Fame, Fortune, and the Fun Frontend

Arthur Ketcham
dev@arthurk.com
Lead Developer, gowatchit.com

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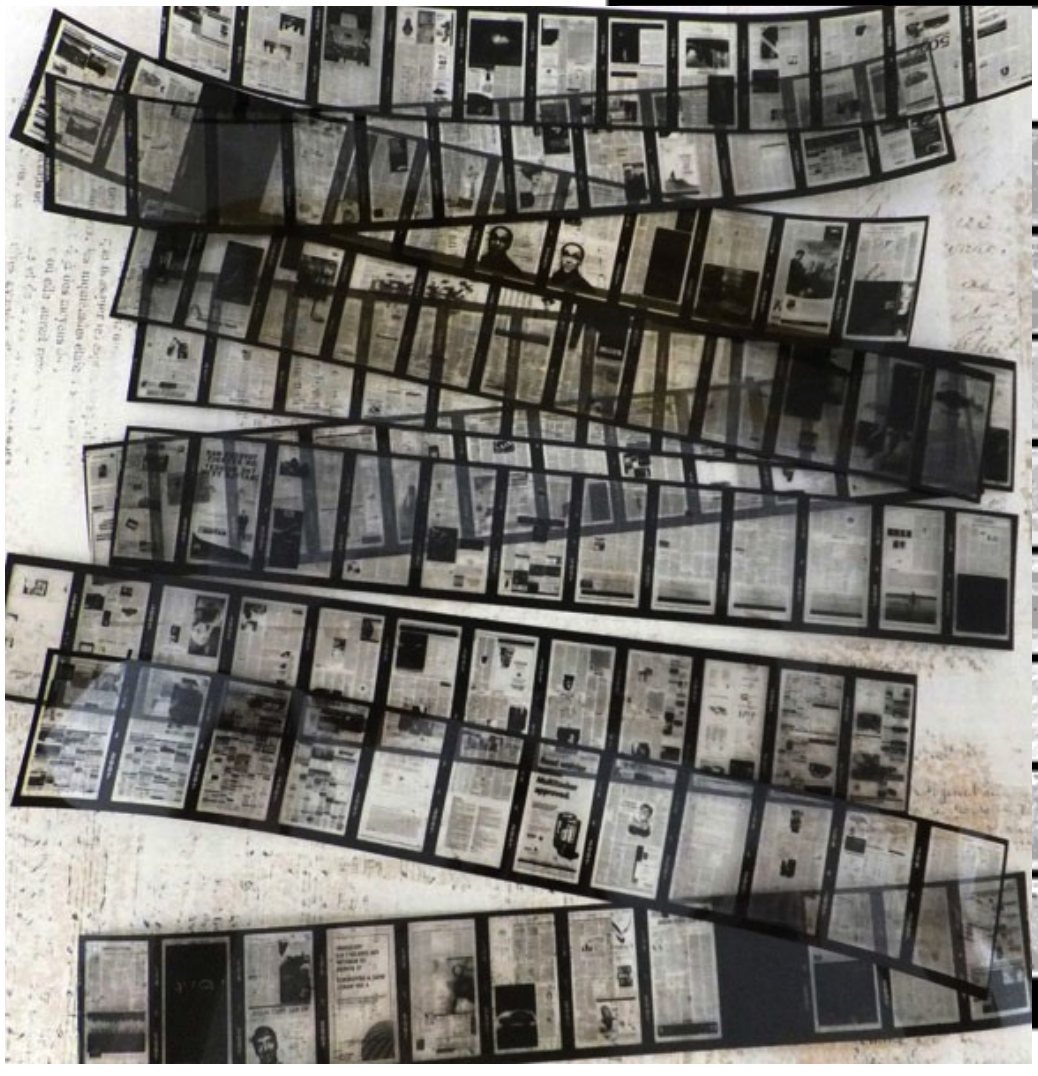
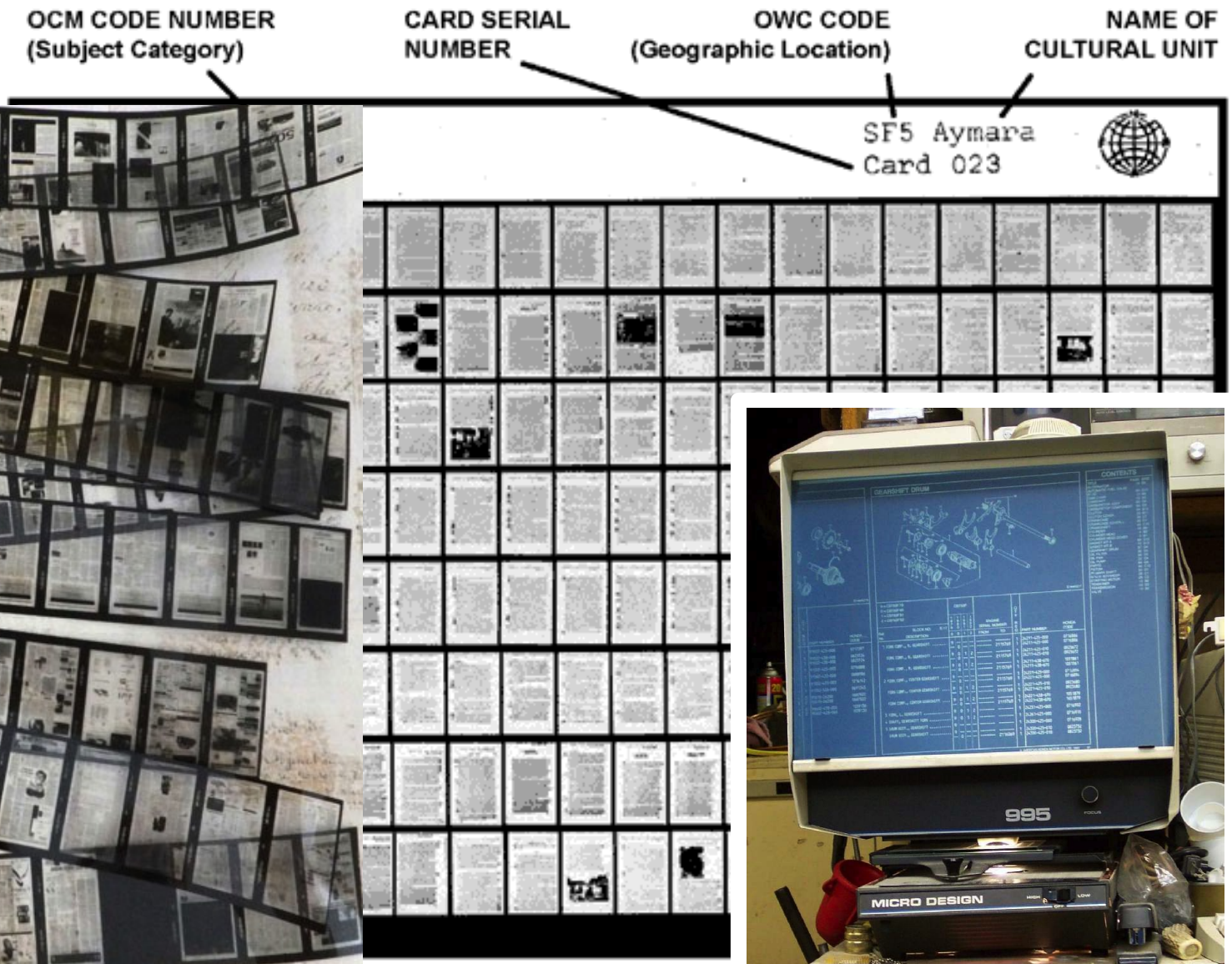
- HTML is the DNA of the Web
- The Internet is more than the Web
- What are HTTP and HTML?

