

HTML



INTRODUCTION TO HTML5

Semantic Layout in HTML5

Semantic Layout in HTML5

- The new semantic layout in HTML5 refers to a new class of elements that is designed to help you understand where and how text is defined in your web page and its context.
- All semantic tags must appear within the `<body>...</body>` container tag group.
- It is important to note that the new semantic layout elements are all optional and are only provided for your benefit as a web developer.

<header> and <footer>

- The <header> and <footer> tag groups are most commonly found immediately after <body> begins and before <body> ends, respectively.
- They indicate content that appears at the top and the bottom of your web page.

```
<body>  
  <header>[... Page header ...]</header>  
  [... Page Content ...]  
  <footer>[... Page footer ...]</footer>  
</body>
```

- Most websites' headers typically contain a site logo image, introductory text, navigation, and a search form.
- Footers may contain additional secondary navigation, legal or copyright notices, and closing images or text.

<section>

- The <section> tag group describes the different section of content on your web page.
- You can use as many section groups as you need.
- All sections must be found directly within the <body> tag.

```
<body>  
  <header>[... Page header ...]</header>  
    <section>[... First Section ...]</section>  
    <section>[... Second Section ...]</section>  
    <section>[... Third Section ...]</section>  
  <footer>[... Page footer ...]</footer>  
</body>
```

- For example, a newspaper has multiple sections, such as World News, Local News, Sports, Entertainments and Classifieds, with each containing several articles related to the section.

<hgroup>

- The optional <hgroup> tag is designed to appear within the <article> container, when the container contains more than one heading tag - <h1>, <h2>, and up to <h6> - in a row.
- For example, an article title, followed by a subtitle, and the article author.

```
<section>
  <article>
    <hgroup>
      <h1>[... Article title ...]</h1>
      <h2>[... Article subtitle ...]</h2>
      <h3>[... Article author ...]</h3>
    </hgroup>
    [... Article content ...]
  </article>
</section>
```

- If your article has only one heading element, you can ignore the <hgroup> tag and place it directly within the <article> tag.

<p>

- The paragraph tag can appear anywhere within any of the earlier tags, except <hgroup>.

```
<section>
  <article>
    <hgroup>
      <h1>[... Article title ...]</h1>
      <h2>[... Article subtitle ...]</h2>
      <h3>[... Article author ...]</h3>
    </hgroup>
    <p>[... First Paragraph ...]</p>
    <p>[... Second Paragraph ...]</p>
  </article>
</section>
```

<figure> and <figcaption>

- The optional <figure> tag is designed to appear only within the <article> container.

```
<section>
  <article>
    <hgroup>
      <h1>[... Article title ...]</h1>
      <h2>[... Article subtitle ...]</h2>
      <h3>[... Article author ...]</h3>
    </hgroup>
    <figure>
      [... Image related to the article ...]
      <figcaption>[... Image Description ...]</figcaption>
    </figure>
    <p>[... First Paragraph ...]</p>
    <p>[... Second Paragraph ...]</p>
  </article>
</section>
```

<aside>

- The optional <aside> tag is designed to appear only within the <article> container.
- It represents content that is related to the article but not a part of the article's reading text order.
- For example, in a news-related website, an <aside> tag could hold an interesting image, quote text, or something that summarizes the article.
- This is designed to catch the reader's eye.

<aside>

```
<section>
  <article>
    <hgroup>
      <h1>[... Article title ...]</h1>
      <h2>[... Article subtitle ...]</h2>
      <h3>[... Article author ...]</h3>
    </hgroup>
    <figure>
      [... Image related to the article ...]
      <figcaption>[... Image Description ...]</figcaption>
    </figure>
    <p>[... First Paragraph ...]</p>
    <aside>[... Supporting article text or quote ...]</aside>
    <p>[... Second Paragraph ...]</p>
  </article>
</section>
```

Declare Header and Footer Layout

```
<!DOCTYPE html>
<html>
  <head>
    <title>My HTML5 Website</title>
  </head>

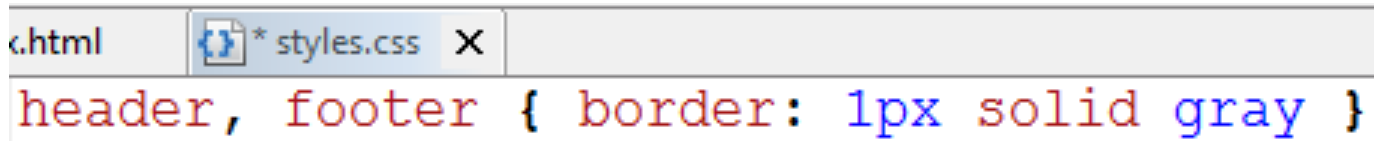
  <body>
    <header>
      <h1>My HTML5 Website</h1>
    </header>

    <p>
      <b>HTML5</b> is a language for structuring and presenting content for the <a
href="http://en.wikipedia.org/wiki/World_Wide_Web" title="World Wide Web">World Wide Web</a>,
and is a core technology of the Internet originally proposed by <a
href="http://en.wikipedia.org/wiki/Opera_Software">Opera Software</a>. It is the fifth revision
of the HTML standard (created in 1990 and standardized as HTML4 as of 1997) and as of November
2011 is still under development. Its core aims have been to improve the language with support
for the latest multimedia while keeping it easily readable by humans and consistently
understood by computers and devices (web browsers, parsers, etc.). HTML5 is intended to subsume
not only <a href="http://en.wikipedia.org/wiki/HTML_4">HTML 4</a>, but XHTML 1 and DOM2HTML
(particularly JavaScript) as well.
    </p>

    <footer>&copy;2011 My HTML5 Website</footer>
  </body>
</html>
```

Declare Header and Footer Layout

- Create a new style sheet call “styles.css” and save it in the css folder.
- Add header and footer rules.

