

next table of contents elements attributes index



HTML 4.01 Specification

W3C Recommendation 24 December 1999

This version:

http://www.w3.org/TR/1999/REC-html401-19991224 (plain text [794Kb], gzip'ed tar archive of HTML files [371Kb], a .zip archive of HTML files [405Kb], gzip'ed Postscript file [746Kb, 389 pages], azip'ed PDF file [963Kb]) Latest version of HTML 4.01: http://www.w3.org/TR/html401 Latest version of HTML 4: http://www.w3.org/TR/html4 Latest version of HTML: http://www.w3.org/TR/html Previous version of HTML 4.01: http://www.w3.org/TR/1999/PR-html40-19990824 **Previous HTML 4 Recommendation:** http://www.w3.org/TR/1998/REC-html40-19980424 Editors: Dave Raggett <dsr@w3.org> Arnaud Le Hors, W3C Ian Jacobs, W3C

<u>Copyright</u> ©1997-1999 <u>W3C</u>[®] (<u>MIT</u>, <u>INRIA</u>, <u>Keio</u>), All Rights Reserved. W3C <u>liability</u>, <u>trademark</u>, <u>document use</u> and <u>software licensing</u> rules apply.

Abstract

This specification defines the HyperText Markup Language (HTML), the publishing language of the World Wide Web. This specification defines HTML 4.01, which is a subversion of HTML 4. In addition to the text, multimedia, and hyperlink features of the previous versions of HTML (HTML 3.2 [HTML32] and HTML 2.0 [RFC1866]), HTML 4 supports more multimedia options, scripting languages, style sheets, better printing facilities, and documents that are more accessible to users with disabilities. HTML 4 also takes great strides towards the internationalization of documents, with the goal of making the Web truly World Wide.

HTML 4 is an SGML application conforming to International Standard ISO 8879 -- Standard Generalized Markup Language [ISO8879].

Status of this document

This section describes the status of this document at the time of its publication. Other documents may supersede this document. The latest status of this document series is maintained at the W3C.

This document specifies HTML 4.01, which is part of the HTML 4 line of specifications. The first version of HTML 4 was HTML 4.0 [HTML40], published on 18 December 1997 and revised 24 April 1998. This specification is the first HTML 4.01 Recommendation. It includes non-editorial changes since the 24 April version of HTML 4.0. There have been some changes to the DTDs, for example. This document obsoletes previous versions of HTML 4.0, although W3C will continue to make those specifications and their DTDs available at the W3C Web site.

This document has been reviewed by W3C Members and other interested parties and has been endorsed by the Director as a W3C Recommendation. It is a stable document and may be used as reference material or cited as a normative reference from another document. W3C's role in making the Recommendation is to draw attention to the specification and to promote its widespread deployment. This enhances the functionality and interoperability of the Web.

W3C recommends that user agents and authors (and in particular, authoring tools) produce HTML 4.01 documents rather than HTML 4.0 documents. W3C recommends that authors produce HTML 4 documents instead of HTML 3.2 documents. For reasons of backward compatibility, W3C also recommends that tools interpreting HTML 4 continue to support HTML 3.2 and HTML 2.0 as well.

For information about the next generation of HTML, "The Extensible HyperText Markup Language" [XHTML], please refer to the <u>W3C HTML Activity</u> and the list of <u>W3C Technical Reports</u>.

This document has been produced as part of the <u>W3C HTML Activity</u>. The goals of the <u>HTML Working Group</u> (<u>Members only</u>) are discussed in the <u>HTML</u> <u>Working Group charter</u> (<u>Members only</u>).

A list of current W3C Recommendations and other technical documents can be found at <u>http://www.w3.org/TR</u>.

Public discussion on HTML features takes place on <u>www-html@w3.org</u> (archives of www-html@w3.org).

Available languages

The English version of this specification is the only normative version.

However, for translations of this document, see http://www.w3.org/MarkUp/html4-updates/translations.

Errata

The list of known errors in this specification is available at: http://www.w3.org/MarkUp/html4-updates/errata

Please report errors in this document to www-html-editor@w3.org.

