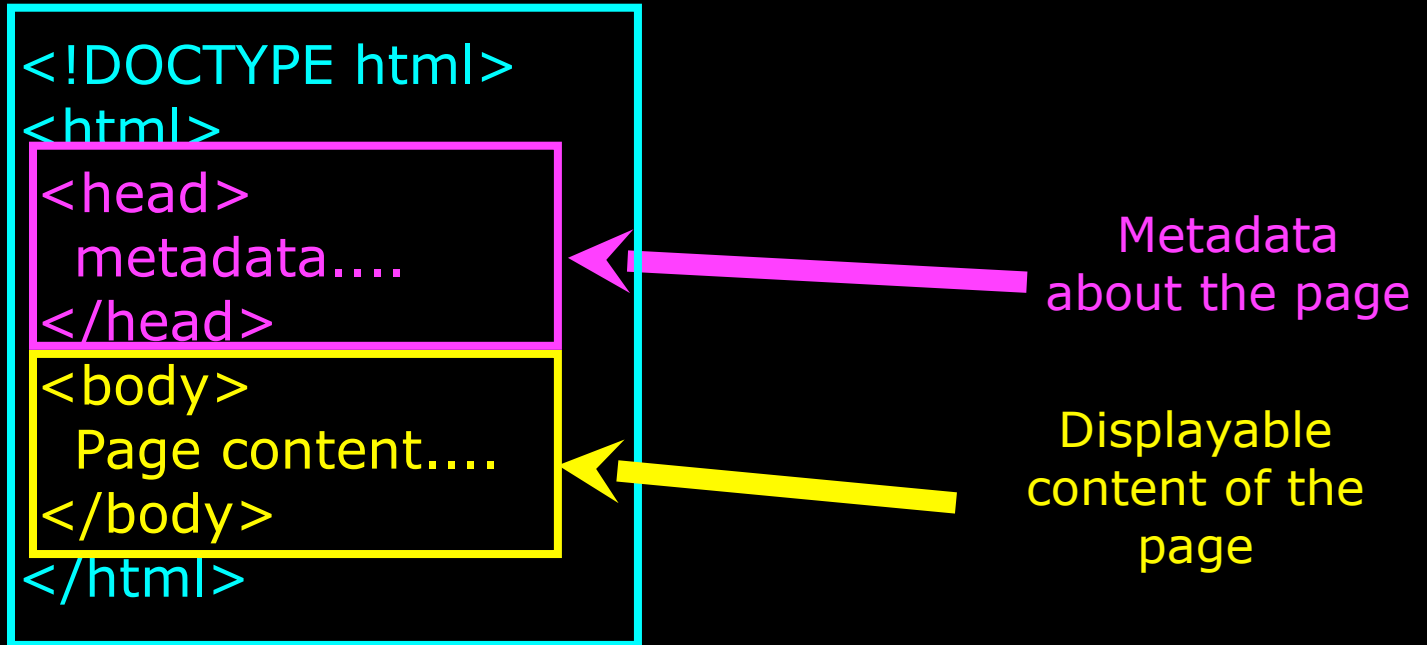
Tags must be lowercase.

Attributes must be enclosed in quotes.

Tags must be closed.

HTML Documents

Structure of an HTML Document



Special File Names

- When a URL points to a directory in your web server, it looks for a file with a special name:
`index.html`, `index.htm`, `index.php`, etc.
- While there is a convention, the “default file” is configurable.
- Usually `index.htm` or `index.html` is a safe bet.
- This only works when viewing through a web server - when viewing from disk, you must view the file.

