

the design  
of HTML5

**HTML**

<b>HTML 2.0</b>	<b>1995</b>
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<b>HTML 3.2</b>	<b>1997</b>
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<b>HTML 4.0</b>	<b>1997</b>
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<b>HTML 4.01</b>	<b>1999</b>
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**XHTML 1.0**

**2000**

**XHTML 1.1**

**2001**

**XHTML 2**

*Be conservative in what you send;  
be liberal in what you accept.*

—Jon Postel,  
The Robustness Principle

**WHATWG**

**2004**

**W3C**

**2007**

**HTML5**

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# design principles



*This document describes the set of guiding principles used by the HTML Working Group for the development of HTML5. The principles offer guidance for the design of HTML in the areas of compatibility, utility and interoperability.*

—HTML Design Principles  
[w3.org/TR/html-design-principles](http://w3.org/TR/html-design-principles)

# **avoid needless complexity**

Simple solutions are preferred to complex ones,  
when possible.

# HTML 4.01

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

# XHTML 1.0

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

# HTML5 <!DOCTYPE html>

# HTML 4.01

```
<meta http-equiv="Content-Type"  
content="text/html; charset=utf-8">
```

# XHTML 1.0

```
<?xml version="1.0" encoding="UTF-8"?>  
<meta http-equiv="Content-Type"  
content="text/html; charset=utf-8" />
```

# HTML5 <meta charset="utf-8">

```
<link rel="stylesheet" type="text/css"  
href="file.css">
```

```
<script type="text/javascript">  
</script>
```

# HTML5

# support existing content

Existing content often relies upon expected user agent processing and behaviour to function as intended.

**  
<p class="foo">Hello world</p>**

**  
<p class="foo">Hello world**

**<IMG SRC="foo" ALT="bar">  
<P CLASS="foo">Hello world</P>**

**<img src=foo alt=bar>  
<p class=foo>Hello world</p>**

*Be conservative in what you send;  
be liberal in what you accept.*

—Jon Postel,  
The Robustness Principle



# solve real problems

Abstract architectures that don't address an existing need are less favoured than pragmatic solutions to problems that web content faces today.

# (X)HTML

```
<h2><a href="/path/to/resource">Headline text</a></h2>  
<p><a href="/path/to/resource">Paragraph text.</a></p>
```

# HTML5

```
<a href="/path/to/resource">  
<h2>Headline text</h2>  
<p>Paragraph text.</p>  
</a>
```

**pave the  
cowpaths**

**section**

**article**

**aside**

**nav**

**header**

**footer**

**details**

**figure**

```
<body>  
<div id="header">...</div>  
<div id="navigation">...</div>  
<div id="main">...</div>  
<div id="sidebar">...</div>  
<div id="footer">...</div>  
</body>
```

```
<body>  
<header>...</header>  
<nav>...</nav>  
<div id="main">...</div>  
<aside>...</aside>  
<footer>...</footer>  
</body>
```

**section**

**article**

**aside**

**nav**

**header**

**footer**

**details**

**figure**

```
<div class="item">  
<h2>...</h2>  
<div class="meta">...</div>  
<div class="content">  
  
...  
</div>  
<div class="links">...</div>  
</div>
```



```
<section class="item">  
<header><h1>...</h1></header>  
<footer class="meta">...</footer>  
<div class="content">  
  
...  
</div>  
<nav class="links">...</nav>  
</section>
```

```
<section class="item">
<header><h1>...</h1></header>
<footer class="meta">...</footer>
<div class="content">
...
</div>
<nav class="links">...</nav>
</section>
```

*I would in fact prefer, instead of <H1>, <H2> etc for headings to have a nestable <SECTION>..</SECTION> element, and a generic <H>..</H> which at any level within the sections would produce the required level of heading.*

—Tim Berners-Lee,  
1991

# degrade gracefully

HTML 5 document conformance requirements should be designed so that Web content can degrade gracefully in older or less capable user agents, even when making use of new elements, attributes, APIs and content models.