Quick Table of Contents

- 1. About the HTML 4 Specification
- 2. Introduction to HTML 4
- 3. On SGML and HTML
- 4. Conformance: requirements and recommendations
- 5. <u>HTML Document Representation</u> Character sets, character encodings, and entities
- 6. <u>Basic HTML data types</u> Character data, colors, lengths, URIs, content types, etc.
- 7. <u>The global structure of an HTML document</u> *The HEAD and BODY of a document*
- 8. Language information and text direction International considerations for text
- 9. <u>Text</u> Paragraphs, Lines, and Phrases
- 10. Lists Unordered, Ordered, and Definition Lists
- 11. Tables
- 12. Links Hypertext and Media-Independent Links
- 13. Objects, Images, and Applets
- 14. <u>Style Sheets</u> Adding style to HTML documents
- 15. Alignment, font styles, and horizontal rules
- 16. Frames Multi-view presentation of documents
- 17. Forms User-input Forms: Text Fields, Buttons, Menus, and more
- 18. Scripts Animated Documents and Smart Forms
- 19. <u>SGML reference information for HTML</u> Formal definition of HTML and validation
- 20. SGML Declaration of HTML 4
- 21. Document Type Definition
- 22. Transitional Document Type Definition
- 23. Frameset Document Type Definition
- 24. Character entity references in HTML 4
- A. Changes
- B. Performance, Implementation, and Design Notes

References Index of Elements Index of Attributes Index

Full Table of Contents

- 1. About the HTML 4 Specification
 - 1. How the specification is organized
 - 2. Document conventions
 - 1. Elements and attributes
 - 2. Notes and examples
 - 3. Acknowledgments
 - 1. Acknowledgments for the current revision
 - 4. Copyright Notice
- 2. Introduction to HTML 4
 - 1. What is the World Wide Web?
 - 1. Introduction to URIs
 - 2. Fragment identifiers
 - 3. Relative URIs
 - 2. What is HTML?
 - 1. A brief history of HTML
 - 3. <u>HTML 4</u>
 - 1. Internationalization
 - 2. Accessibility
 - 3. <u>Tables</u>
 - 4. Compound documents
 - 5. Style sheets
 - 6. <u>Scripting</u>
 - 7. Printing
 - 4. Authoring documents with HTML 4
 - 1. Separate structure and presentation
 - 2. Consider universal accessibility to the Web
 - 3. Help user agents with incremental rendering
- 3. On SGML and HTML
 - 1. Introduction to SGML
 - 2. SGML constructs used in HTML
 - 1. Elements
 - 2. <u>Attributes</u>
 - 3. Character references
 - 4. Comments
 - 3. How to read the HTML DTD
 - 1. DTD Comments
 - 2. Parameter entity definitions
 - 3. Element declarations
 - Content model definitions
 - 4. <u>Attribute declarations</u>
 - DTD entities in attribute definitions
 - Boolean attributes
- 4. Conformance: requirements and recommendations
 - 1. Definitions
 - 2. <u>SGML</u>
 - 3. <u>The text/html content type</u>
- 5. <u>HTML Document Representation</u> Character sets, character encodings, and entities

