

# HTML 3

Lecture 4  
CGS 3066 Fall 2016

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# HTML Layouts

- ▶ Layouts were created using the `<div>` tag in older versions of HTML.
- ▶ Partitions the page into columns/blocks, each used for a specific purpose.
- ▶ `<div>` was paired with CSS styles using the id attributes.
- ▶ Layouts can also be created using tables, but it is not recommended.
- ▶ HTML5 introduces new semantic elements to handle layouts.

# Semantic Elements



# Semantic Elements

- ▶ A semantic element clearly describes its meaning to both the browser and the developer.
- ▶ All the layout tags in the previous slide are semantic elements.
- ▶ Some common semantic elements are:
  - ▶ **Header**: specifies a header for a document or section.
  - ▶ **Nav**: defines a set of navigation links.
  - ▶ **Section**: defines a section in a document
  - ▶ **Aside**: defines content aside from the page content.
  - ▶ **Article**: defines an article.
  - ▶ **Footer**: defines a footer for a document or section.
  - ▶ **Figure**: Specifies self-contained content, like illustrations, diagrams, photos, code listings, etc.

# iframes

- ▶ An iframe is used to display a web page within a web page.
- ▶ Syntax:  

```
<iframe src="demo_iframe.htm" width="200" height="200"
frameborder="0" name="iframe_a" ></iframe>
```
- ▶ An iframe can be used as the target frame for a link.  

```
<p><a href="http://www.google.com"
target="iframe_a" >Google </a></p>
```

# HTML Media

- ▶ Multimedia comes in many different formats. It can be almost anything you can hear or see.
- ▶ Examples: Pictures, music, sound, videos, records, films, animations, and more.
- ▶ Web pages often contains multimedia elements of different types and formats.
- ▶ Common audio formats include .midi, .wma, .wav, .mp3, .mp4 etc.
- ▶ Common video formats include .mpg, .wmv, .avi, .flv, .mp4, .mov, etc.

# HTML Video Tags

- ▶ `<video>`: Defines a video or movie.
- ▶ `<source>`: Defines multiple media resources for media elements, such as `<video>` and `<audio>`.
- ▶ `<track>`: Defines text tracks in media players.
- ▶ `<video width="320" height="240" controls>`  
`<source src="movie.mp4" type="video/mp4" >`  
Your browser does not support the video tag. `</video>`
- ▶ The `controls` attribute adds video controls, like play, pause, and volume.
- ▶ Text between the `<video>` and `</video>` tags will only display in browsers that do not support the `<video>` element.
- ▶ Multiple `<source>` elements can link to different video files. The browser will use the first recognized format.
- ▶ To start a video automatically use the `autoplay` attribute.

# HTML Plug-ins

- ▶ `<object>` and `<embed>` elements are used to add helper applications.
- ▶ Examples are java applets for maps, virus scans, etc.
- ▶ `<object>` is supported by all browsers. `<embed>` by most later versions, and doesn't have a closing tag.
- ▶ Youtube elements are usually embedded into iframes, objects or embed elements.
- ▶ The other attributes for the video tags work here.

# HTML Graphics: Canvas

- ▶ The HTML5 `<canvas>` element is used to draw graphics, on the fly, via scripting.
- ▶ The `<canvas>` element is only a container for graphics.
- ▶ By default, the `<canvas>` element has no border and no content.
- ▶ You can have multiple `<canvas>` elements on one HTML page.  
`<canvas width="200" height="100"></canvas>`
- ▶ Drawing on the canvas is usually done with Javascript.
- ▶ Objects include, but are not limited to:
  - ▶ Paths
  - ▶ Text
  - ▶ Gradients
  - ▶ Images

# HTML Graphics - SVG

- ▶ SVG stands for Scalable Vector Graphics
- ▶ SVG is used to define vector-based graphics for the Web
- ▶ SVG defines the graphics in XML format
- ▶ SVG graphics do NOT lose any quality if they are zoomed or resized
- ▶ Every element and every attribute in SVG files can be animated
- ▶ SVG is a W3C recommendation
- ▶ In HTML5, you can embed SVG elements directly into your HTML page.

```
<svg width="300" height="200" >  
<polygon points="100,10 40,198 190,78 10,78 160,198"  
style="fill:lime;stroke:purple;stroke-width:5;fill-rule:evenodd;"  
</>  
</svg>
```