

# Announcements

1. Class webpage:
  - Have you been reading the announcements?
  - Lecture slides and coding examples will be posted
2. Install Komodo Edit on your computer right away.
3. **Bring laptops to next class session!**

# Recall: How Browser gets Web Page

1. You type “`http://www.cs.umd.edu/~fpe/example.html`” into your browser
2. Your browser sends request to DNS server to look up the IP Address for `www.cs.umd.edu`.
3. The DNS server’s response contains the IP address
4. Browser sends HTTP “GET” request to web server located at this IP Address
5. Web server’s response contains HTTP header and the HTML file you requested
6. Browser interprets the HTML file and renders the page

# Uniform Resource Locator (URL)

`http://www.cs.umd.edu/~fpe/example.html`

Protocol                      Domain Name                      File name (including path)

# Uniform Resource Locator (URL)

Options for **protocol**:

- http
- https
- ftp
- File
- Many others...

Other possibilities:

- Using IP address instead of domain name:  
`http://163.122.8.150/webpage.html`
- Specifying port number:  
`http://www.blah.com:80/webpage.html`
- Query String:  
`http://www.blah.com/webpage.html?name=Fred&age=25`
- Fragment Identifier:  
`http://www.blah.com/webpage.html#section2`

# HTML, CSS, JavaScript

**HTML** is used to define the **structure** of the page

**CSS** (Cascading Style Sheets) used to define the **style** of the page

**Javascript** will be used to make webpage **interactive**

Great online tutorials:

- <http://www.htmldog.com/>
- <http://www.w3schools.com/>
- These links are on class webpage under “Resources”

# HyperText Markup Language (HTML)

- Simple language used to define web pages
- Web browser “interprets” the HTML and “renders” the web page
- Standards maintained by W3C (World Wide Web Consortium)
  - Led by Tim Berners-Lee
  - <http://www.w3.org/Consortium/>

# Evolution of HTML

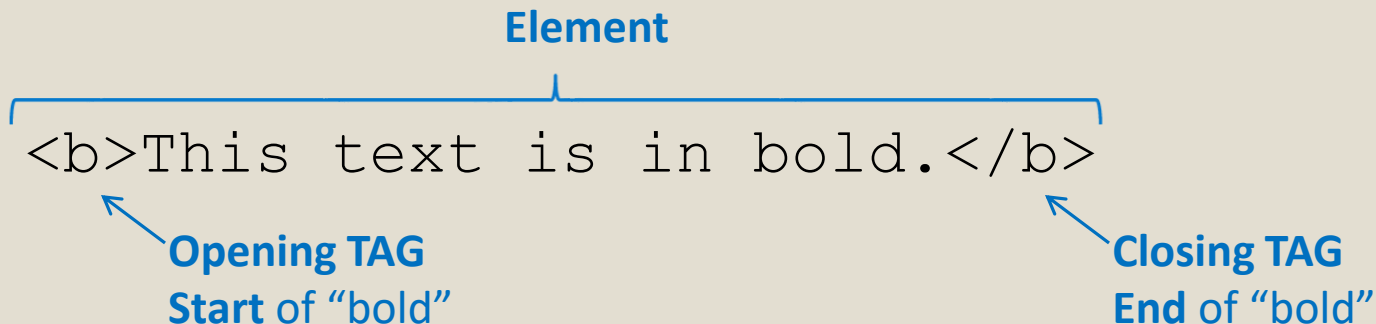
- History of HTML:

<http://www.html5code.com/tutorials/a-brief-history-of-html/>

- Most up-to-date version: **HTML 5**
  - Not fully supported by all browsers
  - We will use this for class
  - We will not be using any “advanced” features

# HTML Tags and Elements

- **Tags** specify how portions of your document will be structured
- Most tags must be used in pairs (opening and closing tags)
- An **element** is a section that is demarked by a corresponding pair of tags





# Solitary Tags

Some tags are solitary:

`<hr />` Horizontal Rule

`<br />` Line break

# HTML 5 Skeleton

- All HTML 5 web pages **must** have these features
- Let's talk about what we see here (next slide...)

```
<!DOCTYPE html>

<html lang="en">
<head>
  <title>Page Title</title>
  <meta charset="UTF-8" />
</head>

<body>
  My Web Page.
</body>
</html>
```

# HTML 5.0 Skeleton

```
<!DOCTYPE html>
```

- Tells the browser what language we will use

```
<html lang="en">
```

HTML

```
<head>
```

Info **about** document

```
<title> My Web Page</title>
```

```
<meta charset="UTF-8" />
```

```
</head>
```

```
<body>
```

What gets displayed

```
</body>
```

```
</html>
```

# Creating HTML Files

- HTML code is just “text”
  - Could use ANY text editor
  - We prefer tool like “Komodo Edit”
    - Knows HTML and detects many mistakes
    - Automatically fills in certain details
    - Formats code nicely (auto-indentation, nice colors, etc.)
    - Many advanced features
    - **Install it on your machine right away!**
  - **In this class, you may NOT use a web authoring tool that automatically generates HTML for you!**

# Komodo Edit Demo

Let's create a new HTML page using the built-in "template" for HTML-5.

The template is incomplete! We'll need to modify the `<html>` opening tag:

```
<html lang="en">
```

and let's not forget to put this in the "head" section:

```
<meta charset="UTF-8" />
```

# HTML Ignores “White Space”

What happens when we enter the following as the “body” of a web page?

**one**

**two**

**three**

**four**

**five**

**six**

**seven**

# Examples of Tags

All examples from class will be on the class webpage.

- Paragraphs.html
- Headings.html
- OtherTags.html

– Notice how tags are “nested”:

`<i><b>blah, blah, blah</b></i>` Correct!

`<i><b>blah, blah, blah</i></b>` Incorrect!

- Where can we find a list of all available tags?

# HTML Validation

- HTML 5 standard is very strict
- Code must be “validated”: <http://validator.w3.org>  
(Link is also on Resources section of class webpage)
- Why is validation important?

Let's try validating some of our examples...