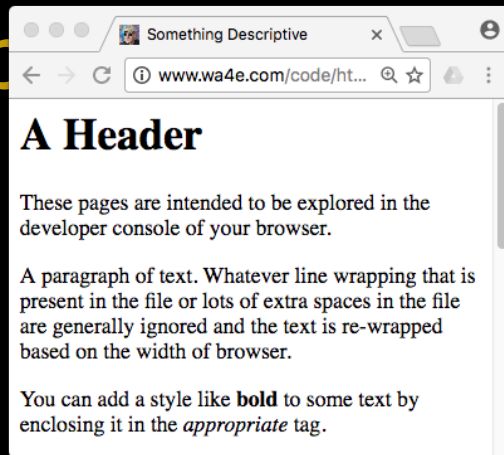
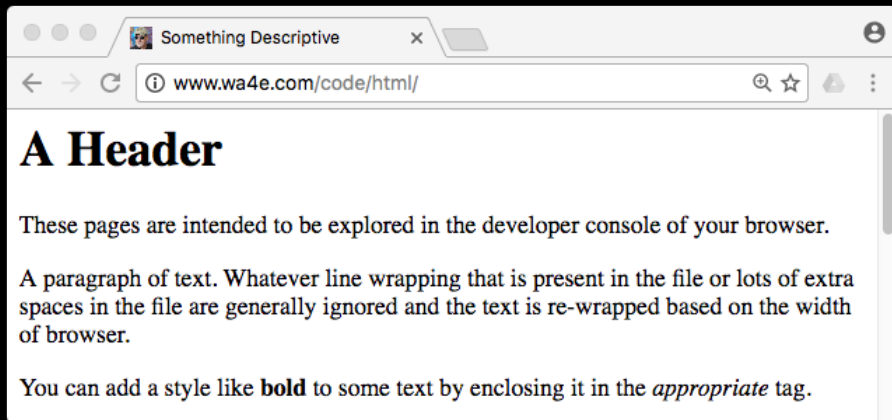
Multiple Files

We can put multiple files in the same directory and then use them in relative links.

```
csev$ ls -l
-rw-r--r--  1 csev  staff   618 Dec 18 22:56 index.htm
-rw-r--r--  1 csev  staff   883 Dec 18 22:57 images.htm
-rw-r--r--  1 csev  staff   679 Dec 18 22:57 tables.htm
-rw-r--r--  1 csev  staff  5909 Dec 18 22:57 tiny.png
csev$
```

Whitespace and line wrapping

<p>You can add a style like
bold to some
text by enclosing it in the
appropriate tag.</p>



Whitespace and
line wrapping

Tags Have a Beginning and /End...

`<p>`You can add a style like
``**bold**`` to some text
by enclosing it in the
``appropriate`` tag.`</p>`

HTML Tag Basics

Start tag

End tag

`<h1>Hello World</h1>`

Tags "mark up" the HTML document.
The tags are read and interpreted by
the browser but not shown.

Attribute

``

A self-closing tag does not need a
corresponding end tag.

Self-closing tag

What about `<` `s` ?

`<p>`Less than `<``</p>`

`<p>`Greater than `>``</p>`

`<p>`Ampersand `&``</p>`

`<p>`Ampersand inception `&amp;``</p>`

`<p>`Semicolon just works `;``</p>`

`<p>`Money characters: `£` `€` `¥``</p>`

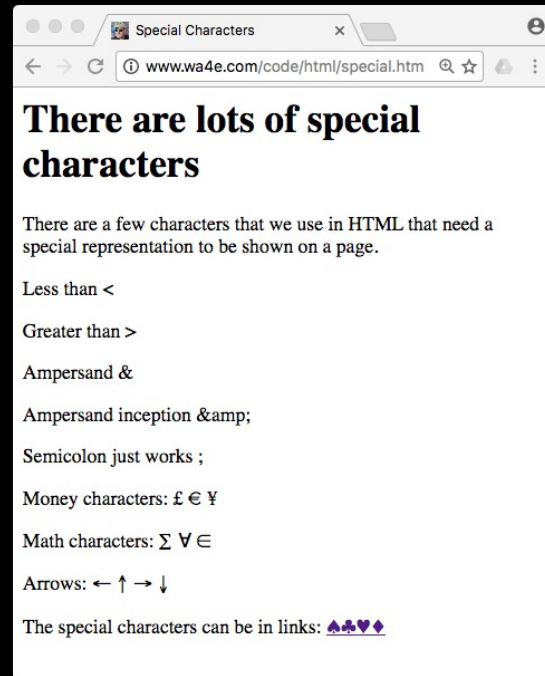
`<p>`Math characters: `∑` `∀` `∈``</p>`

`<p>`Arrows: `←` `↑` `→` `↓``</p>`

`<p>`The special characters can be

in links: ``

`♠``♣``♥``♦````</p>`



HTML Comments

```
<!-- Ignore this for now :) -->
```

```
<p style="border-style: none; position: fixed;  
bottom: 10px; right: 10px;">Go to the  
<a href="navdetail.htm">very last page</a>.</p>
```

HTML Links

- One of the key things about HTML is making a set of pages and creating “hypertext” links amongst those pages.
- Links are what make the “web” into a web of interlinked documents.
- The interlinked nature of the web leads to the “intelligence” that search engines like Google appear to have.

