Introduction to Web Technologies & HTML 5 Language

New Semantic& structural Elements In HTML 5

ITI – Assiut Branch

Eng. Hany Saad

Topics we will Learn…

HTML 5 Semantic & Structural Elements

❑ Semantic Means:

- When people say they want to make something more semantic, they simply want to make that thing more meaningful.
- Semantic html is using html to reinforce structural meaning. It's about using tags, class names, and ids that reinforce the meaning of the content within the tags.

❑ Why Semantic HTML is Important

- **Clean** — It's easier to read and edit, which saves time and money during maintenance.
- **More accessible** — It can be better understood by a greater variety of devices.
- **Search engine friendly** — This is still debatable as search engines rank content and not code.

HTML 5 Semantic & Structural Elements (Cont.)

- **Some New semantic Elements in HTML 5**
  - **Meter**
  - **Progress**
  - **Mark**
  - **Time**
  - **<header>**
  - **<hgroup>**
  - **<nav>**
  - **<section>**
  - **<article>**
  - **<aside>**
  - **<footer>**
  - **<address>**

<meter>

- **Representing scalar measurements or fractional values**
- **Meter is also known as a gauge**
- **It should not be used to indicate progress**
- **Attributes:**
  - value
  - min
  - max
  - high
  - low
  - optimum

<meter> (Cont.)

- Using <meter>

```
<meter value="0.6“
                    min=“”
                    max=“”
                    high ="0.6“ >
                    Medium
</meter>
```

<progress>

- **Show completion progress of a task**
- **Progress bars are widely used in other applications**
- **Works with scripted applications**
- **Attributes**
  - **value :** Specifies how much of the task has been completed
  - **max :** Specifies how much work the task requires in total
- **Useful for:**
  - Indicate loading progress of an AJAX application
  - Show user progress through a series of forms
  - Making impatient users wait

<progress> (Cont.)

- **Using <progress>**

```
<progress id=“pBar" max="100" value=“10">
</progress>
```

<mark>

- **Marked or Highlighted text**
- **Indicates point of interest or relevance**
- **Useful for:**
  - Highlighting relevant code in a code sample
  - Highlighting search keywords in a document (e.g. in Google Cache)

<mark> (Cont.)

- Using <mark>

The highlighted part below is where the error lies:

```
var i: Integer;
begin
    i := 1.1;
end.
```

```
<p>The highlighted part below is where the error lies:</p>
 <pre>
        <code>
            var<var> i</var>: Integer;
                begin
                i := <mark>1.1</mark>;
                end.
        </code>
</pre>
```

is used for computer code

is used to indicate a variable within code.

<Time>

- Time as you would expect is used to markup temporal information. It can be used for dates, times, or combinations of the two.
- The <time> tag defines either a time (24 hour clock), or a date in the Gregorian calendar, optionally with a time and a time-zone offset.
- This element can be used as a way to encode dates and times in a machine-readable way.

```
<time>2011-07-14</time>
<time datetime="2011-07-14">July 14th, 2011</time>
<time datetime="2011-07-14T14:00">2pm on July 14th</time>
```

Structural Elements (Cont.)

- **Structural Semantic Elements:**
  - **<header>**
  - **<hgroup>**
  - **<nav>**
  - **<section>**
  - **<article>**
  - **<aside>**
  - **<footer>**
  - **<address>**