- 1. <u>The Document Character Set</u>
- 2. Character encodings
 - 1. Choosing an encoding
 - Notes on specific encodings
 - 2. Specifying the character encoding
- 3. Character references
 - 1. <u>Numeric character references</u>
 - 2. Character entity references
- 4. Undisplayable characters
- 6. <u>Basic HTML data types</u> Character data, colors, lengths, URIs, content types, etc.
 - 1. Case information
 - 2. SGML basic types
 - 3. Text strings
 - 4. <u>URIs</u>
 - 5. <u>Colors</u>
 - 1. Notes on using colors
 - 6. Lengths
 - 7. Content types (MIME types)
 - 8. Language codes
 - 9. <u>Character encodings</u>
 - 10. Single characters
 - 11. Dates and times
 - 12. Link types
 - 13. <u>Media descriptors</u>
 - 14. Script data
 - 15. Style sheet data
 - 16. Frame target names
- 7. The global structure of an HTML document The HEAD and BODY of a document
 - 1. Introduction to the structure of an HTML document
 - 2. <u>HTML version information</u>
 - 3. The HTML element
 - 4. The document head
 - 1. The HEAD element
 - 2. The TITLE element
 - 3. The title attribute
 - 4. Meta data
 - Specifying meta data
 - The META element
 - Meta data profiles
 - 5. <u>The document body</u>
 - 1. The BODY element
 - 2. Element identifiers: the id and class attributes
 - 3. Block-level and inline elements
 - 4. Grouping elements: the DIV and SPAN elements
 - 5. Headings: The H1, H2, H3, H4, H5, H6 elements
 - 6. The ADDRESS element
- 8. Language information and text direction International considerations for text

- 1. Specifying the language of content: the lang attribute
 - 1. Language codes
 - 2. Inheritance of language codes
 - 3. Interpretation of language codes
- 2. Specifying the direction of text and tables: the dir attribute
 - 1. Introduction to the bidirectional algorithm
 - 2. Inheritance of text direction information
 - 3. <u>Setting the direction of embedded text</u>
 - 4. Overriding the bidirectional algorithm: the BDO element
 - 5. Character references for directionality and joining control
 - 6. The effect of style sheets on bidirectionality
- 9. <u>Text</u> Paragraphs, Lines, and Phrases
 - 1. White space
 - 2. <u>Structured text</u>
 - 1. Phrase elements: EM, STRONG, DFN, CODE, SAMP, KBD, VAR, CITE, ABBR, and ACRONYM
 - Quotations: The BLOCKQUOTE and Q elements
 Rendering quotations
 - 3. Subscripts and superscripts: the SUB and SUP elements
 - 3. Lines and Paragraphs
 - 1. Paragraphs: the p element
 - 2. Controlling line breaks
 - Forcing a line break: the BR element
 - Prohibiting a line break
 - 3. <u>Hyphenation</u>
 - 4. Preformatted text: The PRE element
 - 5. Visual rendering of paragraphs
 - 4. Marking document changes: The INS and DEL elements
- 10. Lists Unordered, Ordered, and Definition Lists
 - 1. Introduction to lists
 - 2. Unordered lists (UL), ordered lists (OL), and list items (LI)
 - 3. Definition lists: the DL, DT, and DD elements
 - 1. Visual rendering of lists
 - 4. The DIR and MENU elements
- 11. Tables
 - 1. Introduction to tables
 - 2. Elements for constructing tables
 - 1. The TABLE element
 - Table directionality
 - 2. <u>Table Captions: The CAPTION element</u>
 - 3. Row groups: the THEAD, TFOOT, and TBODY elements
 - 4. Column groups: the COLGROUP and COL elements
 - The COLGROUP element
 - The COL element
 - Calculating the number of columns in a table
 - Calculating the width of columns
 - 5. <u>Table rows: The TR element</u>
 - 6. Table cells: The TH and TD elements
 - Cells that span several rows or columns
 - 3. <u>Table formatting by visual user agents</u>

- 1. Borders and rules
- 2. Horizontal and vertical alignment
 - Inheritance of alignment specifications
- 3. Cell margins
- 4. Table rendering by non-visual user agents
 - 1. Associating header information with data cells
 - 2. <u>Categorizing cells</u>
 - 3. <u>Algorithm to find heading information</u>
- 5. Sample table
- 12. Links Hypertext and Media-Independent Links
 - 1. Introduction to links and anchors
 - 1. Visiting a linked resource
 - 2. Other link relationships
 - 3. Specifying anchors and links
 - 4. Link titles
 - 5. Internationalization and links
 - 2. The A element
 - 1. Syntax of anchor names
 - 2. <u>Nested links are illegal</u>
 - 3. Anchors with the id attribute
 - 4. Unavailable and unidentifiable resources
 - 3. Document relationships: the LINK element
 - 1. Forward and reverse links
 - 2. Links and external style sheets
 - 3. Links and search engines
 - 4. Path information: the BASE element
 - 1. Resolving relative URIs
- 13. Objects, Images, and Applets
 - 1. Introduction to objects, images, and applets
 - 2. Including an image: the IMG element
 - 3. Generic inclusion: the OBJECT element
 - 1. <u>Rules for rendering objects</u>
 - 2. Object initialization: the PARAM element
 - 3. Global naming schemes for objects
 - 4. Object declarations and instantiations
 - 4. Including an applet: the APPLET element
 - 5. Notes on embedded documents
 - 6. Image maps
 - 1. Client-side image maps: the MAP and AREA elements
 - Client-side image map examples
 - 2. Server-side image maps
 - 7. Visual presentation of images, objects, and applets
 - 1. Width and height
 - 2. White space around images and objects
 - 3. Borders
 - 4. Alignment
 - 8. How to specify alternate text
- 14. <u>Style Sheets</u> Adding style to HTML documents
 - 1. Introduction to style sheets
 - 2. Adding style to HTML

- 1. <u>Setting the default style sheet language</u>
- 2. Inline style information
- 3. Header style information: the STYLE element
- 4. Media types
- 3. External style sheets
 - 1. <u>Preferred and alternate style sheets</u>
 - 2. <u>Specifying external style sheets</u>
- 4. Cascading style sheets
 - 1. Media-dependent cascades
 - 2. Inheritance and cascading
- 5. Hiding style data from user agents
- 6. Linking to style sheets with HTTP headers
- 15. Alignment, font styles, and horizontal rules
 - 1. Formatting
 - 1. Background color
 - 2. <u>Alignment</u>
 - 3. Floating objects
 - Float an object
 - Float text around an object
 - 2. Fonts
 - 1. Font style elements: the TT, I, B, BIG, SMALL, STRIKE, S, and U elements
 - 2. Font modifier elements: FONT and BASEFONT
 - 3. Rules: the HR element
- 16. Frames Multi-view presentation of documents
 - 1. Introduction to frames
 - 2. Layout of frames
 - 1. The FRAMESET element
 - <u>Rows and columns</u>
 - <u>Nested frame sets</u>
 - Sharing data among frames
 - 2. The FRAME element
 - Setting the initial contents of a frame
 - Visual rendering of a frame
 - 3. <u>Specifying target frame information</u>
 - 1. Setting the default target for links
 - 2. Target semantics
 - 4. Alternate content
 - 1. <u>The NOFRAMES element</u>
 - 2. Long descriptions of frames
 - 5. Inline frames: the IFRAME element
- 17. Forms User-input Forms: Text Fields, Buttons, Menus, and more
 - 1. Introduction to forms
 - 2. Controls
 - 1. Control types
 - 3. The FORM element
 - 4. The INPUT element
 - 1. Control types created with INPUT
 - 2. Examples of forms containing INPUT controls
 - 5. <u>The BUTTON element</u>

- 6. The select, OPTGROUP, and OPTION elements
- 1. Pre-selected options
- 7. The TEXTAREA element
- 8. The ISINDEX element
- 9. Labels
 - 1. The LABEL element
- 10. Adding structure to forms: the FIELDSET and LEGEND elements
- 11. Giving focus to an element
 - 1. Tabbing navigation
 - 2. Access keys
- 12. Disabled and read-only controls
 - 1. Disabled controls
 - 2. Read-only controls
- 13. Form submission
 - 1. Form submission method
 - 2. <u>Successful controls</u>
 - 3. Processing form data
 - Step one: Identify the successful controls
 - <u>Step two: Build a form data set</u>
 - Step three: Encode the form data set
 - Step four: Submit the encoded form data set
 - 4. Form content types
 - application/x-www-form-urlencoded
 - multipart/form-data
- 18. Scripts Animated Documents and Smart Forms
 - 1. Introduction to scripts
 - 2. Designing documents for user agents that support scripting
 - 1. The SCRIPT element
 - 2. Specifying the scripting language
 - The default scripting language
 - Local declaration of a scripting language
 - References to HTML elements from a script
 - 3. Intrinsic events
 - 4. Dynamic modification of documents
 - 3. Designing documents for user agents that don't support scripting
 - 1. The NOSCRIPT element
 - 2. <u>Hiding script data from user agents</u>
- 19. <u>SGML reference information for HTML</u> Formal definition of HTML and validation
 - 1. Document Validation
 - 2. Sample SGML catalog
- 20. SGML Declaration of HTML 4
 - 1. SGML Declaration
- 21. Document Type Definition
- 22. Transitional Document Type Definition
- 23. Frameset Document Type Definition
- 24. Character entity references in HTML 4
 - 1. Introduction to character entity references
 - 2. Character entity references for ISO 8859-1 characters
 - 1. The list of characters

- 3. Character entity references for symbols, mathematical symbols, and <u>Greek letters</u>
 - 1. The list of characters
- Character entity references for markup-significant and internationalization characters
 The list of characters
- A. Changes
 - 1. Changes between 24 April 1998 HTML 4.0 and 24 December 1999 HTML 4.01 versions
 - 1. Changes to the specification
 - General changes
 - On SGML and HTML
 - HTML Document Representation
 - Basic HTML data types
 - Global structure of an HTML document
 - Language information and text direction
 - Tables
 - Links
 - Objects, Images, and Applets
 - <u>Style Sheets in HTML Documents</u>
 - Frames
 - Forms
 - SGML Declaration
 - Strict DTD
 - Notes
 - References
 - 2. Errors that were corrected
 - 3. Minor typographical errors that were corrected
 - 4. Clarifications
 - 5. Known Browser problems
 - 2. Changes between 18 December 1997 and 24 April 1998 versions
 - 1. Errors that were corrected
 - 2. Minor typographical errors that were corrected
 - 3. Changes between HTML 3.2 and HTML 4.0 (18 December 1997)
 - 1. Changes to elements
 - New elements
 - <u>Deprecated elements</u>
 - Obsolete elements
 - 2. Changes to attributes
 - 3. Changes for accessibility
 - 4. Changes for meta data
 - 5. Changes for text
 - 6. Changes for links
 - 7. Changes for tables
 - 8. Changes for images, objects, and image maps
 - 9. Changes for forms
 - 10. Changes for style sheets
 - 11. Changes for frames
 - 12. Changes for scripting
 - 13. Changes for internationalization

- B. Performance, Implementation, and Design Notes
 - 1. Notes on invalid documents
 - 2. Special characters in URI attribute values
 - 1. Non-ASCII characters in URI attribute values
 - 2. <u>Ampersands in URI attribute values</u>
 - 3. <u>SGML implementation notes</u>
 - 1. Line breaks
 - 2. Specifying non-HTML data
 - Element content
 - Attribute values
 - 3. SGML features with limited support
 - 4. Boolean attributes
 - 5. Marked Sections
 - 6. Processing Instructions
 - 7. Shorthand markup
 - 4. Notes on helping search engines index your Web site
 - 1. Search robots
 - <u>The robots.txt file</u>
 - Robots and the META element
 - 5. Notes on tables
 - 1. Design rationale
 - Dynamic reformatting
 - Incremental display
 - Structure and presentation
 - Row and column groups
 - Accessibility
 - 2. <u>Recommended Layout Algorithms</u>
 - Fixed Layout Algorithm
 - Autolayout Algorithm
 - 6. Notes on forms
 - 1. Incremental display
 - 2. <u>Future projects</u>
 - 7. <u>Notes on scripting</u>
 - 1. <u>Reserved syntax for future script macros</u>
 - <u>Current Practice for Script Macros</u>
 - 8. Notes on frames
 - 9. <u>Notes on accessibility</u>
 - 10. Notes on security
 - 1. Security issues for forms
 - **References**
 - 1. Normative references
 - 2. Informative references
 - Index of Elements

Index of Attributes

Index

next table of contents elements attributes index