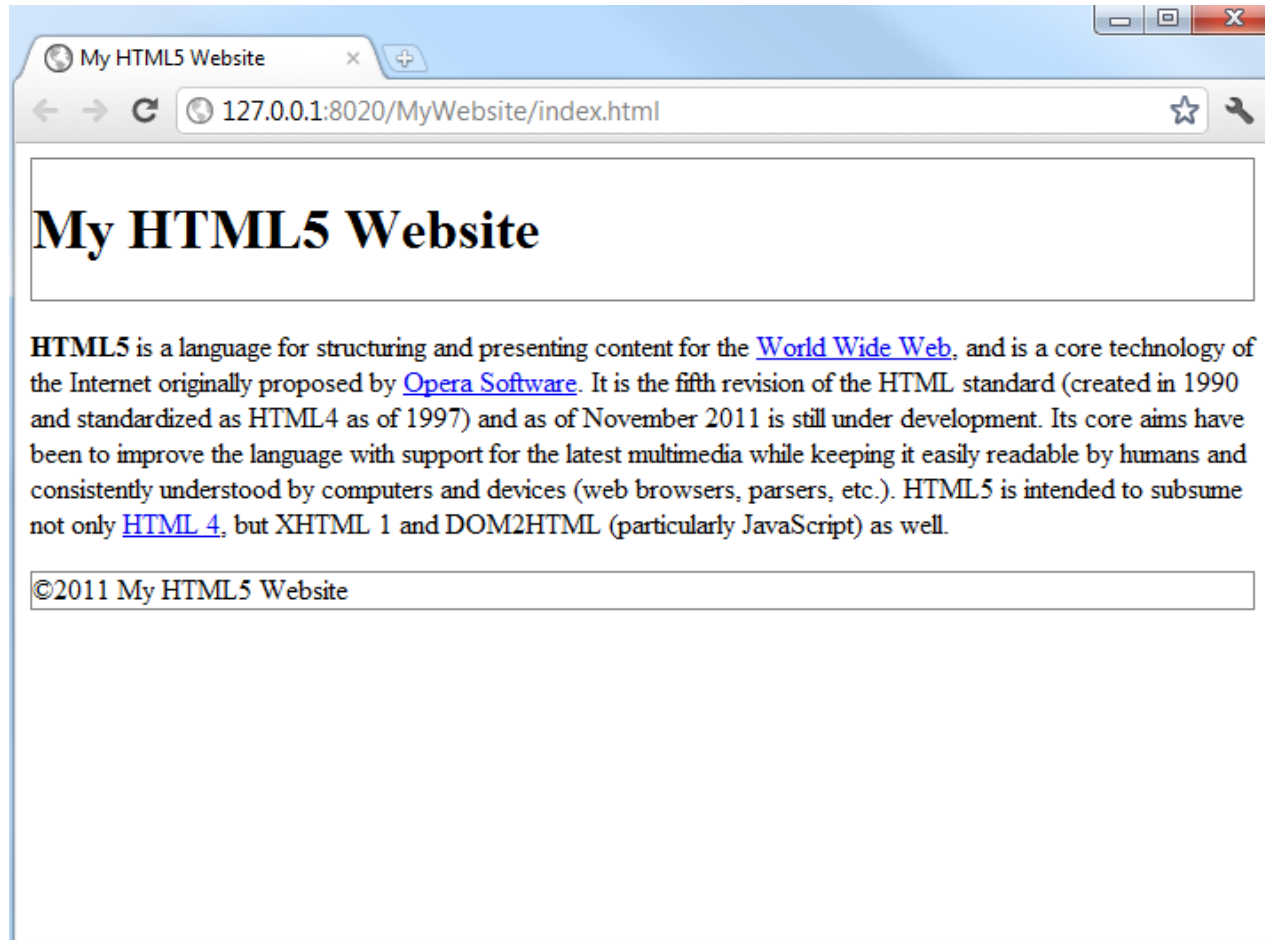


The screenshot shows a code editor with two tabs: 'index.html' and '* styles.css'. The 'styles.css' tab is active, displaying the CSS rule: `header, footer { border: 1px solid gray }`.

- Link the CSS file to index.html by using <link> tag.

```
<head>  
  <title>My HTML5 Website</title>  
  <link rel="stylesheet" type="text/css" href="css/styles.css" />  
</head>
```

Declare Header and Footer Layout



Declare a Navigation Layout

- The navigation element represents a section of your web page that links to other pages, or other parts in the same page, with a series of links.

```
<header>
  <nav>
    <a href="index.html">Home</a>
    <a href="tutorials/">Tutorials</a>
    <a href="demos/">Demos</a>
    <a href="about/">About</a>
  </nav>
  <h1>My HTML5 Website</h1>
</header>
```