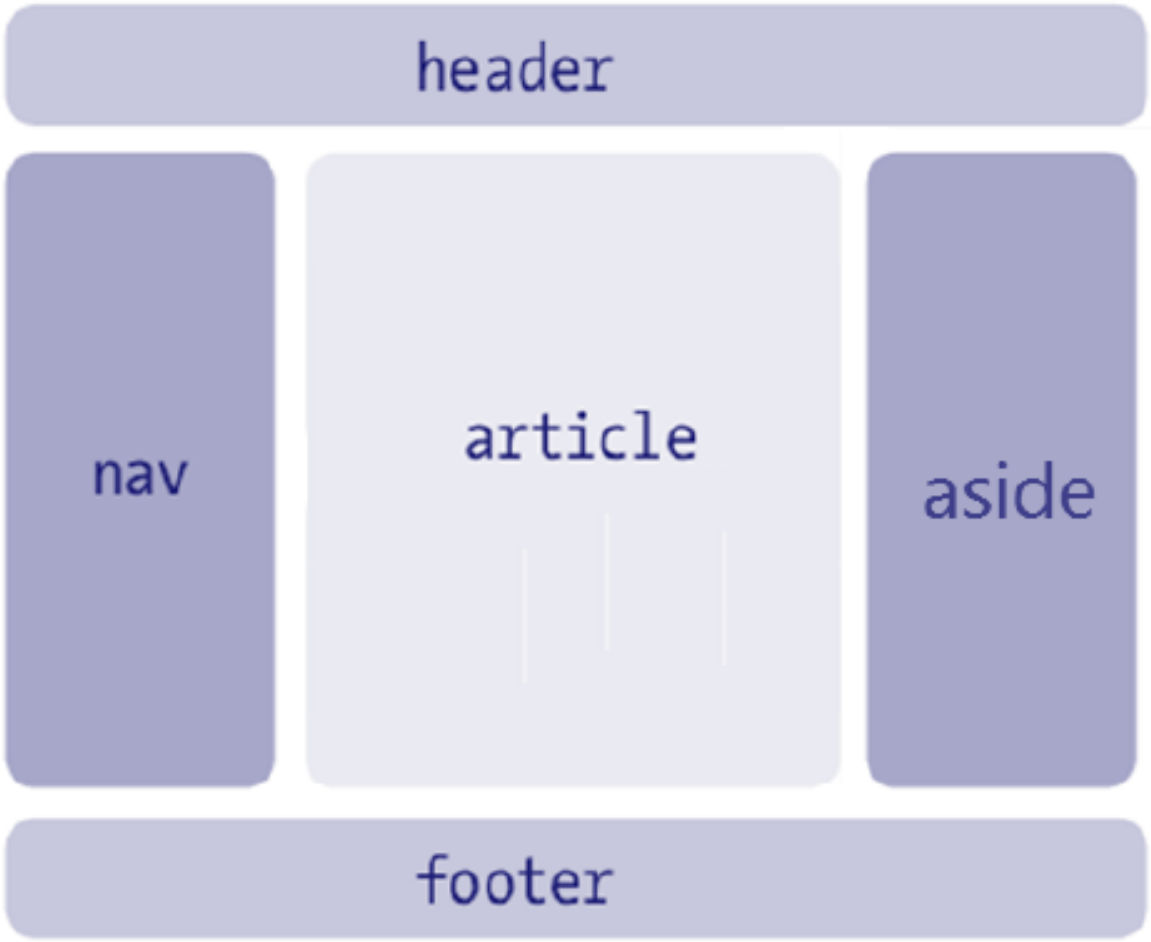
- **More about Semantic & Structural Elements:**
  - http://www.adobe.com/devnet/dreamweaver/articles/understanding-html5-semantics.html
  - http://www.webmonkey.com/2010/02/building_web_pages_with_html_5/

Structural Elements (Cont.)