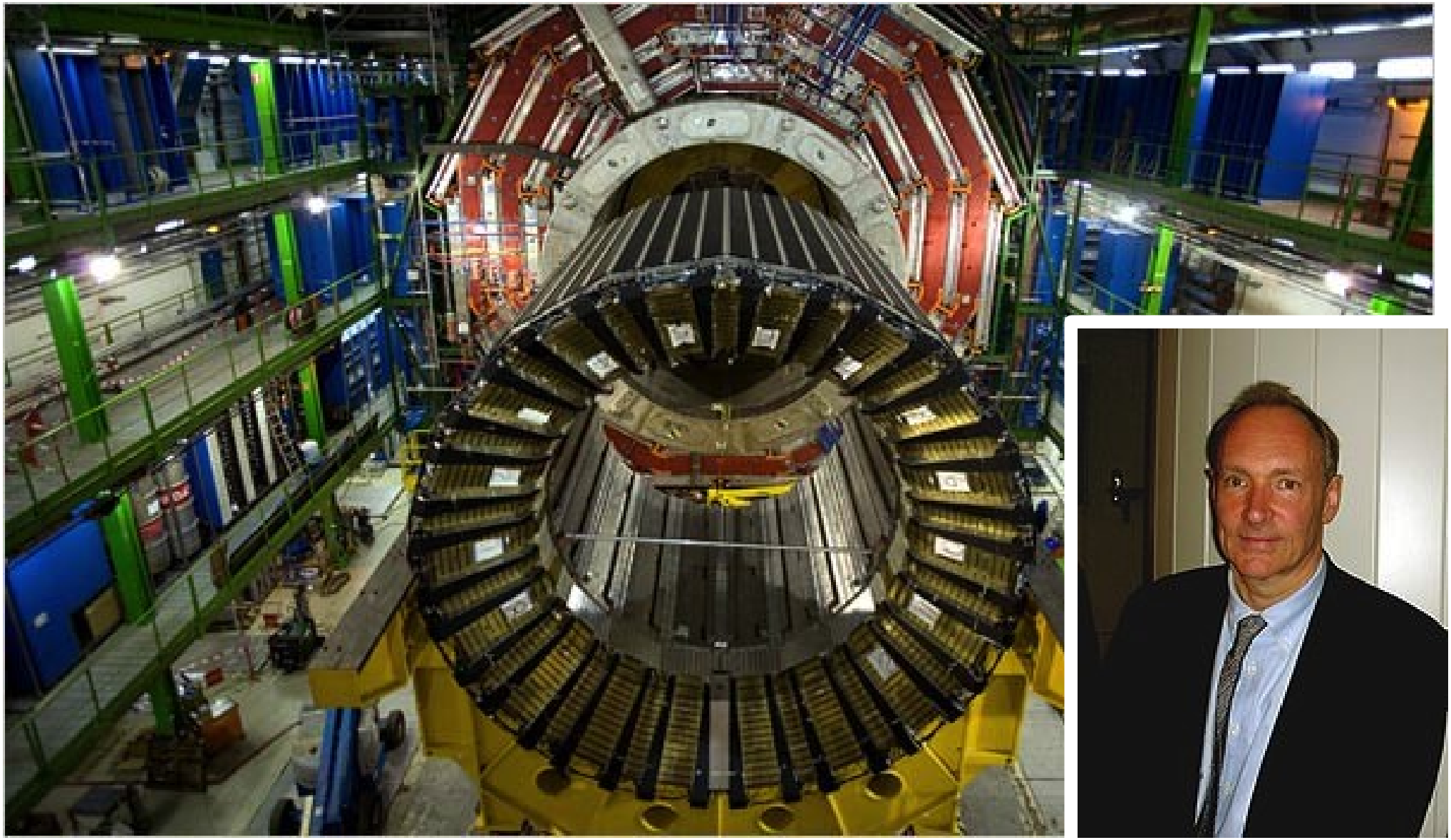


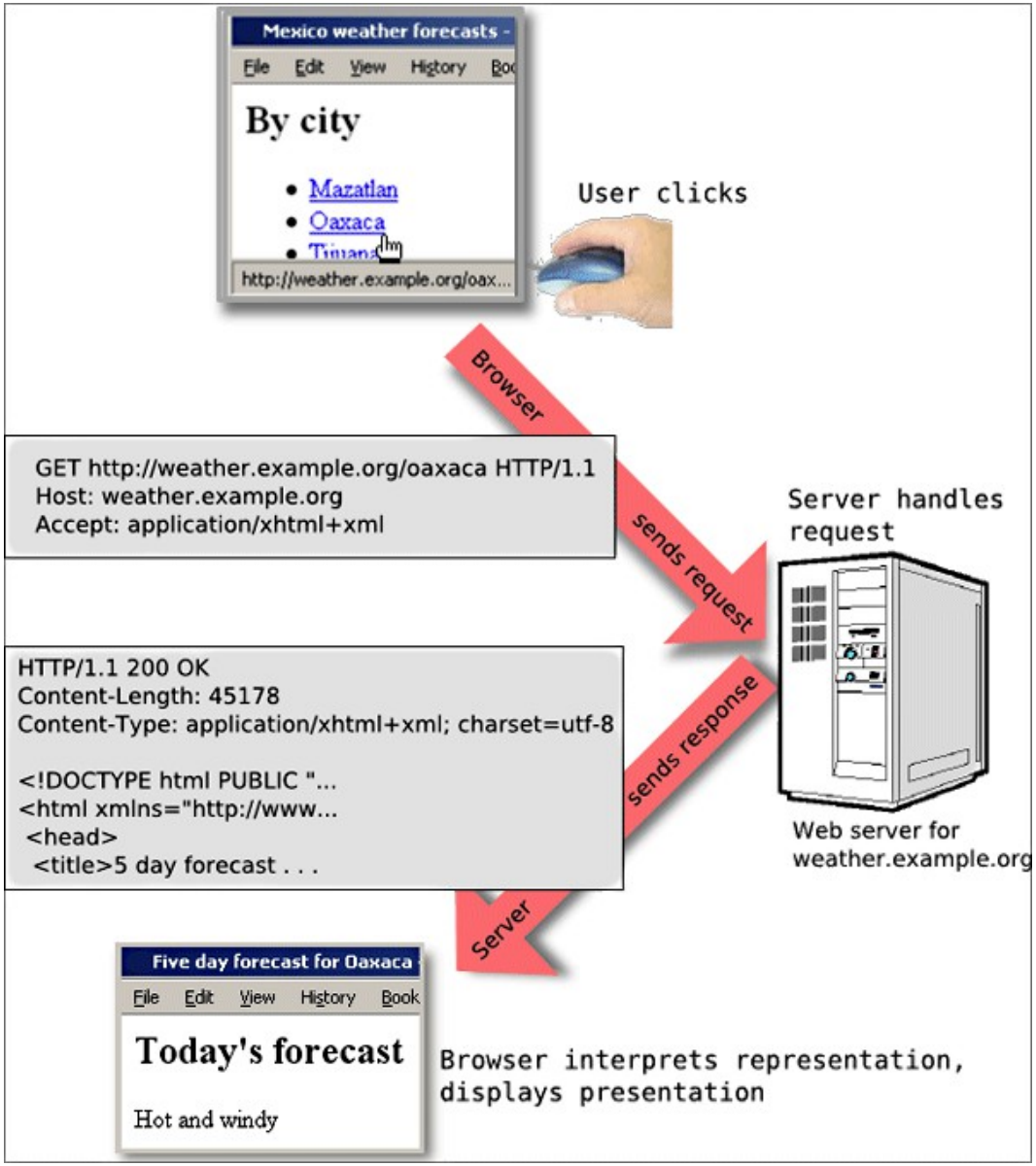

OCM CODE NUMBER
(Subject Category)
CARD SERIAL
NUMBER
OWC CODE
(Geographic Location)
NAME OF
CULTURAL UNIT
SF5 Aymara
Card 023

995
MICRO DESIGN

Document: Bungler OED
At: "<entry>"
<entry>
<hwsec>
<hwgp>
<hwlem>bungler</hwlem>
<pron>b<I>ə</I>ŋglə</pron>. </hwgp>
<vfl>Also <vd>b</vd> <vf>bongler</vf>,
</vfl>
<etym>f. as prec. + <xra><xlem>-ER</xlem>
<sen>One who bungles; a clumsy unskilful
<quot>
<qdat>1533 </qdat>
<auth>More </auth>
<wk>Answ. Poyson. Bk. </wk>Wks. (1557
<qtxt>He is euen but a very bungler.