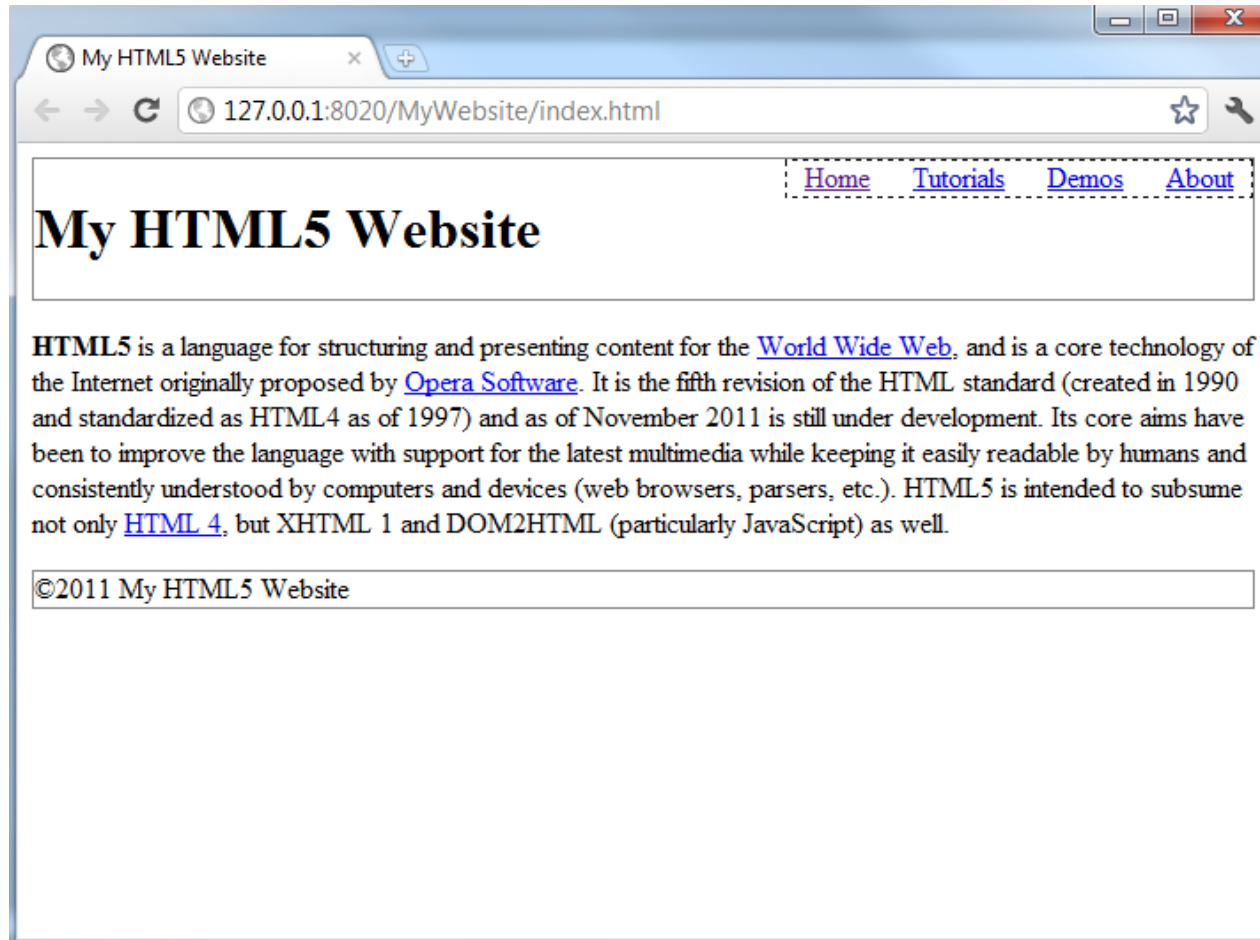
Declare a Navigation Layout

- Add some styles to the `<nav>` and `<a>` tag.

```
header nav
{
    border: 1px dashed black;
    float: right;
}

header nav a
{
    margin: 10px;
}
```