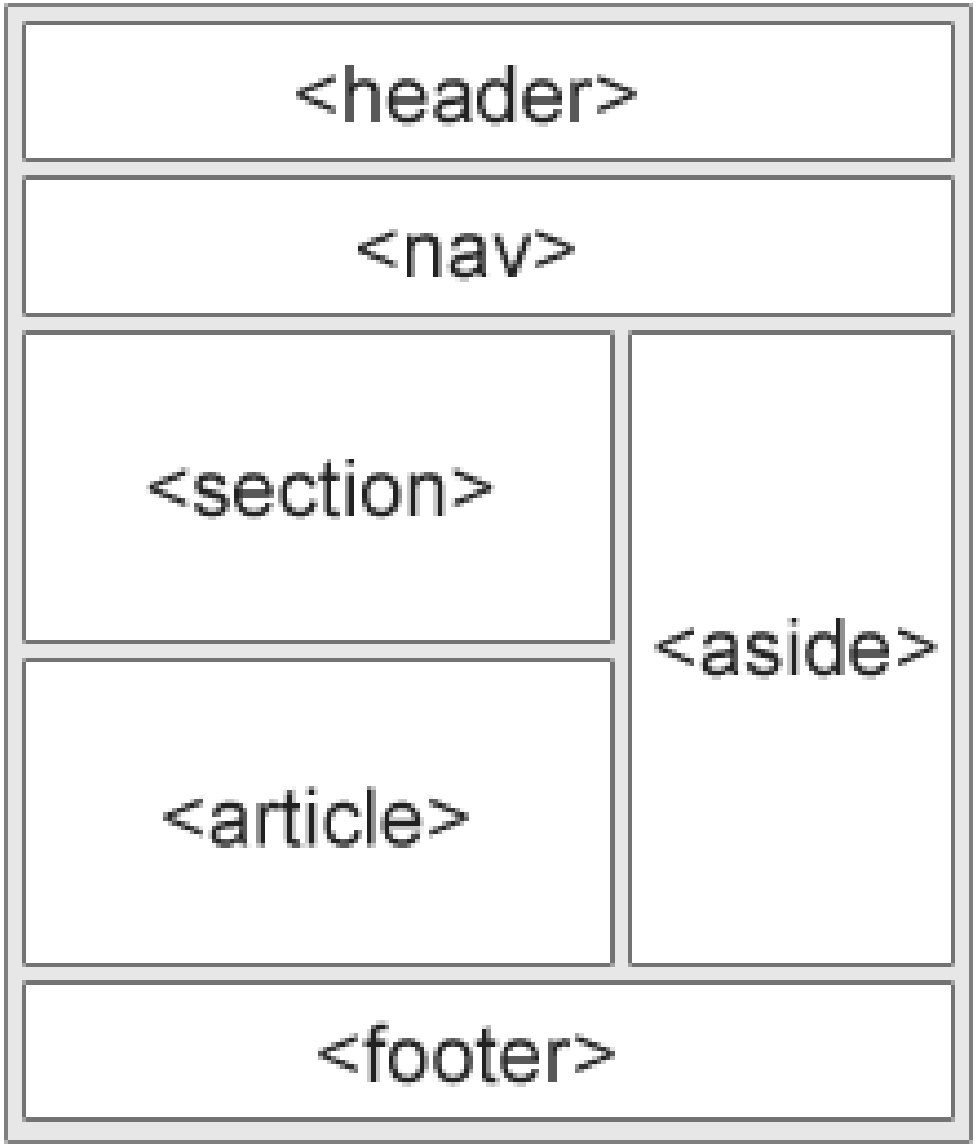
❑ Structural Semantic Usage:

Typical HTML4	Typical HTML5
	<header>
	<nav>
	<section>
	<article>
	<footer>

Structural Elements (Cont.)



Structural Elements (Cont.)



Microdata

Microdata

- Microdata a new lightweight semantic meta-syntax.
- Microdata defines five HTML attributes that can be applied to any HTML5 tag.
- It gives us a whole new way to add extra semantic information and extend HTML5.
- HTML5 Microdata has the same basic mission as RDFa and Microformats but differs slightly in implementation and use.
- allows you at add structured markup to any HTML element that is bot-readable, standardized and won't cause any problems with browsers that don't support it.
- Simply, it is a way of embedding machine-readable information in your web page.

  - i.e. it's a way of instructing a machine how to extract information that already exists in your web page.

Microdata(Cont.)

- **Instead of elements, these name-value pairs are defined via attributes: Microdata a new lightweight semantic meta-syntax.**
  - **Itemscope:** Indicates the element is a microdata element and its child elements are part of its microdata format.

    → Microdata Container
  - **itemprop**="property-name"

    An individual data element that adds a property to microdata item
  - **itemtype**=""

    Defines the vocabulary to be used by the microdata format.

Microdata(Cont.)

- **itemref**=""

  Allows a microdata element to reference another element on the page to define it by either HTML id or by itemid.

- **itemid**=“”

  The unique identifier of the item, if defined by the microdata vocabulary.

- **Microdata itemtype value:**
  http://www.data-vocabulary.org/
- **Google Microdata Snippets:**
  http://support.google.com/webmasters/bin/answer.py?hl=en&answer=176035
- **Google Structured Data Testing Tool:**
  http://www.google.com/webmasters/tools/richsnippets

Self Study..

- What's Semantic Web?
- What's the differences between Microdata, Microformats and RDF?
- What's Structured Data?

<Questions> ? </Questions>

Thank You…