Writing Modes
Viola

WorldWideWeb Hypermedia Browser

ViolaWWW is a World Wide Web browser. ViolaWWW is built using the Viola hypermedia language/toolkit, and now also comes with a Motif front end.

Viola’s support of HTML 3.0 (aka HTML+) so far includes:
- Paragraph as container
- Nesting lists
- Input forms
- Tables

URL: http://berkeley.ora.com/proj/viola/vu/about_3.3.html
It’s the World Wide Web, not the Wealthy Western Web.

— Bruce Lawson
AZTEC PICTOGRAMS. From the Aztec Empire in Mexico that flourished before the Spanish invasion. (Gelb)

IBERIAN SCRIPT. Used on the Iberian peninsula before it became a territory of the Roman Empire. Currently being deciphered. (Diringer)

HIEROGLYPHICS. Ancient Egyptian ideograms established in the 31st century B.C. One of the oldest writing systems. (Wallis)

SCRIPT OF THE PHAISTOS DISC. Only one disc impressed with this script has been discovered on Crete. From the 17th century B.C. Undeciphered. (Yajima)

TARTARIA SCRIPT. This script, recently discovered in Romania, may be one of the oldest writing systems in human culture. From the 4th millennium B.C. (Hood)

OGHAM SCRIPT. Used in the 5th and 6th centuries in northern Britain and Ireland. Its text consisted of a line crossed with short lines. (Diringer)
CSS Writing Modes Level 4

Editor’s Draft, 15 June 2017

This version: https://drafts.csswg.org/css-writing-modes-4/

Latest published version: https://www.w3.org/TR/css-writing-modes-4/

Test Suite: http://test.csswg.org/suites/css-writing-modes-3_devhighly-unstable/

Issue Tracking:
Tracker
Inline in Spec
GitHub Issues

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Abstract

CSS Writing Modes Level 4 defines CSS support for various international writing modes, such as left-to-right (e.g., Latin Arabic) and right-to-left (e.g., Hebrew and Arabic) texts, using writing modes and writing directions.
direction / dir
writing-mode
text-orientation
CSS Display Module Level 3
Editor’s Draft, 15 June 2017

This version:
https://drafts.csswg.org/css-display/

Latest published version:
https://www.w3.org/TR/css-display-3/

Previous Versions:
https://www.w3.org/TR/2015/WD-css-display-3-20151015/
https://www.w3.org/TR/2015/WD-css-display-3-20150721/
https://www.w3.org/TR/2014/WD-css-display-3-20140911/

Issue Tracking:
Inline In Spec
GitHub Issues

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Abstract

This module describes how the CSS formatting box tree is generated from the document element tree and defines the ‘display’ property that controls it.

CSS is a language for describing the rendering of structured documents (such as HTML and XML) on screen, on paper, in speech, etc.
div {
  display: block;
}

```html
<div>
  <div>
  <div>
  <div>
    <div>
    <div>
    <div>
  
```
div {
    display: inline;
}

```html
<div><div><div><div></div></div></div></div>
```
div {
    display: inline-block;
}

display: block;
display: inline;
display: inline-block;
display: none;
display: table;
display: flex;
display: grid;
display: <value>;
display: <outside> <inside>;
The outer display type dictates how the box participates in its parent’s formatting context.

<display-outside> = block
     inline
     run-in
Can I use run-in?

0 results found.

Why not suggest this feature be added?

Can I use...

Browser support tables for modern web technologies
Created & maintained by @Fyrd, design by @Lenco.
Support data contributions by the GitHub community.
Usage share statistics by StatCounter GlobalStats for May, 2017
Location detection provided by ipinfo.io.

Support via Patreon

Become a caniuse Patron to support the site and disable ads for only $1/month!

Site links

Home
Feature index
Browser usage table
Feature suggestion list
Caniuse data on GitHub

Legend

- Supported
- Not supported
- Partial support
- Support unknown

Enable accessible colors

or Log In
§ 3. Run-In Layout

A run-in box is a box that merges into a block that comes after it, inserting itself at the beginning of that block's inline-level content. This is useful for formatting compact headlines, definitions, and other similar things, where the appropriate DOM structure is to have a headline preceding the following prose, but the desired display is an inline headline laying out with the text.