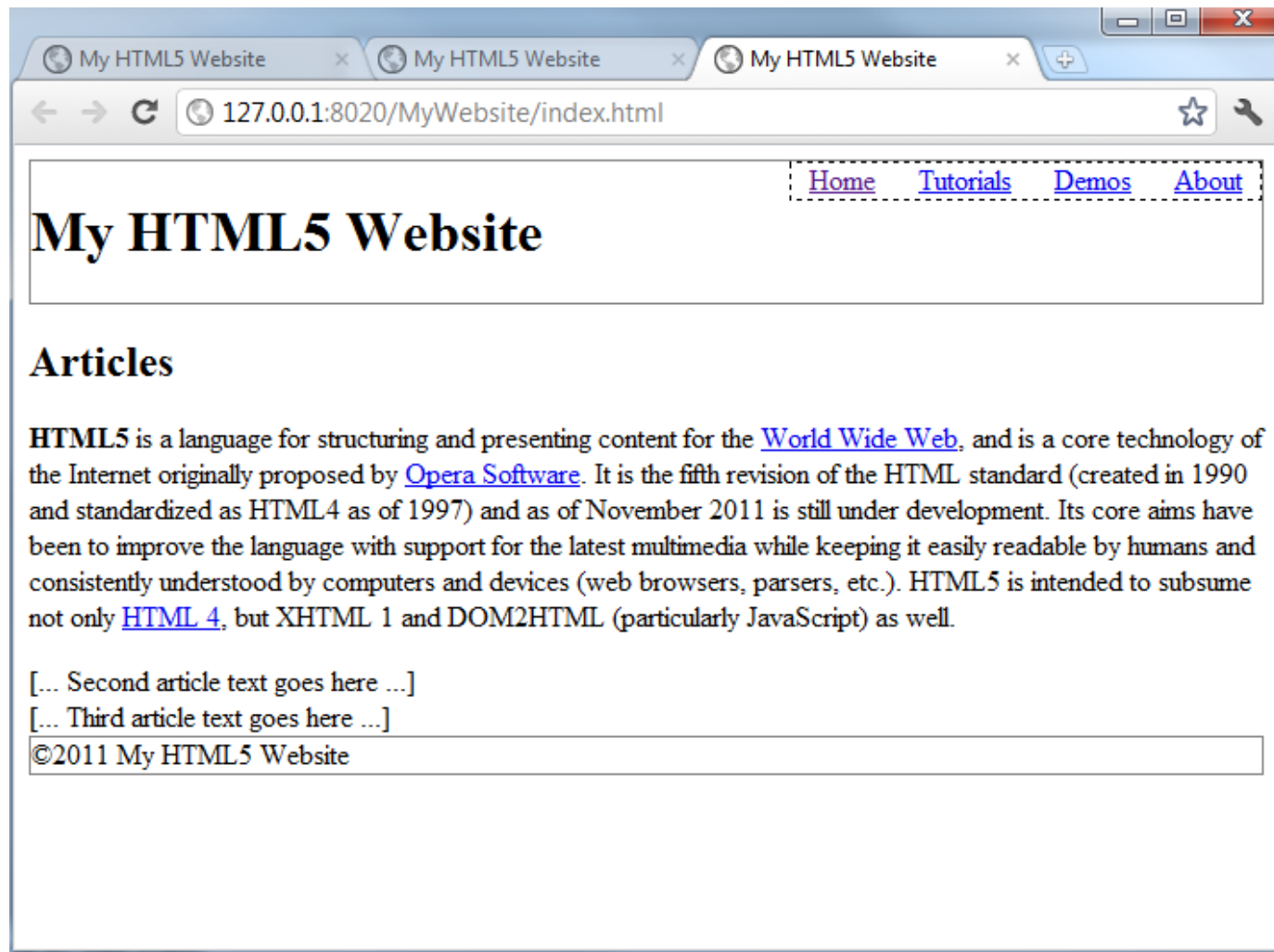
Declare a Navigation Layout



Declare Section and Article Layout

```
</header>
<section id="articles">
  <h2>Articles</h2>
  <article>
    <p>
      <b>HTML5</b> is a language for structuring and presenting content for the
      <a href="http://en.wikipedia.org/wiki/World_Wide_Web" title="World Wide Web">World Wide
      Web</a>, and is a core technology of the Internet originally proposed by <a
      href="http://en.wikipedia.org/wiki/Opera_Software">Opera Software</a>. It is the fifth revision
      of the HTML standard (created in 1990 and standardized as HTML4 as of 1997) and as of November
      2011 is still under development. Its core aims have been to improve the language with support
      for the latest multimedia while keeping it easily readable by humans and consistently
      understood by computers and devices (web browsers, parsers, etc.). HTML5 is intended to subsume
      not only <a href="http://en.wikipedia.org/wiki/HTML_4">HTML 4</a>, but XHTML 1 and DOM2HTML
      (particularly JavaScript) as well.
    </p>
  </article>
  <article>
    [... Second article text goes here ...]
  </article>
  <article>
    [... Third article text goes here ...]
  </article>
</section>
<footer>&copy;2011 My HTML5 Website</footer>
```