SGML





- Client and Server Model
- Client Requests
- Server Responds
- **GET/POST**/PUT/DELETE
- URIs
- **REST**
- Response: Usually HTML

- The web server listens to port 80
- Gets a request:
  - GET "/", HOST “gowatchit.com”
- Web server hands request to *Rails/Rack*
- “Give me the root page!”
  - HomeController#index as HTML
-

- Dynamic vs. Static content
  - Database generated content
  - Interactivity
  - Sessions
- Images
- Video
- CDNs
- CSS, Javascript, and Assets

Routing: Mapping an address to an action

config/routes.rb:

```
Watchitnow::Application.routes.draw do

  Resources :movies
  get '/tools/' => 'browser_bar_widget#new'
  match '/providers' => 'home#providers'

  root :to => "home#index"
  [...]
```

- *User asked for the movie “Argo”, id 265874*
- Rails: “Hey database: find Movie 265874”
- MySQL: “Ok here it is:” *#<Movie id: 265874, year: 2012, title: "Argo", synopsis: "When militants seize control of the U.S. embassy in...", in_theaters: false, priority: "high", run_time: 7200, rating: "R", image_file_name: "Argo.jpg", is_youtube_trailer: true, instant_available: false, queues: 1262, and so on...>*
- Rails*: Cool, lets build HTML and fill in the gaps with that!*

gowatchit.com/movies/argo-265874

Watch It BETA

Find a movie, actor, or director

Follow Us

HI Arthur My Queue Channels Lists Preferences Log out

In Queue

In 1395 Queues

Friends that have queued this

2

Share this movie

Tweet 3

Share 5

Share with a friend

Argo R

MANAGE

2012 • Thriller • 120 Minutes

Directed by **Ben Affleck**. Starring **Ben Affleck**, **Alan Arkin**, **John Goodman**, **Bryan Cranston**, and **Taylor Schilling**.

When militants seize control of the U.S. embassy in Tehran during the height of the Iranian Revoluti... **Read More**

84 **Critic Score**
Read all reviews from MRQE.com

87 **Twitter Sentiment**
See all tweets from Flicktweets.com

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FANDANGO

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Rent from $3.99

vudu
SD / HD / HDX
Buy from $14.99
Rent from $3.99

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Rent from $3.99

MOVIES ON DEMAND ON CABLE
Click for Availability

YouTube
Streaming
Rent from $3.99

Google play
Streaming
Rent from $3.99

```
<!DOCTYPE html>
   <head>
     <title>Watch Argo Online and on DVD | Watch It</title>
     <link href="http://cdn.gowatchit.com/assets/full_site.css"
       media="screen" rel="stylesheet" type="text/css" />
     <script src="http://cdn.gowatchit.com/assets/application.js"
       type="text/javascript"></script>
     <link rel="shortcut icon" href="/favicon.ico"/>
     <meta itemprop="name" content="Watch It"/>
     <meta name="description" content="Watch Argo instantly, rent or buy
       online, on dvd and blu-ray, in theaters, or on demand. Directed
       by Ben Affleck and starring Ben Affleck, Alan Arkin, John
       Goodman, Bryan Cranston, Taylor Schilling." />
     <meta name="keywords" content="watch movies online, rent movies
       online, buy movies online, watch movies instantly, watch movies
       dvd, watch movies blu ray, watch movies in theater, watch movies
       on demand, Netflix, iTunes, Redbox, Amazon, Fandango, Movies on
       Demand." />
     <meta property="fb:app_id" content="167888973227524"/>
     <meta property="og:title" content="Argo"/>
     <meta property="og:type" content="movie"/>
   </head>
   <body>
 ...
```

```
<html>
    <head>
    </head>
    <body>
        <div id=”leg 1”></div>
        <div id=”leg2”></div>
    </body>
</html>
```

- DOM Elements:
  - Root → <html> → <head> → <title>
  - Root → <html> → <body> →
- Block Elements
  - , <section>, <video>, <table>, <ul>, <form>, etc.
- Inline Elements
  - <img>, , <a>,,<td>

https://developer.mozilla.org/en-US/docs/HTML/Block-level_elements
http://serendip.brynmawr.edu/serendip/htmlprimer.html

- Lists

```
<ul>
  <li>List Item</li>
</ul>
```

- Dictionaries

```
<dl class="urban">
  <dt>Dawg</dt>
  <dd>Close friend and/or Homie</dd>
</dl>
```

- Tables
  - Use for tabular data only! Never for layout!
  - <table>,<th>,<td>,<tr>

- `<a href="http://google.com">Google</a>`
- Elements **(<a>)**
- Attributes **(href)**
- Contents **(Google)**
  - Text
  - Other Elements
  - Code

```
<!DOCTYPE html>
   <head>
     <title>Watch Argo Online and on DVD | Watch It</title>
   </head>
   <body>
 <header>
       <img src="logo.png" title="Watch It" alt="Watch It" />
   <div id="main_search" class="search_box">
 <form><input type="text" name="search" value="..." /></form>
     </header>


     <div id="movie_poster_trailer">
       <img src="argo-poster.png" title="Click to Play Trailer" />
     </div>
 <div id="movie_description">
       <p>When militants seize control of the U.S. embassy in Tehran during the height of
the Iranian Revolution, CIA agent Tony Mendez (Ben Affleck) creates a fake Hollywood production
in order to fool the terrorists into releasing a group of U.S. diplomats in this Warner Bros.
docudrama based on actual events. Affleck directs from a script by Chris Terrio, with George
Clooney handling producing duties. Alan Arkin, John Goodman, and Bryan Cranston co-star.</p>
     </div>
   </body>
 </html>
```

- Cascading Stylesheets
  - Cascade: Specific rules *overrule general rules*

```
body { color: blue; }
body div.legs { color: brown }
```

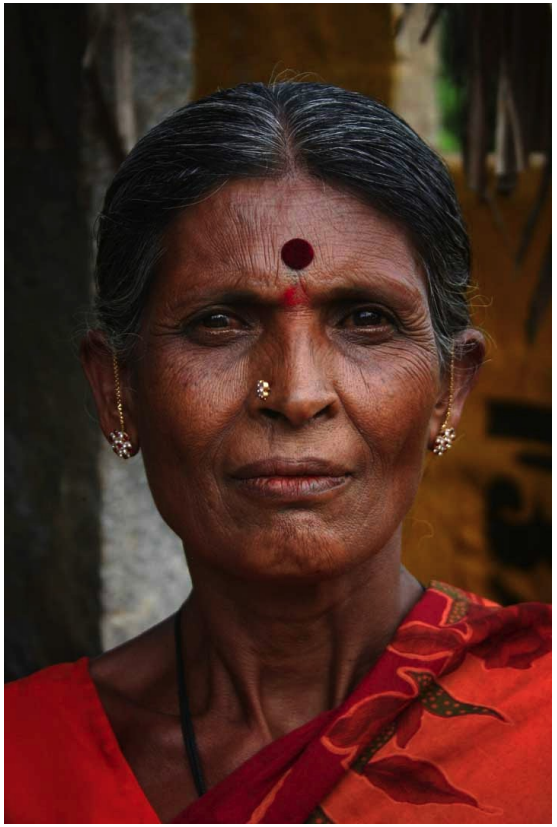
  - ID and Class
    - ID: Unique!
    - Class: Common to many

```
<html>
  <head>
  </head>
  <body>
    <div id=”leg1” class="legs"></div>
    <div id=”leg2” class="legs"></div>
  </body>
</html>
```

  - Using many classes:

```
id="cheetah" class="spotted fast deadly"
```

- CSS Classes define a common trait shared among many related elements
- Reusable in your application
- Dot is the selector "."
- Names like "edit_actions" are better than "orange_buttons"



- An ID must be unique for every item.
- IDs are used a lot in JavaScript
- You can specify a specific item out of many in a group: div#navMenu
- Better to use classes in CSS, but...
  - IDs are faster
  - IDs cascade over classes (more specific)

http://www.tizag.com/cssT/cssid.php
http://screwlewse.com/2010/07/dont-use-id-selectors-in-css/

- Dynamic Manipulations of a page (DOM)
- AJAX. Getting (or POSTing) remote resources
- Client side applications
- Examples:
  - Google Maps
  - Conway's Game of Life: http://www.julianpulgarin.com/canvaslife/
  - MultiPlayer Piano http://www.multiplayerpiano.com/
- Read: http://www.w3schools.com/js/js_intro.asp

- git clone https://github.com/excalq/cuny-software-engineering
- example.html
- styles.css
- javascript.js