HTML Links

```
<h1>The First Page</h1>  
<p>
```

If you like, you can switch to the

```
<a href="http://www.dr-chuck.com/page2.htm">  
Second Page</a>.  
</p>
```



A link is a “hot spot” on the page. It can be text or an image. Often it is visually marked to make it easier to “notice” so as to encourage users to click!

“a” is short for “**anchor**” and “href” is short for “**hypertext reference**”

HTML Links

```
<h1>The Second Page</h1>
```

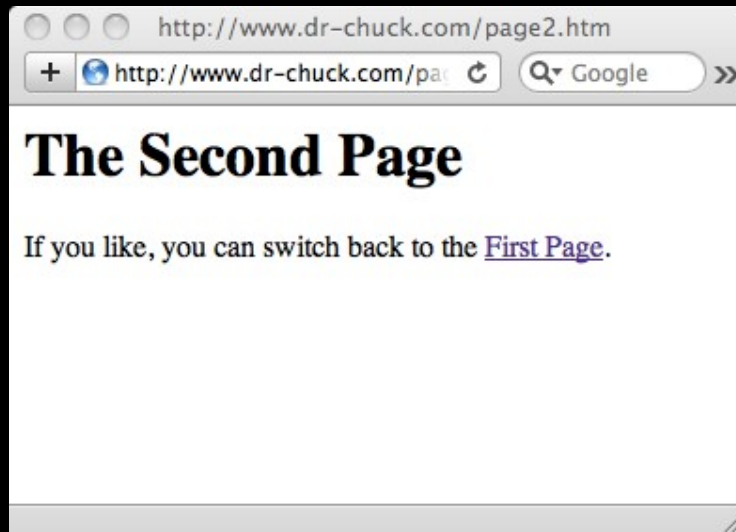
```
<p>
```

If you like, you can switch back to the

```
<a href="page1.htm">
```

```
First Page</a>.
```

```
</p>
```