Declare Section and Article Layout

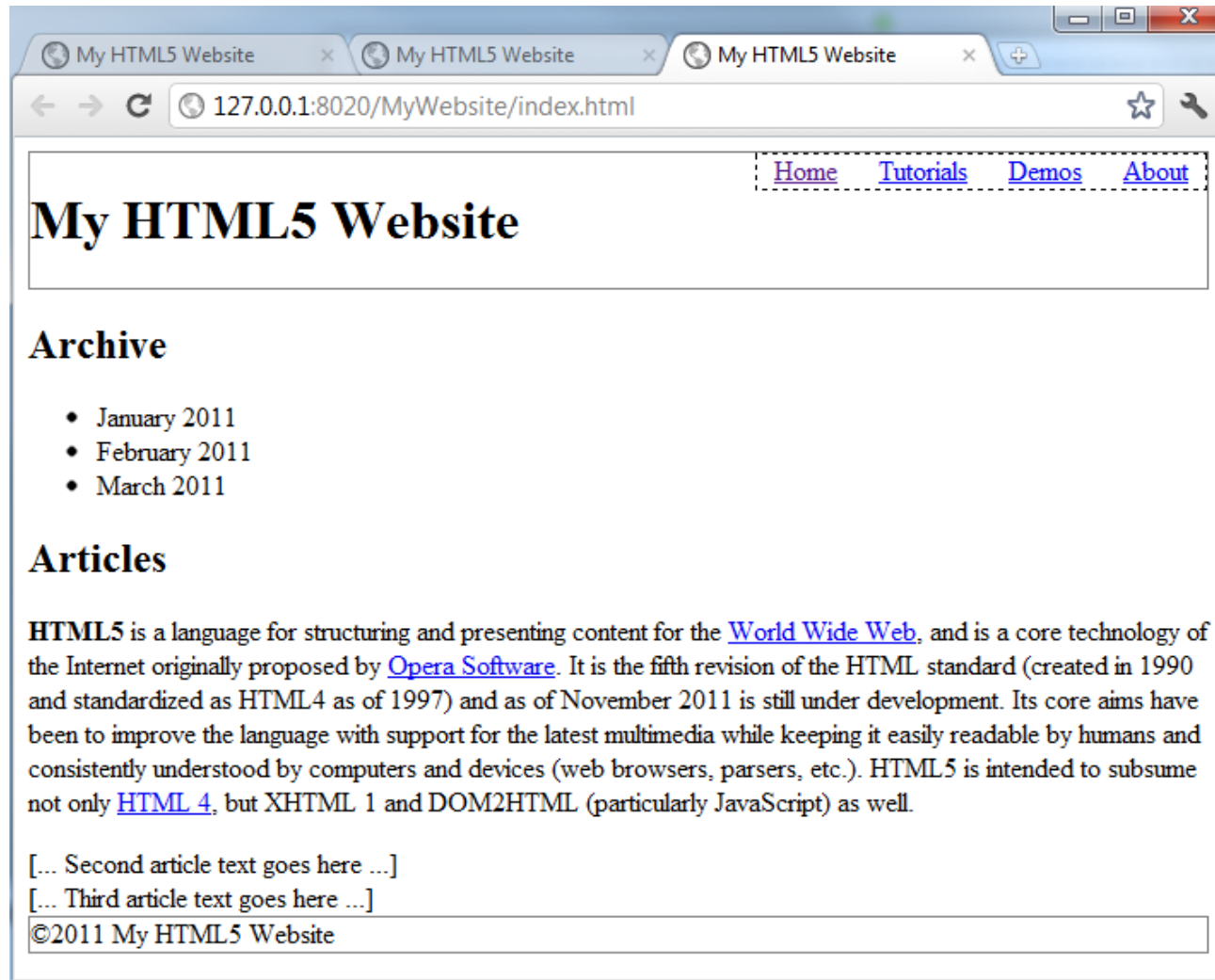


Declare Section and Article Layout

- Let's add another section on top of the previous section.

```
</header>
<section id="sidebar">
  <h2>Archive</h2>
  <nav id="archive">
    <ul>
      <li>January 2011</li>
      <li>February 2011</li>
      <li>March 2011</li>
    </ul>
  </nav>
</section>
<section id="articles">
  <h2>Articles</h2>
```

Declare Section and Article Layout



Declare Section and Article Layout

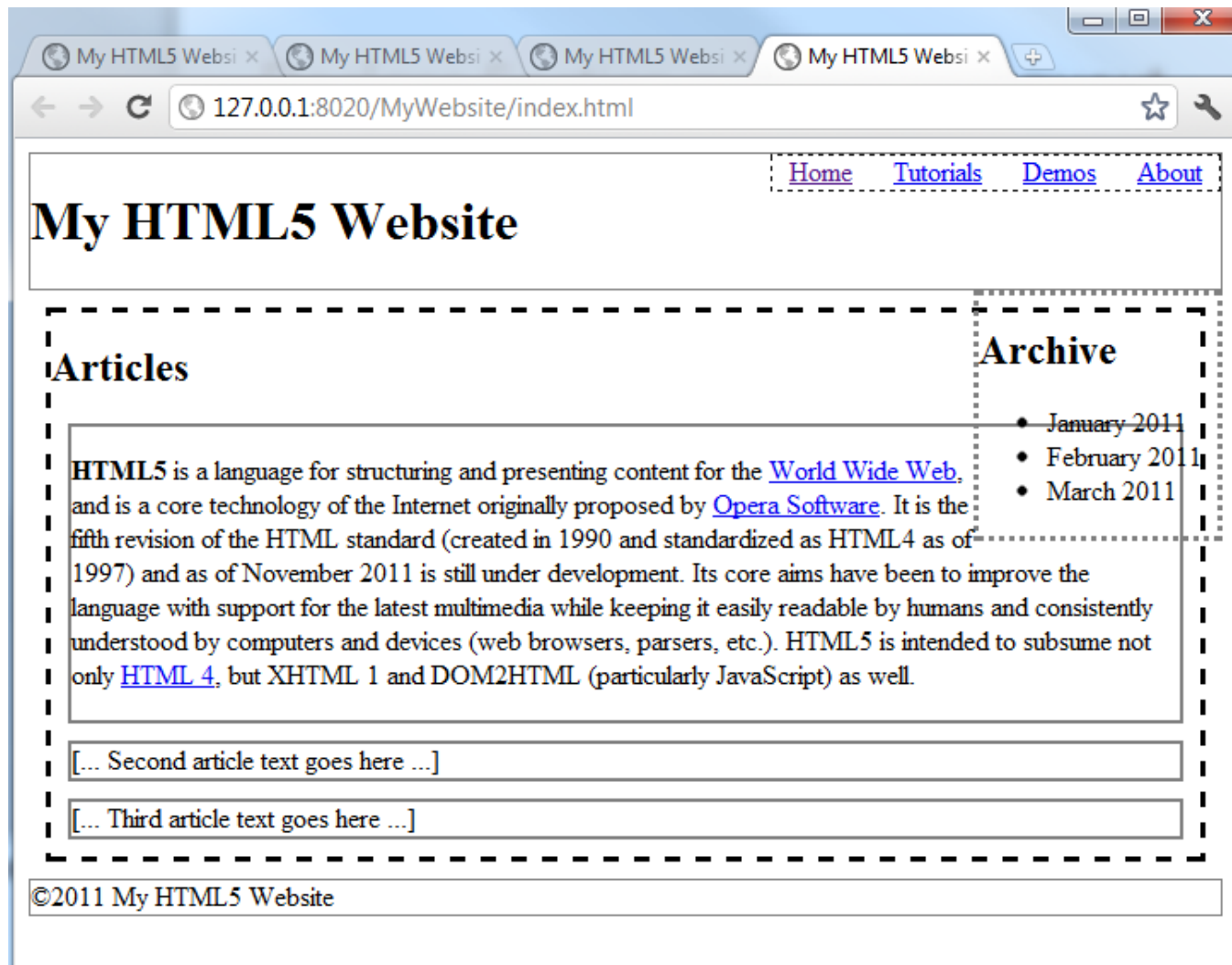
- Apply some styles to the `<section>` and `<article>` tag.

```
section#sidebar
{
    border: 3px dotted gray;
    float: right;
    width: 20%;
}

section#articles
{
    border: 3px dashed black;
    margin: 10px;
}

section#articles article
{
    border: 2px solid gray;
    margin: 10px;
}
```

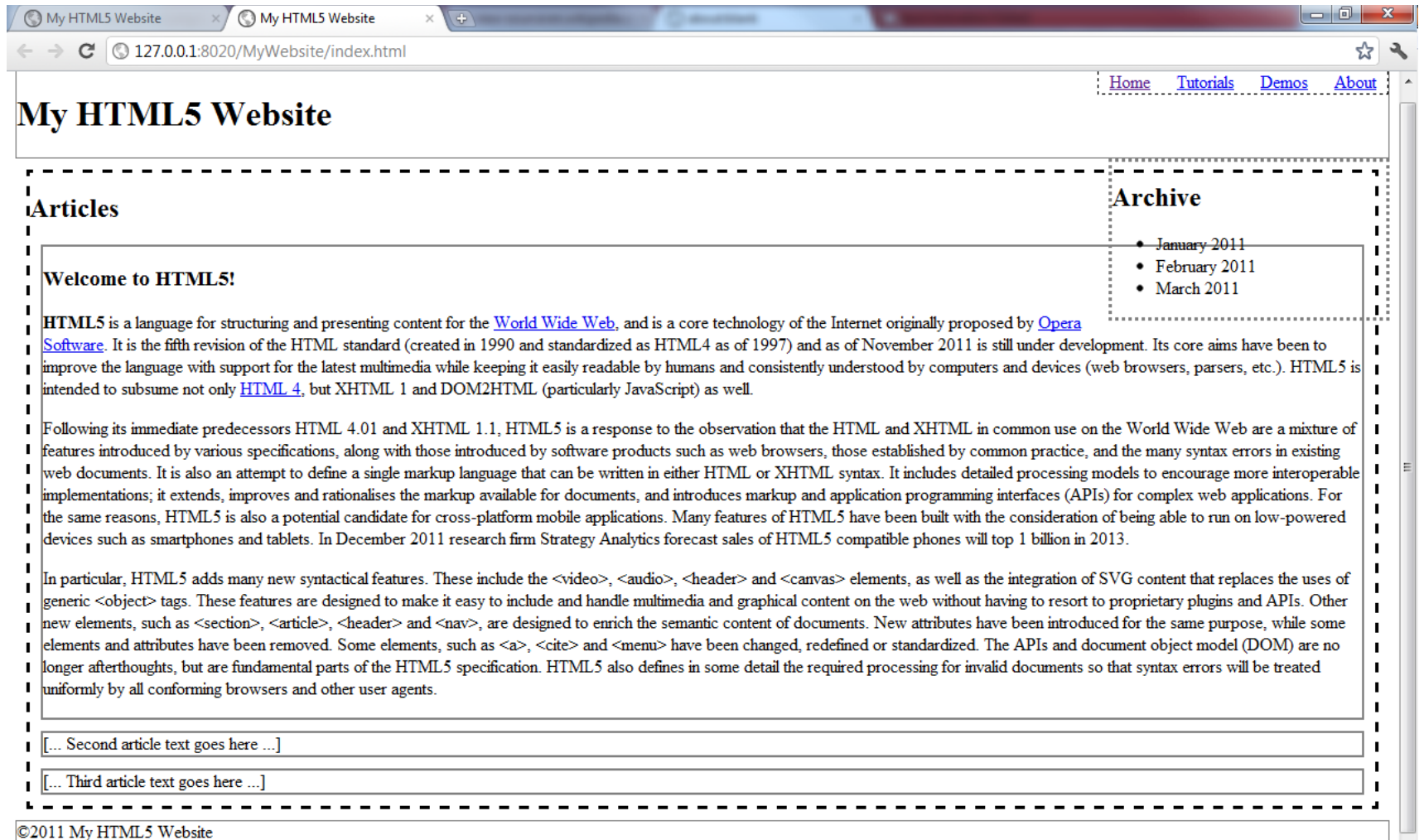
Declare Section and Article Layout



Declare Heading and Paragraph

```
<section id="articles">
  <h2>Articles</h2>
  <article>
    <h3>Welcome to HTML5!</h3>
    <p>
      <b>HTML5</b> is a language for structuring and presenting content for the <a href="http://en.wikipedia.org/wiki/World_Wide_Web"
title="World Wide Web">World Wide Web</a>, and is a core technology of the Internet originally proposed by <a
href="http://en.wikipedia.org/wiki/Opera_Software">Opera Software</a>. It is the fifth revision of the HTML standard (created in 1990 and
standardized as HTML4 as of 1997) and as of November 2011 is still under development. Its core aims have been to improve the language with support
for the latest multimedia while keeping it easily readable by humans and consistently understood by computers and devices (web browsers, parsers,
etc.). HTML5 is intended to subsume not only <a href="http://en.wikipedia.org/wiki/HTML_4">HTML 4</a>, but XHTML 1 and DOM2HTML (particularly
JavaScript) as well.
    </p>
    <p>
      Following its immediate predecessors HTML 4.01 and XHTML 1.1, HTML5 is a response to the observation that the HTML and XHTML in
common use on the World Wide Web are a mixture of features introduced by various specifications, along with those introduced by software products
such as web browsers, those established by common practice, and the many syntax errors in existing web documents. It is also an attempt to define a
single markup language that can be written in either HTML or XHTML syntax. It includes detailed processing models to encourage more interoperable
implementations; it extends, improves and rationalises the markup available for documents, and introduces markup and application programming
interfaces (APIs) for complex web applications. For the same reasons, HTML5 is also a potential candidate for cross-platform mobile applications.
Many features of HTML5 have been built with the consideration of being able to run on low-powered devices such as smartphones and tablets. In
December 2011 research firm Strategy Analytics forecast sales of HTML5 compatible phones will top 1 billion in 2013.
    </p>
    <p>
      In particular, HTML5 adds many new syntactical features. These include the <video>, <audio>, <header> and
<canvas> elements, as well as the integration of SVG content that replaces the uses of generic <object> tags. These features are
designed to make it easy to include and handle multimedia and graphical content on the web without having to resort to proprietary plugins and
APIs. Other new elements, such as <section>, <article>, <header> and <nav>, are designed to enrich the semantic content of
documents. New attributes have been introduced for the same purpose, while some elements and attributes have been removed. Some elements, such as
<a>, <cite> and <menu> have been changed, redefined or standardized. The APIs and document object model (DOM) are no longer
afterthoughts, but are fundamental parts of the HTML5 specification. HTML5 also defines in some detail the required processing for invalid
documents so that syntax errors will be treated uniformly by all conforming browsers and other user agents.
    </p>
  </article>
```

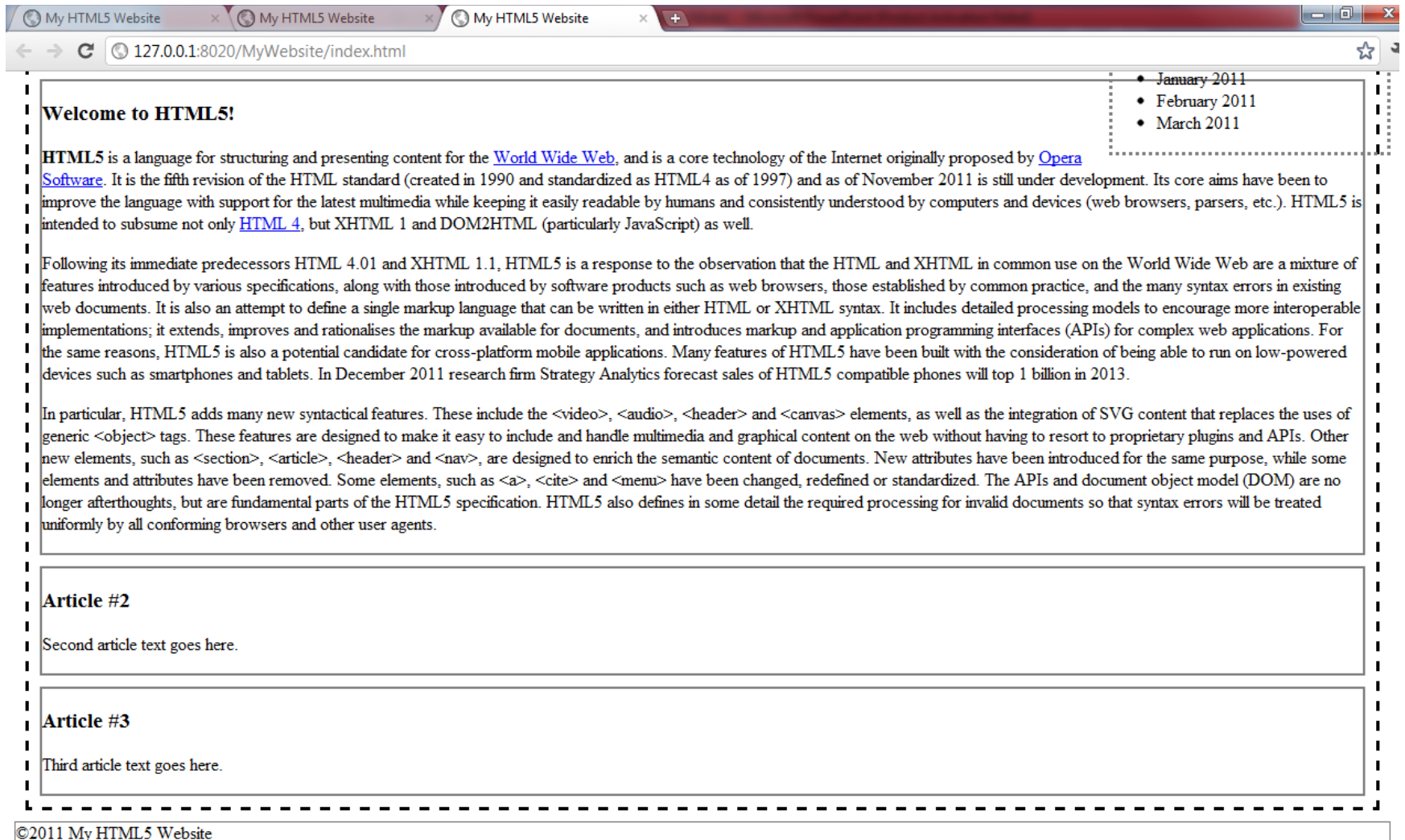
Declare Heading and Paragraph



Declare Heading and Paragraph

```
</article>
<article>
  <h3>Article #2</h3>
  <p>Second article text goes here.</p>
</article>
<article>
  <h3>Article #3</h3>
  <p>Third article text goes here.</p>
</article>
</section>
<footer>&copy; 2011 My HTML5 Website</footer>
```


Declare Heading and Paragraph



Declare Heading Group

```
<section id="articles">
  <h2>Articles</h2>
  <article>
    <hgroup>
      <h3>Welcome to HTML5!</h3>
      <h4>From Wikipedia, the free encyclopedia</h4>
    </hgroup>
    <p>
```

Declare Heading Group



Declare Heading Group

- The headings shown above are way to big, let's apply some styles to the headings.

```
article hgroup *  
{  
    margin: 0px;  
}  
  
article h4  
{  
    font-size: 0.67em;  
}
```

Declare Heading Group



Declare Figure Layout

- Create a new folder call “images” and copy the HTML5 logo image to this folder.



```
<section id="articles">
  <h2>Articles</h2>
  <article>
    <hgroup>
      <h3>Welcome to HTML5!</h3>
      <h4>From Wikipedia, the free encyclopedia</h4>
    </hgroup>
    <figure>
      
    </figure>
  </article>
</section>
```

Declare Figure Layout

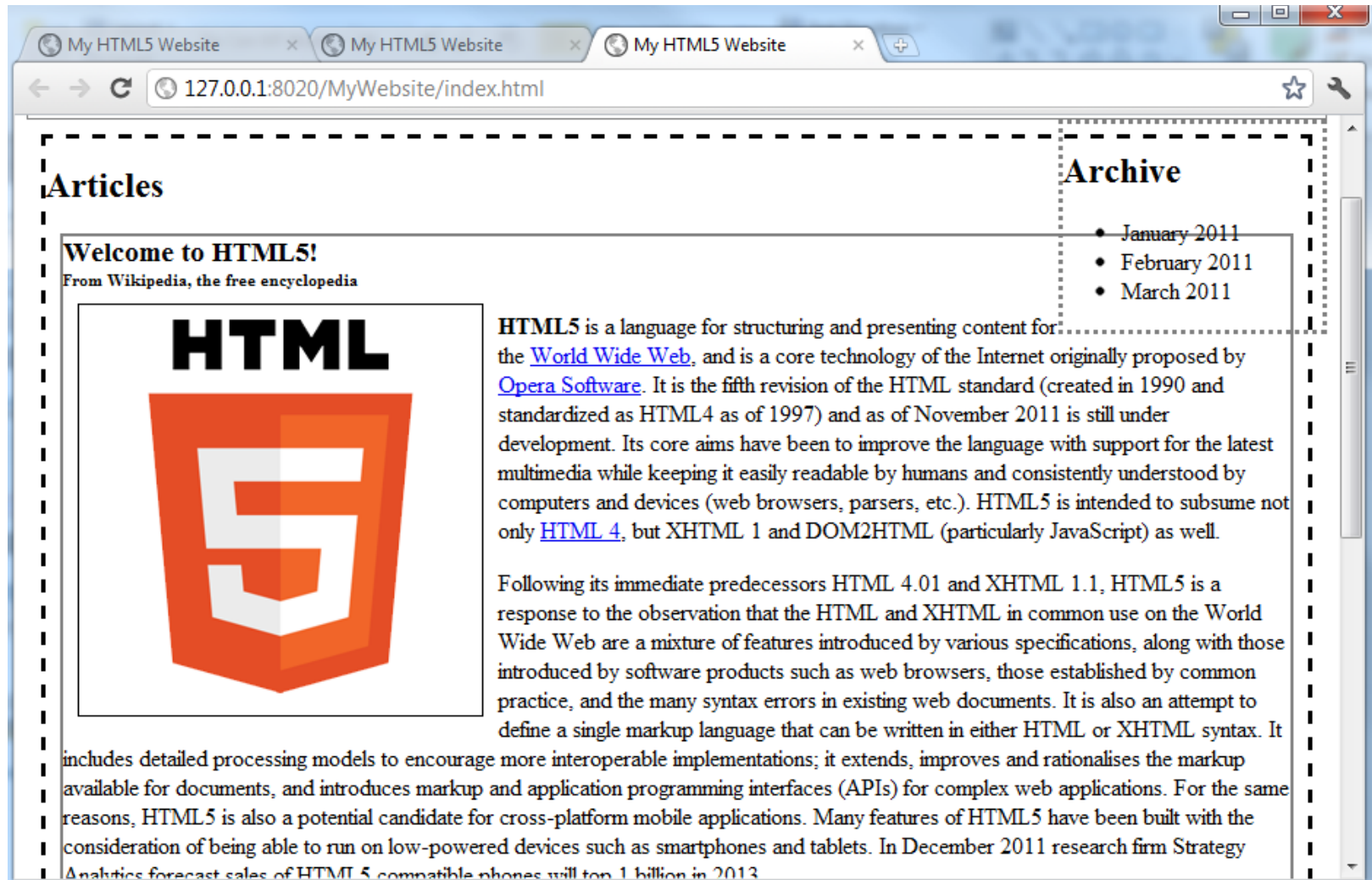


Declare Figure Layout

- Apply some styles to the `<figure>` tag.

```
figure
{
    border: 1px solid;
    padding: 10px;
    margin: 10px;
    float: left;
}
```


Declare Figure Layout



Declare Aside Layout

`HTML5` is a language for structuring and presenting content for the `World Wide Web`, and is a core technology of the Internet originally proposed by `Opera Software`. It is the fifth revision of the HTML standard (created in 1990 and standardized as HTML4 as of 1997) and as of November 2011 is still under development. Its core aims have been to improve the language with support for the latest multimedia while keeping it easily readable by humans and consistently understood by computers and devices (web browsers, parsers, etc.). HTML5 is intended to subsume not only `HTML 4`, but XHTML 1 and DOM2HTML (particularly JavaScript) as well.

`</p>`

`<aside>News and interesting Hacks.</aside>`

`<p>`

Following its immediate predecessors HTML 4.01 and XHTML 1.1, HTML5 is a response to the observation that the HTML and XHTML in common use on the World Wide Web are a mixture of features introduced by various specifications, along with those introduced by

Declare Aside Layout



Declare Aside Layout

- Apply a style to the <aside> tag.

```
aside
{
    border: 1px solid;
    max-width: 20%;
    float: right;
}
```

Declare Aside Layout

