

HTML

HyperText Markup Language

Goals

- Discuss the relationship between SGML and HTML
- Describe the structure of HTML documents
- Introduction to XHTML and HTML 5
- Explain the role of CSS in document rendering

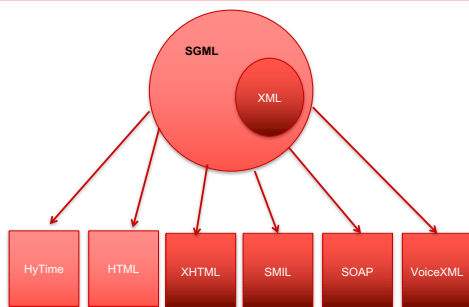
SGML

- *Standard Generalized Markup Language*
- Meta-markup language
 - Language for defining "markup languages"
- *SGML application – 4 parts of*
 - Declaration - character sets and delimiters
 - Document Type Definition (DTD) - constraints for composing documents
 - Specification - semantic constraints
 - Document instances
- *Tags versus elements*

SGML, HTML, XML, and XHTML

- SGML allows for "flexible" documents
 - Hard to parse
 - Ambiguous
- HTML (<=4) is a descendant of SGML
- XML tightens up the syntax
 - Easy to parse
 - Non-ambiguous
- XHTML combines HTML semantics with XML formalism
- HTML 5 attempts to unify HTML and XHTML

SGM, XML, and their applications...



Hello, World (XHTML Strict)

```

<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">

<html>

  <head>
    <title>TITLE OF THE PAGE</title>
  </head>

  <body>
    <p>Hello, World!</p>
  </body>

</html>
  
```

Hello, World (HTML 5)

```
<!DOCTYPE html>

<html>

  <head>
    <title>TITLE OF THE PAGE</title>
  </head>

  <body>
    <p>Hello, World!</p>
  </body>

</html>
```

Header Elements

- META
 - Used to specify optional meta data


```
<META name="Author" content="Adams">
```
 - Used to specify HTTP headers


```
<META http-equiv="Date" content="Thu Jan
3 07:47:04 CST 2013">
```
- STYLE
 - Attaches styling information
- SCRIPT
 - Attaches Javascript

Body Elements

- Block
- Inline
- Tables
- Forms

Block Elements

Content that is set
apart from the
surrounding text

- h1, h2, h3, ..., h6
- img
- ol, li
- p
- pre
- ul, li

Useful block elements
include:

- blockquote
- br
- div
- dl, dt, dd

In-line Elements

Content "inline" with
surrounding text

- code
- dfn
- em
- kbd
- span
- strong
- var

Useful in-line
elements include:

- a
- abbr
- acronym
- address
- cite

Tables

- table starts the table
- tr defines a row
- th defines a header cell
- td defines a cell ("table data")

```
<table>
  <tr>
    <th>One</th>
    <th>Two</th>
    <th>Three</th>
  </tr>
  <tr>
    <td>4</td>
    <td>5</td>
    <td>6</td>
  </tr>
  <tr>
    <td colspan="2">7</td>
    <td>8</td>
  </tr>
</table>
```

Forms

- form element starts the form
 - action attribute: URL where to send the form data
 - method attribute: send the data via "post" or "get"
- Form elements (things the user can interact with) are created with the input element.
 - type attribute determines the kind of form element

Form Elements

All input elements must have a name attribute

- text
- password
- checkbox
 - checked="true" to check by default
- radio
 - To group, give all radio elements the same name attribute
- file

More Form Elements I

- submit - submit button
 - value attribute is the text on the button
- image
 - an image that will submit the form when clicked
- button
- reset
 - resets the form
- hidden

Form Example

```
<form action="submit_comments.php"
  method="post">

  <input type="text" name="name" />

  <textarea name="comment"></textarea>

  <input type="submit" name="submit"
    value="Submit Comments" />

</form>
```

Textarea

- textarea - a large input box
 - rows and cols attributes are required

```
<textarea rows="10" cols="40">Initial
text</textarea>
```

Select

select - drop-down menu

```
<select>
  <option value="first">Red</option>
  <option value="second"
    selected="selected">Blue</option>
  <option value="third">Green</option>
  <option value="fourth">Yellow</option>
</select>
```

HTML 5 Elements

article
aside
audio
canvas
command - user clickable button
datalist - pre-defined options for "input" controls
details/summary - hidable content
figure/figcaption - a figure and its caption

More HTML 5 Elements

footer
header
nav
section
video

For more info see

<http://www.w3schools.com/tags/default.asp>

Self Study

- Complete the HTML 5 Tutorial on w3schools.com:
 - <http://www.w3schools.com/html/default.asp>