HTML Links

Absolute Reference

`Second Page`

Start
tag

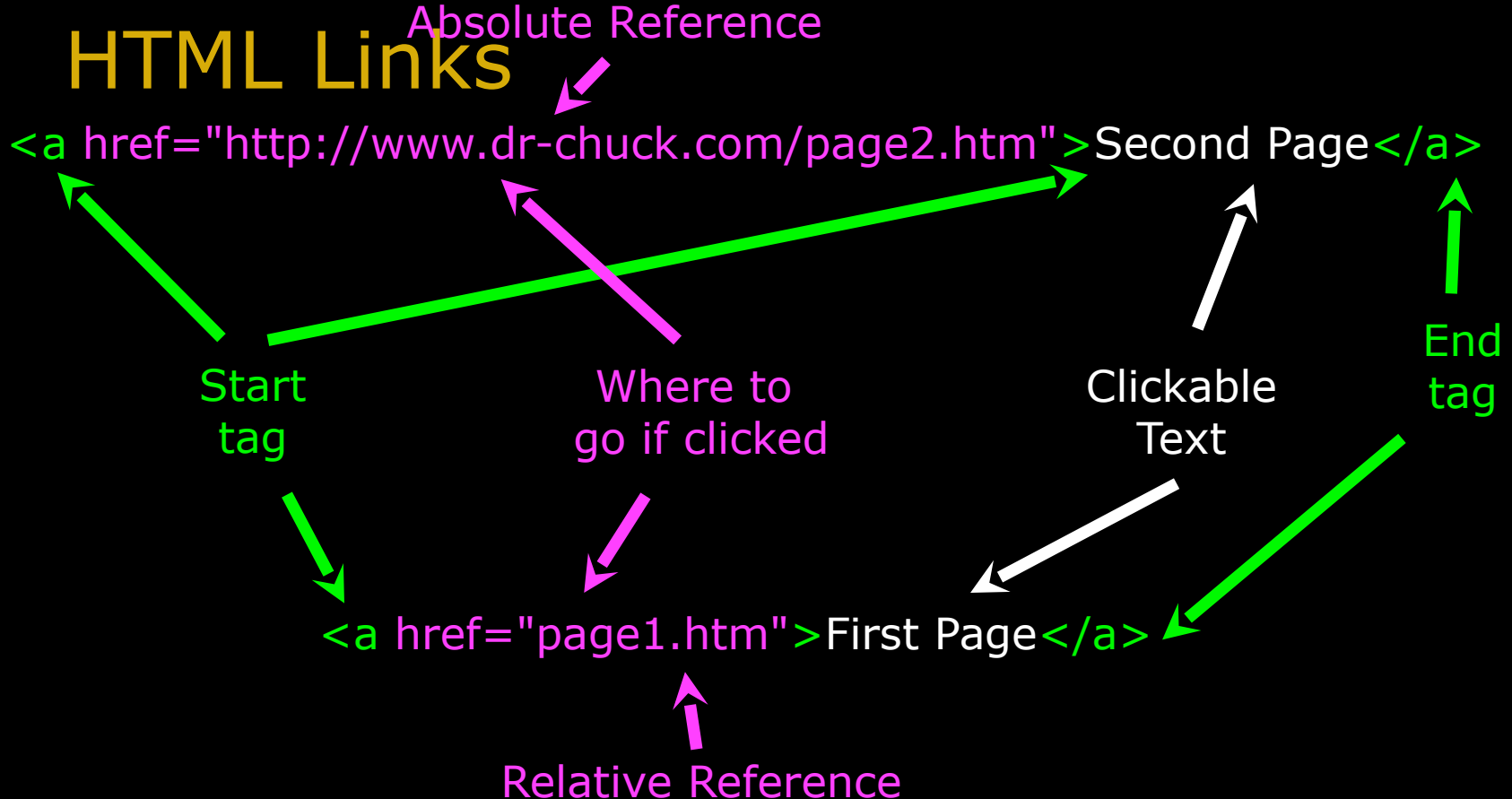
Where to
go if clicked

Clickable
Text

End
tag

`First Page`

Relative Reference



Absolute vs. Relative

```
<a href="http://www.dr-chuck.com/page2.htm">Second Page</a>
```

A hypertext references can be a full URL and refer to some other page anywhere on the Internet.

```
<a href="page1.htm">First Page</a>
```

Or the reference can be a file name that is assumed to be in the same folder as the current document (relative reference).

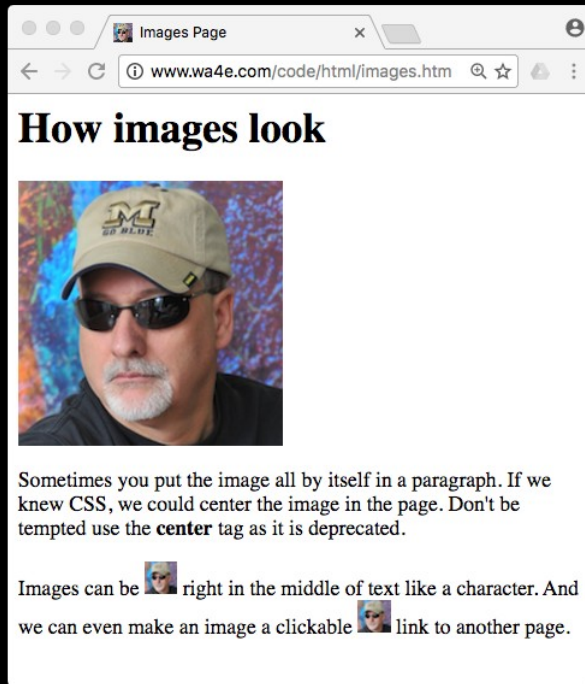
Images

<p>

Images can be **** right in the middle of text like a character. And we can even make an image a clickable

link to another page.

</p>



A List ...

