

Creating HTML5 Content

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Demos folder:
Demos\05-Html5Content

1. Semantic Mark-up Tags

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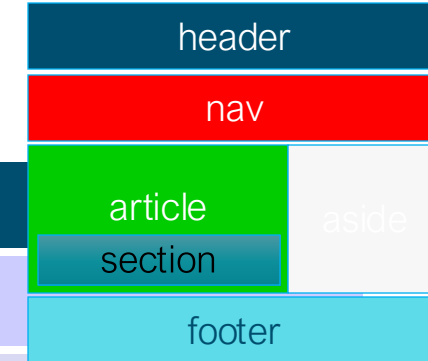
Viewing the sample document

Overview of Semantic Mark-up Tags

HTML5 defines semantic mark-up tags

- Emphasise the purpose of the mark-up in a page
- More meaningful than `<div id="header">` etc.

Element	Description
<code><header></code>	Header content for a page, or for a section within the page
<code><footer></code>	Footer content for a page, or for a section within the page
<code><section></code>	A part of a web page, useful for general partitioning
<code><article></code>	Independent content for an article, typically enclosed within <code><section></code>
<code><nav></code>	Navigational assistance, e.g. a hyperlinks panel
<code><aside></code>	Additional content, similar to a sidebar in a book
<code><figure></code>	Self-contained unit of content, optionally with a caption, that can be moved away from the main flow of the document without affecting meaning
<code><figcaption></code>	Optional caption or legend for a <code><figure></code>



Using Semantic Tags

Here's an HTML document that makes use of the semantic tags to define the overall framework of the document

```
<!DOCTYPE html>
<html>

<head>
  <meta charset="utf-8" />
  <title>Hello HTML5</title>
</head>
<body>

  <header> Header for document </header>

  <div>
    <nav> Navigation links </nav>

    <section> Main content of this page </section>

    <aside> Additional info, similar to a sidebar </aside>

    <footer> Footer for this part of the page </footer>
  </div>

</body>
</html>
```

SemanticTags/SemanticTags1.html

Going Further with Semantic Tags

It's common to use nested semantic tags in combination

- To achieve the desired effect
- Very useful when you apply CSS style sheets 😊

```
<section>

  <article>
    <header> ... </header>
    <p>This example shows how to use HTML5 semantic markup tags ... </p>
    <p>This page looks much better if you link it to the stylesheet!</p>
    <footer> ... </footer>
  </article>

  <article>
    <header> ... </header>
    ...
    <footer> ... </footer>
  </article>

</section>
```

[SemanticTags/SemanticTags2.html](#)

Using Traditional HTML Elements

You can mix-and-match semantic tags with traditional HTML elements

SemanticTags3.html

```
<header>
  <h1>Hello HTML5</h1>
  <h2>Enjoy the ride!</h2>
  <h4>Fancy eh!</h4>
</header>
```

```
<article>
  <ul>
    <li>Canvas (2D and 3D)</li>
    <li>Channel messaging</li>
    <li>Cross-document messaging</li>
    ...
  </ul>
</article>
```