EXAMPLE 3
For example, dictionary definitions are often formatted so that the word is inline with the definition:

```html
<dl class='dict'>
  <dt>dictionary
  <dd>a book that lists the words of a language in alphabetical order and gives their meaning, or that gives the equivalent words in a different language.
  <dt>glossary
  <dd>an alphabetical list of terms or words found in or relating to a specific subject, text, or dialect, with explanations; a brief dictionary.
</dl>
```

Which is formatted as:

dictionary: a book that lists the words of a language in alphabetical order and explains their meaning.

glossary: an alphabetical list of terms or words found in or relating to a specific subject, text, or dialect, with explanations; a brief dictionary.
The outer display type dictates how the box participates in its parent’s formatting context.

<display-outside> = block
    inline
    run-in
The inner display type defines the kind of formatting context it generates, dictating how its descendant boxes are laid out.

<display-inside> = flow flex flow-root grid table ruby
<table>
<thead>
<tr>
<th>Short <code>display</code></th>
<th>Full <code>display</code></th>
<th>Generated box</th>
</tr>
</thead>
<tbody>
<tr>
<td>block</td>
<td>block flow</td>
<td>block-level block container</td>
</tr>
<tr>
<td>flow-root</td>
<td>block flow-root</td>
<td>block-level block container w/ new Block Formatting Context</td>
</tr>
<tr>
<td>inline</td>
<td>inline flow</td>
<td>inline box</td>
</tr>
<tr>
<td>inline-block</td>
<td>inline flow-root</td>
<td>inline-level block container</td>
</tr>
<tr>
<td>flex</td>
<td>block flex</td>
<td>block-level flex container</td>
</tr>
<tr>
<td>inline-flex</td>
<td>inline flex</td>
<td>inline-level flex container</td>
</tr>
<tr>
<td>grid</td>
<td>block grid</td>
<td>block-level grid container</td>
</tr>
<tr>
<td>inline-grid</td>
<td>inline grid</td>
<td>inline-level grid container</td>
</tr>
<tr>
<td>table</td>
<td>block table</td>
<td>block-level table wrapper box</td>
</tr>
<tr>
<td>inline-table</td>
<td>inline table</td>
<td>inline-level table wrapper box</td>
</tr>
<tr>
<td>Short <code>display</code></td>
<td>Full <code>display</code></td>
<td>Generated box</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>none</td>
<td></td>
<td>subtree omitted from box tree</td>
</tr>
<tr>
<td>contents</td>
<td></td>
<td>element replaced by contents in box tree</td>
</tr>
<tr>
<td>run-in</td>
<td>run-in flow</td>
<td>run-in box (inline box with special box-tree munging rules)</td>
</tr>
<tr>
<td>list-item</td>
<td>list-item block flow</td>
<td>block box with additional marker box</td>
</tr>
<tr>
<td>inline-list-item</td>
<td>list-item inline flow</td>
<td>inline box with additional marker box</td>
</tr>
<tr>
<td>ruby</td>
<td>inline ruby</td>
<td>inline-level ruby container</td>
</tr>
<tr>
<td>block ruby</td>
<td>block ruby</td>
<td>block box containing ruby container</td>
</tr>
<tr>
<td>&lt;display-internal&gt;</td>
<td></td>
<td>layout-specific internal box (a bunch more table &amp; ruby stuff)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(like table-row-group, table-column, ruby-base-container...)</td>
</tr>
</tbody>
</table>
When I’m writing or reading this is the way the characters flow

inline direction
A character orientation
SYSTEMS LIKE LATIN

A

character orientation

inline direction

block direction
SYSTEMS LIKE ARABIC

A character orientation

inline direction

block direction
direction
.foo { direction: ltr; }

.foo { direction: rtl; }
direction

Summary

Set the `direction` CSS property to match the direction of the text. It is for languages written from right-to-left (like Hebrew or Arabic) text and `ltr` for other scripts. This is typically done as part of the document (e.g., using the `dir` attribute in HTML) rather than through direct use of CSS.

Browser compatibility

<table>
<thead>
<tr>
<th>Feature</th>
<th>Chrome</th>
<th>Firefox (Gecko)</th>
<th>Internet Explorer</th>
<th>Opera</th>
<th>Safari (WebKit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic support</td>
<td>2.0</td>
<td>1.0 (1.7 or earlier)</td>
<td>5.5</td>
<td>9.2</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Browser compatibility

<table>
<thead>
<tr>
<th>Feature</th>
<th>Android</th>
<th>Firefox Mobile (Gecko)</th>
<th>IE Phone</th>
<th>Opera Mobile</th>
<th>Safari Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic support</td>
<td>1.0</td>
<td>1.0 (1.0)</td>
<td>6</td>
<td>8</td>
<td>3.1</td>
</tr>
</tbody>
</table>
Authors should not use `direction`.

— The Writing Modes Spec
<!DOCTYPE html>
<html lang="ar" dir="rtl">
  <head> ... </head>
  <body> ... </body>
</html>
UNITED NATIONS

MAIN BODIES

Security Council

LATEST NEWS

Ban commands West African countries' firm decision to stand by Gambian President-elect

UN chief urges "adequate, neutral monitoring and direct observation on evacuations from the eastern districts" of the war-battered city of Aleppo

Security Council unanimously approves sending UN monitors to war-torn Aleppo

19 December 2016 - Alarmed at the "devastating" humanitarian crisis in Aleppo, where perhaps thousands of civilians remain trapped, the Security Council today requested the United Nations and other relevant institutions to carry out "adequate, neutral monitoring and direct observation on evacuations from the eastern districts" of the war-battered city of Aleppo.

IN FOCUS

International Migrants Day (18 December)

Throughout human history, migration has been a courageous expression of the individuals will to overcome adversity and to live a better life. Today, globalization, in tandem with advances in communications and transport, is putting the individual at the center of the debate. The United Nations has a responsibility to ensure that the rights of migrants are protected.

IN FOCUS

International Day of Commemoration and Prevention of Genocide (2 April)

International Mountain Day (11 December)

Wrapped up in the global debate on human rights, the 2004 UN resolution on the right of peoples to self-determination is being applied in a way that is often contradictory, in that it seeks to provide a form of protection for indigenous peoples that in many cases means preserving them from political or social advancement.

LATEST NEWS

Ban condemns assassination of Russian Ambassador to Turkey

Strengthen preventative measures for victims of forced labour. UN expert tells States
SYSTEMS LIKE LATIN

inline direction

block direction

<html dir="ltr">

SYSTEMS LIKE ARABIC

inline direction

block direction

<html dir="rtl">
English words

الكلمات العربية.
<p>English words in this paragraph.<bdi dir="rtl"> لكلمات. </bdi> Some more LTR words, same paragraph.</p>
Example: Writing Mode 1A
Set Direction to RTL

Around 1040, the first known movable type system was created in China by (1) Bi Sheng out of porcelain. Sheng used clay type, which broke easily, but Wang Zhen by 1298 had carved a more durable type from wood.
unicode-bidi
§2.2. Embeddings and Overrides: the ‘unicode-bidi’ property

<table>
<thead>
<tr>
<th>Name</th>
<th>‘unicode-bidi’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>normal</td>
</tr>
<tr>
<td>Initial</td>
<td>normal</td>
</tr>
<tr>
<td>Applies to</td>
<td>all elements, but see prose</td>
</tr>
<tr>
<td>Inherited</td>
<td>no</td>
</tr>
<tr>
<td>Percentages</td>
<td>n/a</td>
</tr>
<tr>
<td>Media</td>
<td>visual</td>
</tr>
<tr>
<td>Computed value</td>
<td>specified value</td>
</tr>
<tr>
<td>Canonical order</td>
<td>per grammar</td>
</tr>
<tr>
<td>Animation type</td>
<td>discrete</td>
</tr>
</tbody>
</table>

Because HTML UAs can turn off CSS styling, we recommend HTML authors to use the HTML dir attribute, <do> element, and appropriate distinction of text-level vs. grouping-level HTML element types to ensure correct bidirectional layout in the absence of a style sheet. Authors should not use ‘unicode-bidi’ in HTML documents.

Normally (i.e. when ‘unicode-bidi’ is ‘normal’) an inline box is transparent to the unicode bid algorithm; content is ordered as if the box’s boundaries were not there. Other values of the ‘unicode-bidi’ property cause inline boxes to create scopes within the algorithm, and to override the intrinsic directionality of text.
Authors should not use `unicode-bidi`.

— The Writing Modes Spec
A TALE OF OPPOSING DIRECTIONS:

BIDIRECTIONAL TEXT IN HTML AND CSS

Elika J. Etemad (fantasai)
Mozilla Project
W3C CSS Working Group
SYSTEMS LIKE LATIN

inline direction

block direction

<html dir="ltr">
<bdo dir="ltr">
<bdi dir="ltr">

SYSTEMS LIKE ARABIC

inline direction

block direction

<html dir="rtl">
<bdo dir="rtl">
<bdi dir="rtl">

<html dir="ltr">
<bdo dir="ltr">
<bdi dir="ltr">

<html dir="rtl">
<bdo dir="rtl">
<bdi dir="rtl">
SYSTEMS LIKE MONGOLIAN
SYSTEMS LIKE MONGOLIAN

inline direction

block direction
HAN-BASED SYSTEMS
*Chinese, Japanese, Korean & more
HAN-BASED SYSTEMS
*Chinese, Japanese, Korean & more
コレクションもセレブもクラシックに夢中
ブランドのDNAを最新鑑定。永久欠番モードの殿堂
この秋、グレイは新しいブラックになる。

ここだわりもハードコア!? 東京にインスパイアされた作品に注目。

-Barbara Hutton-

"世界で一番お金持ちだった女の子"。
こだわりもちハード・コア!? 東京にインスパイアされた作品に注目。
HAN-BASED SYSTEMS

*Chinese, Japanese, Korean & more
writing-mode
THREE OPTIONS FOR WRITING-MODE

writing-mode: horizontal-tb;

writing-mode: vertical-lr;

writing-mode: vertical-rl;
CSS writing-mode property

Property to define whether lines of text are laid out horizontally or vertically and the direction in which blocks progress.

Internet Explorer supports different values from an earlier version of the spec, which originated from SVG.
HAN-BASED SYSTEMS
*Chinese, Japanese, Korean & more

writing-mode: horizontal-tb;
writing-mode: vertical-rl;
Chinese language on the web

If you hadn't realised by now, I am Chinese. I was born in Malaysia, then studied and now work in Singapore. Like many others with similar backgrounds, we speak both English and Chinese with native fluency, plus a smattering of other languages and dialects here and there.

A couple of months back, I went down a rabbit hole while researching my article on CSS display and discovered the HTML ruby element. There was also an article by Ahmad Shadeed on CSS Writing Mode that was making its rounds on the intezwebs. And this got me thinking about Chinese typography on the web.

Again, this is one of those posts that grew from a cute little cub into a full fledged Giant Panda, sooo here's a content list. `_(˘˘)˘˘`

Table of contents

chenhuijing.com/blog/chinese-web-typography
文字的故事

記錄：演變 06/20/2014

人類和其他生物種族是在以自己獨特的方式和語言給予大自然和目的生命歷程留下一些印跡。當遠古時期的人類根據熊掌印開始追跡的時候，那便是最早的視覺交流與傳播。

法國發現的拉斯科岩洞中，古代人類的原始繪畫，大約西元前一萬五千至一一」

最早的視覺傳達方式基本都是利用圖形進行的。這是由烏爾王奉獻給其神的供品，公元前四千年左右。
文字的故事

最早的視覺傳達方式基本都是利用圖形(Visual Communication)的開發。

人類和其他生物物種總是在以自己獨特的方式追跡。當遠古時期的獵人根據熊掌印開始追跡，

記載：演變 05/20/2014
HAN-BASED SYSTEMS
*Chinese, Japanese, Korean & more
THE EXPERIMENTAL LAYOUT LAB

OF JEN SIMMONS

Includes examples for:
- Revolutionizing your page design
- Real time on the web
- Progressing our layouts
- Modern layouts: getting out of our rut

WORKSHOP EXAMPLES

Follow @JENSIMMONS
Sign up for LAYOUT LAND - a place for us to show off new ideas for layout.
h1:nth-child(2) {
    writing-mode: vertical-rl;
}

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REVOLUTIONIZE YOUR PAGE: REAL ART DIRECTION ON THE WEB
PROGRESSING OUR LAYOUTS
MODERN LAYOUTS: GETTING OUT OF OUR RUTS

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THE EXPERIMENTAL LAYOUT LAB OF JEN SIMMONS

Includes examples for revolutionize your page: real art direction on the web. