

# CMSC388A

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## Web Application Development with JavaScript



## HTML II

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# HTML Elements - iframe

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- iframe - embedded HTML document with a web page (like another browser window inside of the page)
- **Format:**  
`<iframe src="URL_TO_DISPLAY" title="description"></iframe>`
- **Additional attributes**
  - width and height
  - To remove the border use `style="border:none"`
- **Example:** UsingIFrames.html
- **Example:**  
<https://www.cs.umd.edu/~nelson/classes/resources/cmsc335/IFrameExample.html>
- Notice the restrictions on accessing sites outside of the home one

# HTML Elements - iframe

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- **Playing YouTube videos with iframe**
  - [http://www.w3schools.com/html/html\\_youtube.asp](http://www.w3schools.com/html/html_youtube.asp)
  - You can customize the video interaction by adding options after the link
- ?controls=0 : player controls does not display while playing video
- ?loop=1 : video will loop (forever)
- YouTube <object> and <embed> were deprecated

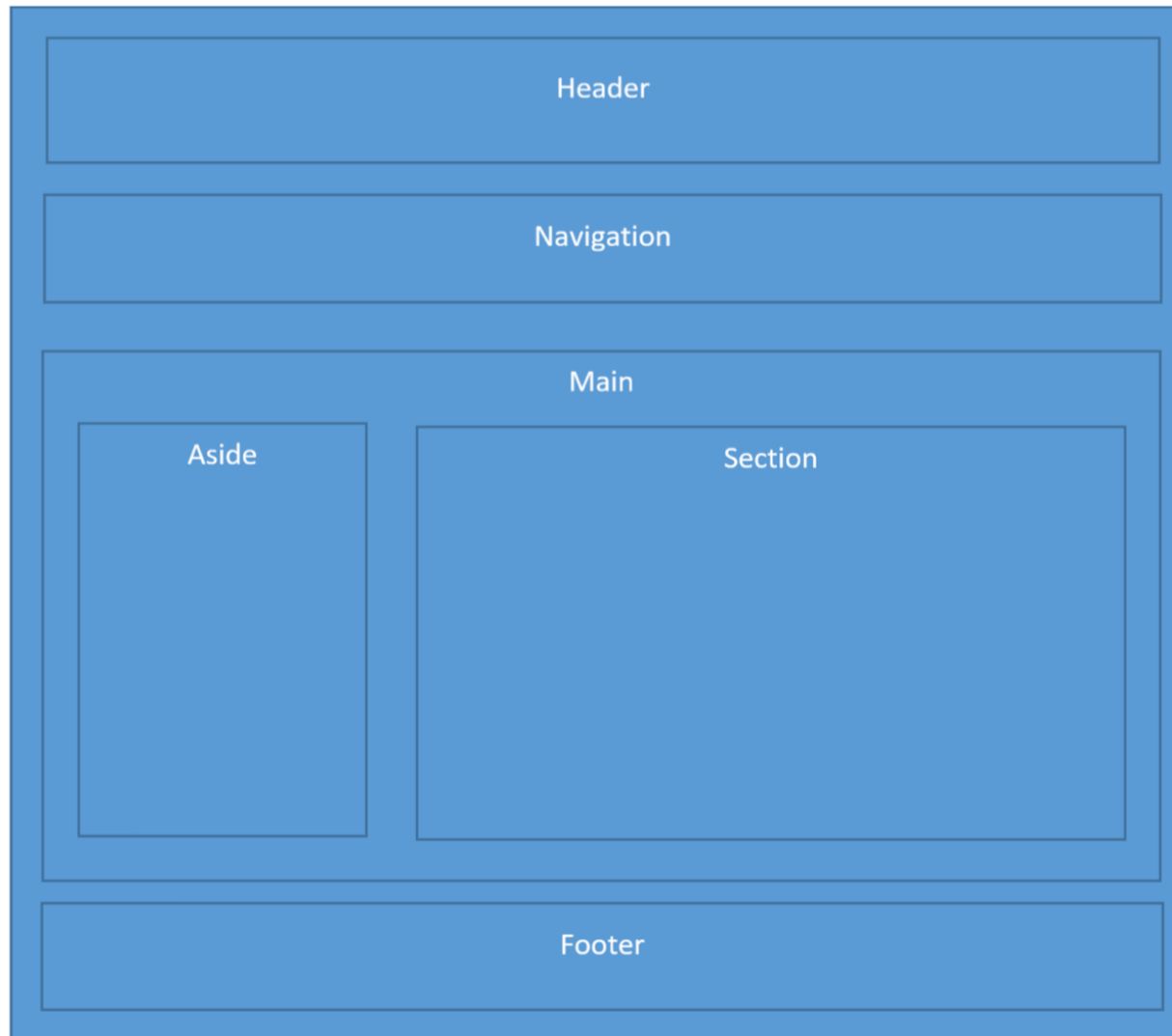
# HTML5 Elements

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- **<main>**
  - Contains the central topic of the document
- **<nav>**
  - Defines a section with navigation links
  - There can be several of them in a document
- **<article>**
  - **Independent, self-contained** item (e.g., magazine article, blog entry)
  - Intended to be independently distributable
- **<section>**
  - Sections in a document, typically with a heading

# HTML5 Elements

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**Example:** Html5Elements.html

# HTML5 Elements

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- **<aside>**
  - Information related to main content (e.g., references)
  - Like a sidebar
- **<header>**
  - header
  - <article>, <section>, <nav> can have their own **header**
- **<footer>**
  - footer
  - <article>, <section>, <nav> can have their own **footer**

# Other HTML Elements

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- **<div>**
  - Generic container (block-level)
- **<span>**
  - Generic container (inline) – For example, to identify a line section
- In the past, <div>'s were used to identify header, footer, contents, and navigation sections. For example:

**<div id="nav">**

**<!-- links to pages -->**

**</div>**

# HTML5 Video

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- HTML5 **<video>** element allows embedding of video on a web page. It is no longer necessary to rely on third-party plug-in software

- **Example:**

```
<video width= "400" height= "400" controls>  
  <source src= "mystery.mp4" type="video/mp4">  
  <source in another video format... >  
  <source in another video format... >  
  video tag not supported by the browser  
</video>
```

- Several files can be listed, and the browser will use the first recognized format

- **Example:**

- [http://www.w3schools.com/html/tryit.asp?filename=tryhtml5\\_video\\_all](http://www.w3schools.com/html/tryit.asp?filename=tryhtml5_video_all)



# HTML5 Audio

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- HTML5 **<audio>** element allows playing audio files. It is no longer necessary to rely on third-party plug-in software
- **Example:**  
    <audio **controls**>  
        <source src= "macarena.mp3" type="audio/mpeg">  
        **audio tag not supported by the browser**  
    </audio>
- Several files can be listed, and the browser will use the first recognized format
- **Example:**
  - [http://www.w3schools.com/html/tryit.asp?filename=tryhtml5\\_audio\\_all](http://www.w3schools.com/html/tryit.asp?filename=tryhtml5_audio_all)

# HTML5 Video/Audio Attributes

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- HTML5 **<video>** and **<audio>** elements support the following attributes
- **controls** - playback controls should be displayed
  - **Example:** `<video controls>...</video>`
- **autoplay** - media should play as soon as it is ready
- **preload** - media should be loaded when the page loads
- **loop** - media should start over again when finished (use along with **controls** or **autoplay**)

# Display Values

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- Elements (e.g., <p>, <img>) can have different display values (e.g., **block** or **inline**). Keep in mind they have a default value (e.g., <p> is block element)
- **Block element**
  - Begins on a new line (nothing to the left)
  - Stretches to the left and right as far as possible
    - » Try a paragraph with a background color and borders
  - **Examples:** <p>, <table>, <h1>...<h6>, <ul>, <ol>, <div>
- **Inline element**
  - Does not start on a new line
  - Takes only as much space as necessary
  - **Example:** <img>, <a>, <strong>, <em>
- You can display inline elements as block elements and vice versa
- Block elements may contain other block elements, inline elements, and data. Some block elements may not contain other block elements
  - e.g., <h1>

# Microdata

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- Microdata - part of the HTML standard
- Microdata is an attempt to provide a simpler approach to annotating HTML elements with machine-readable tags
- Provides attributes you can add to most HTML elements to describe their contents to search engines, web crawlers, or alternative browsers
- Allows search engines to understand the data on a webpage
- Related term: Semantic Web (goal: make internet data machine-readable)
- **Example:**
  - <https://schema.org/MusicEvent>
    - » Scroll down until you see Exam 1 and select “No Markup”, “Microdata”
- **References:**
  - <https://developer.mozilla.org/en-US/docs/Web/HTML/Microdata>

# Global HTML5 Attributes

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- The following attributes can be applied to most elements
- **hidden** - hides element from display
- **contenteditable** - user can modify the contents of an element
- **spellcheck** - allows for spelling and grammar check
- **draggable** - element can be dragged
- **Example:** GlobalAttributes.html
- List of Global Attributes
  - [https://www.w3schools.com/tags/ref\\_standardattributes.asp](https://www.w3schools.com/tags/ref_standardattributes.asp)

# Miscellaneous Elements

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- **<details>** - defines a clickable heading where the contents appear/disappear when clicked. The **<summary>** tag defines the default title for the contents
- **<figure>/<figcaption>** - To enclose figures, diagrams, illustrations
- **<meter>** - graphical representation of a value
- **<mark>** - highlights a section
- **Example:** Miscellaneous.html