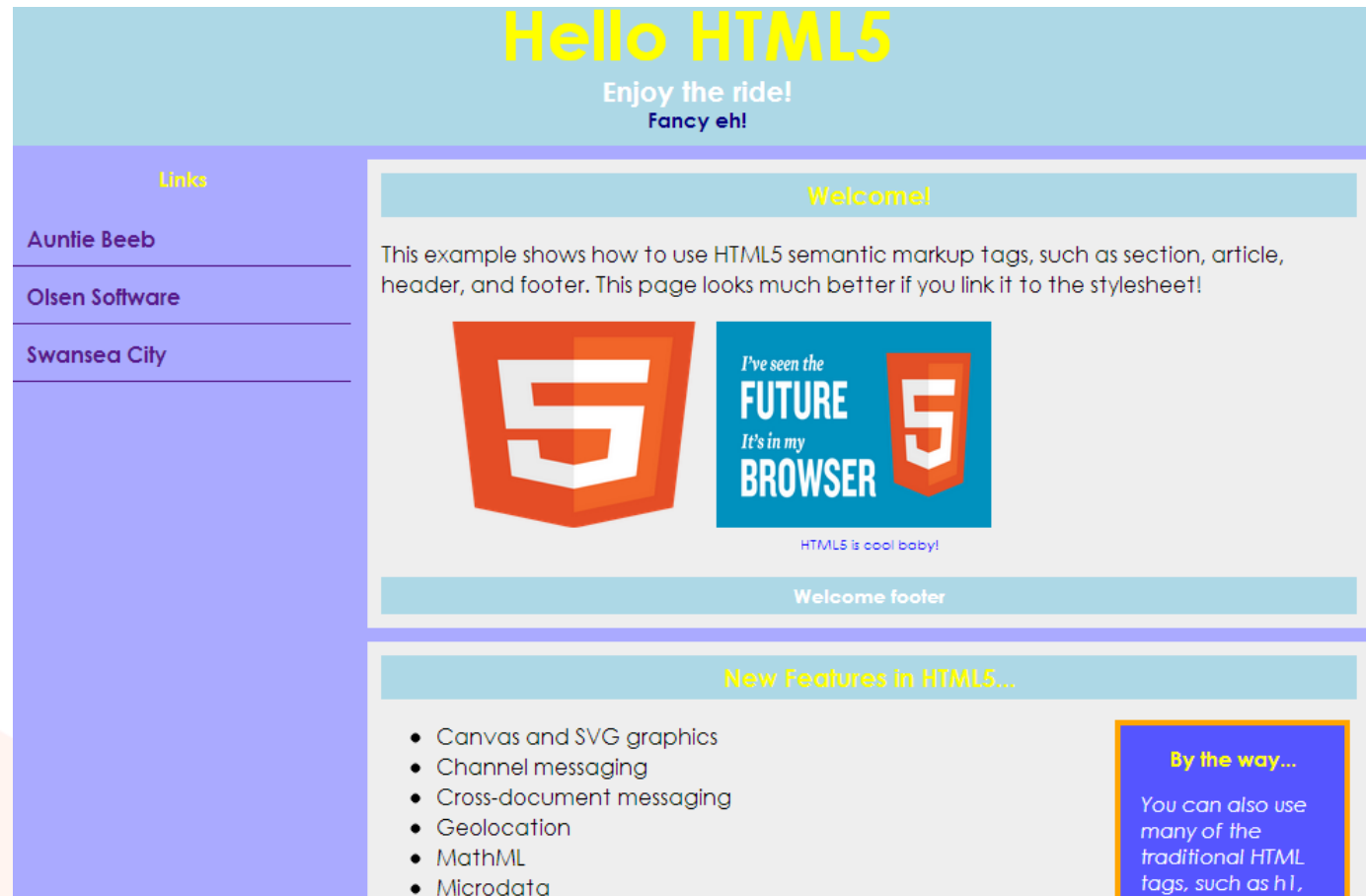
```
<aside>
  <h3>By the way...</h3>
  <p>You can also use many of the traditional HTML tags, such as h1, h2, h3,
    p, div, etc. HTML5 is all about evolution, not revolution.
  </p>
</aside>
```

```
<nav>
  <h3>Links</h3>
  <a href="http://www.bbc.co.uk/">Auntie Beeb</a>
  <a href="http://www.olsensoft.com">Olsen Software</a>
  <a href="http://www.swanseacity.net">Swansea City</a>
</nav>
```

Viewing the Sample Document

Here's the document with a style sheet attached

- SemanticTags/MyDocumentWithStyles.html
- SemanticTags/MyStylesheet.css



2. Additional Tags and Attributes

Defining custom data attributes

Accessing custom data attributes

Example

Miscellaneous additional tags

Example

Defining Custom Data Attributes

HTML5 allows you to add custom attributes to any element

- Prefix with data-

Allows you to augment elements with any additional info that makes sense in your application

- E.g. validation rules, semantic business data, etc.

```
<input id="nameText"  
      data-format="[A-Za-z]+\s[A-Za-z]+"  
      data-error-message="You must enter your first name and last name" />  
  
<input id="emailText"  
      data-format="\w+@[\w.]+([\w.]{2,})$"   
      data-error-message="You must enter a valid e-mail address" />
```

Using Custom Data Attributes

You can access custom data attributes in JavaScript code

- Via the element's `dataset` attribute

E.g. if the custom data attribute is named `data-my-info`

- 👍 • use `dataset.myInfo`
- 👎 • not `dataset.data-my-info`
- 👎 • nor `dataset.my-info`

Example:

```
// Get an element.  
var elem = ... ;  
  
// Get its custom data attributes.  
var format    = elem.dataset.format;      // Or elem.dataset["format"]  
var errorMsg  = elem.dataset.errorMessage; // Or elem.dataset["errorMessage"]
```

Example

Example of custom data attributes:

- See [Additional/CustomDataAttributes.html](#)

Custom data attributes

Name:	<input type="text" value="Leon"/>
E-mail:	<input type="text" value="leon"/>
Home tel:	<input type="text" value="12345"/>
Work tel:	<input type="text" value="67890"/>
<input type="button" value="Submit"/>	

nameText error: You must enter your first name and last name

emailText error: You must enter a valid e-mail address

Note: For non-supporting browsers (e.g. IE11), do this:

```
var elem = ... ;  
  
var format    = elem.getAttribute('data-format');  
var errorMsg = elem.getAttribute('data-error-message');
```

Miscellaneous Additional Tags

HTML5 defines some additional useful elements...