**input type="number"**

**input type="search"**

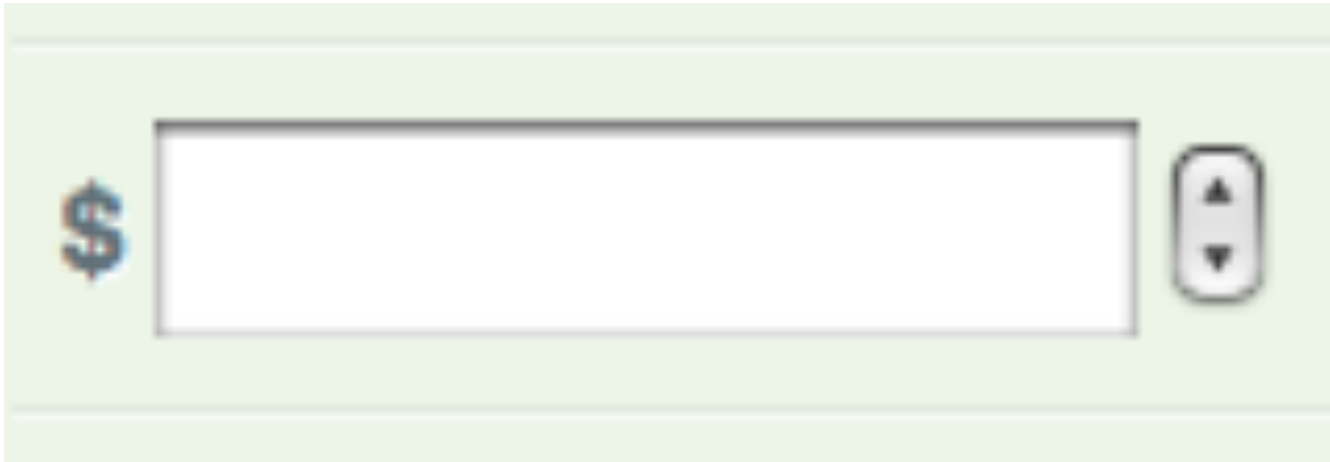
**input type="range"**

**input type="email"**

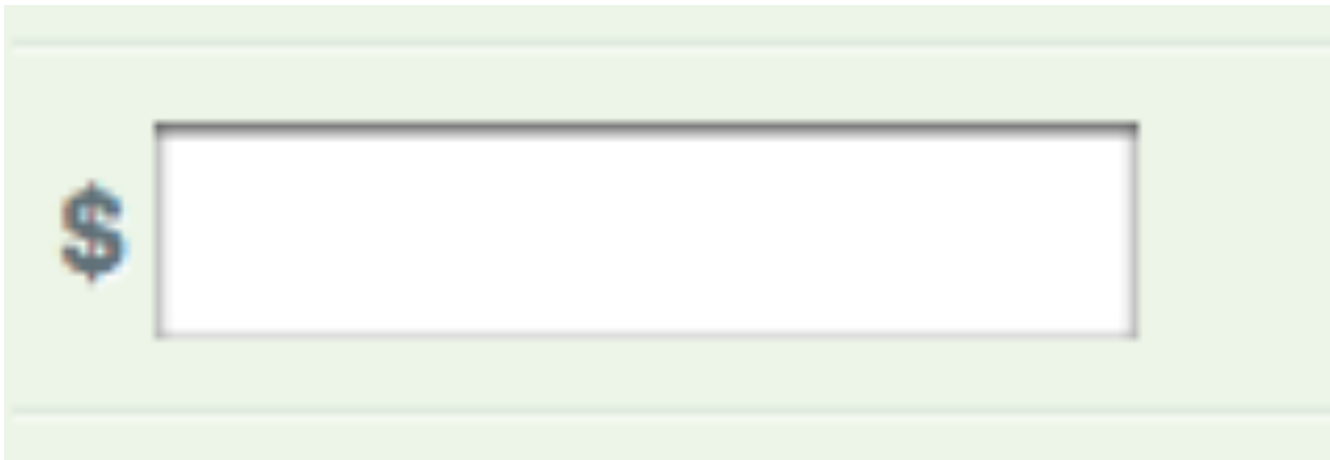
**input type="date"**

**input type="url"**

# input type="number"



A screenshot of a web form with a light green background. It features a white rectangular input field. To the left of the field is a blue dollar sign icon. To the right of the field is a vertical spinner control with up and down arrows.



A screenshot of a web form with a light green background, similar to the one above. It features a white rectangular input field. To the left of the field is a blue dollar sign icon. Unlike the top image, there is no spinner control to the right of the field.

# input type="search"



A search input field with the text "meaning" and a clear button (X) next to it, followed by a "search" button.



A search input field with the text "meaning", followed by a "search" button.

**input type="search"**  
**placeholder="e.g. salad or fish"**



A search bar with a light blue rounded rectangular input field containing the placeholder text "e.g. salad or fish" in a light blue font. To the right of the input field is a dark blue rounded rectangular button with the word "search" in white. The entire search bar is set against a dark blue background, with a lighter blue horizontal bar below it.



A search bar with a white rounded rectangular input field. To the right of the input field is a dark blue rounded rectangular button with the word "search" in white. The entire search bar is set against a dark blue background, with a lighter blue horizontal bar below it.



**HTML5**  
**video**

**Flash**  
**object**

**<video src="movie.mp4">**

**<!-- fallback content -->**

**</video>**

```
<video src="movie.mp4">  
<object data="movie.swf">  
<!-- fallback content -->  
</object>  
</video>
```

```
<video src="movie.mp4">  
<object data="movie.swf">  
<a href="movie.mp4">download</a>  
</object>  
</video>
```

**<video>**

**<source src="movie.mp4">**

**<source src="movie.ogv">**

**<object data="movie.swf">**

**<a href="movie.mp4">download</a>**

**</object>**

**</video>**

**<video>**

**<source src="movie.mp4">**

**<source src="movie.ogv">**

**<source src="movie.webm">**

**<object data="movie.swf">**

**<a href="movie.mp4">download</a>**

**</object>**

**</video>**

**<video>**

**<source src="movie.mp4">**

**1**

**<source src="movie.ogv">**

**2**

**<source src="movie.webm">**

**3**

**<object data="movie.swf">**

**4**

**<a href="movie.mp4">download</a>**

**5**

**</object>**

**</video>**

*The value of a network is proportional to the square of the number of connected users of the system ( $n^2$ ).*

—Robert Metcalfe



# priority of constituencies

In case of conflict, consider  
users over authors over  
implementors over specifiers  
over theoretical purity.

**@adactio**

**adactio.com**

**books.alistapart.com**