``

`<p>`This pages shows us how lists work`</p>`

`<p>`We need to encode

``certain characters``

to show them in HTML`</p>`

`<p>`We should learn more about

``Links``

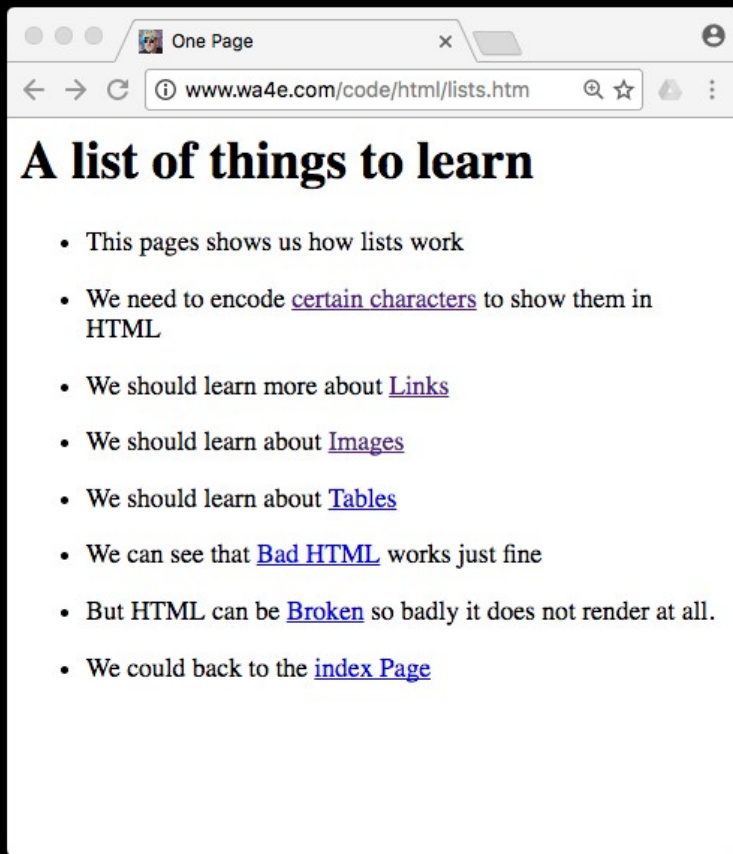
`</p>`

`<p>`We should learn about

``Images``

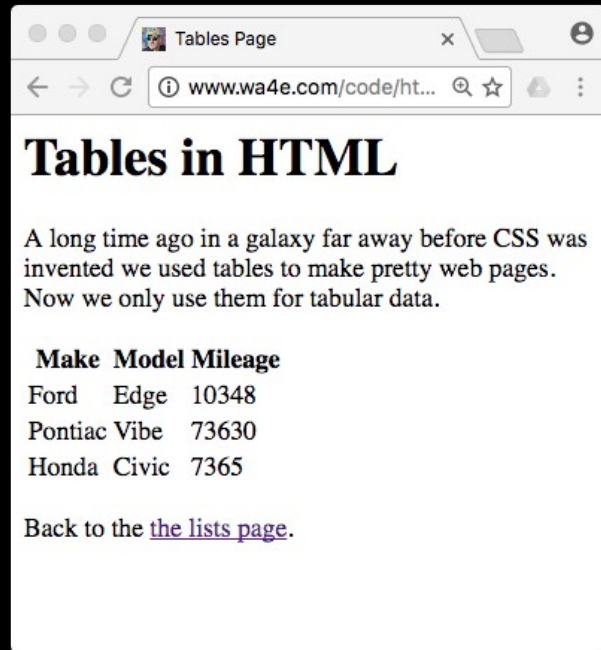
`</p>`

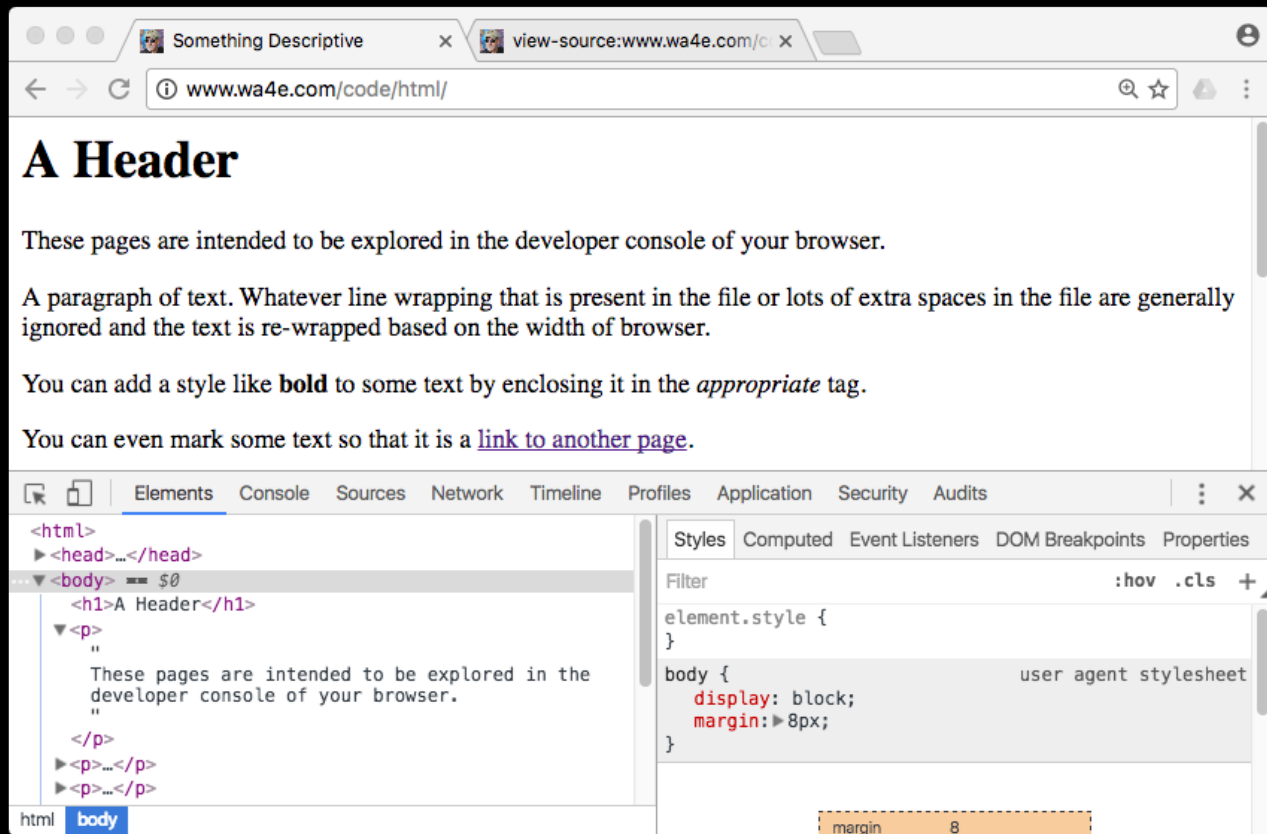
``



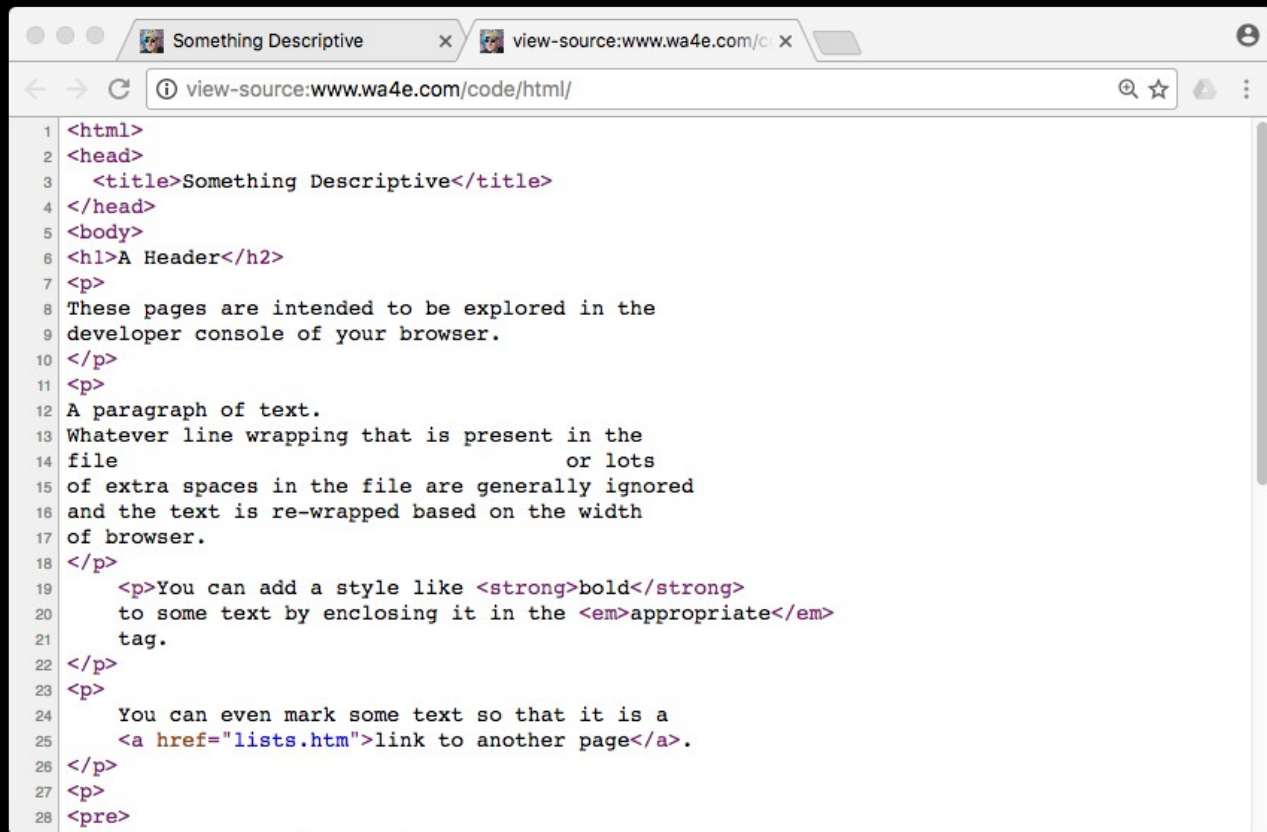
Tables

```
<table>
  <tr>
    <th>Make</th>
    <th>Model</th>
    <th>Mileage</th>
  </tr>
  <tr>
    <td>Ford</td><td>Edge</td>
    <td>10348</td>
  </tr>
  <tr>
    <td>Pontiac</td><td>Vibe</td><td>73630</td>
  </tr>
</table>
```





Explore
Sample
Code



The image shows a web browser window with two tabs. The first tab is titled 'Something Descriptive' and the second is 'view-source:www.wa4e.com/c...'. The address bar shows 'view-source:www.wa4e.com/code/html/'. The main content area displays the source code of an HTML document, which is a simple web page with a title, a header, and several paragraphs of text. The code is color-coded, with tags in purple and text in black. The code is as follows:

```
1 <html>
2 <head>
3   <title>Something Descriptive</title>
4 </head>
5 <body>
6 <h1>A Header</h1>
7 <p>
8 These pages are intended to be explored in the
9 developer console of your browser.
10 </p>
11 <p>
12 A paragraph of text.
13 Whatever line wrapping that is present in the
14 file or lots
15 of extra spaces in the file are generally ignored
16 and the text is re-wrapped based on the width
17 of browser.
18 </p>
19 <p>You can add a style like <strong>bold</strong>
20 to some text by enclosing it in the <em>appropriate</em>
21 tag.
22 </p>
23 <p>
24 You can even mark some text so that it is a
25 <a href="lists.htm">link to another page</a>.
26 </p>
27 <p>
28 <pre>
```

Explore Sample Code

Summary

- HTML has gone through many changes and evolutions.

It started clean and simple - then got ugly and nasty - now we are back to a clean and simple approach.

- A key to modern/clean HTML is that formatting is handled using CSS - Cascading Style Sheets.

Acknowledgements / Contributions



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Continue new Contributors and Translators here