Element	Description
<hgroup>	Indicates its contents should be displayed as a single heading.
<time>	Displays a time or duration in a standard way. Has a datetime attribute that represents the date/time in an ISO-standard way.
<mark>	Indicates a portion of text should be marked or highlighted, so it stands out.
<small>	Indicates a portion of text should be displayed in small print.

Example

Example of miscellaneous additional tags:

- See `Additional/MiscellaneousTags.html`

Important Dates

In my life :-)

My birthday

Swansea City's promotion to the Premier League (CET time)

Hover over one of the `<time>` elements in red above, to see the date/time value here

Also note, Swansea City are the best team [See [here](#) for details]

3. HTML5 Forms

Organising a form

Input control attributes

Input control tags

Organising a Form

HTML5 allows you to partition a forms into field sets

- Use `<fieldset>` to group related fields
- Add a `<legend>` child element, if you want to define a heading
- Add `<div>` child elements, if you want to define styles

Example

- See `Forms/FieldSets.html`

```
<form>
  <fieldset>
    <legend>Home address</legend>
    <div class="formpanel">
      ... input controls here ...
    </div>
  </fieldset>

  <fieldset>
    <legend>work address</legend>
    <div class="formpanel">
      ... input controls here ...
    </div>
  </fieldset>
</form>
```

The image shows a visual representation of the HTML5 form structure. It consists of two fieldsets, each with a legend and a form panel. The first fieldset is titled 'Home address' and contains three input fields labeled 'Address line 1:', 'Address line 2:', and 'Address line 3:'. The second fieldset is titled 'Work address' and also contains three input fields labeled 'Address line 1:', 'Address line 2:', and 'Address line 3:'. The form panels are highlighted with a light blue background.

Input Control Attributes (1 of 2)

HTML5 supports several attributes on input controls

- autocomplete
- autofocus
- list
- multiple
- pattern
- placeholder
- required, min, max

CSS3 supports pseudo-classes for indicating if an input control is valid or invalid

- `input:valid`
- `input:invalid`

Input Control Attributes (2 of 2)

Forms/InputControlAttributes.html

```
<input type="text" id="myName" size="30"
      autofocus
      autocomplete="off"
      placeholder="Enter your name"
      required="true" />

<input type="text" id="myHouseNumber" size="30"
      placeholder="Enter your house number"
      required="true" />

<input type="text" id="myPostCode" size="30"
      pattern="[a-zA-Z]{1,2}\d{1,2}\s\d[a-zA-Z]{2}"
      placeholder="Enter a UK post code" />

<input list="countries" id="myBirthCountry" size="30"
      placeholder="Select your country of birth" />

<input list="countries" id="myResidenceCountry" size="30"
      placeholder="Select your country of residence" />

<input type="file" id="myPics" multiple />
```

```
<datalist id="countries">
  <option value="England">
  <option value="Scotland">
  <option value="Wales">
  <option value="N. Ireland">
</datalist>
```

Input Control Tags (1 of 2)

Date/time input controls:

- date
- time
- datetime, datetime-local
- month
- week

General-purpose input controls:

- number
- range
- email
- tel
- color
- url
- search

Input Control Tags (2 of 2)

```
<input type="date" placeholder="Enter a date" ... />  
<input type="time" placeholder="Enter a time" ... />  
<input type="datetime" placeholder="Enter a date and time" ... />  
<input type="month" placeholder="Enter a month" ... />  
<input type="week" placeholder="Enter a week" ... />
```

```
<input type="number" min="10000" max="50000" value="25000" step="1000" />  
<input type="range" min="1" max="10" value="5" />  
<input type="tel" placeholder="Enter a telephone number" />  
<input type="email" placeholder="Enter an email address" />  
<input type="url" placeholder="Enter a URL" />  
<input type="color" value="red" placeholder="Choose a color" />  
<input type="search" results="3" autosave="mySearch" placeholder="Enter search string" />
```

Forms/InputControlTags.html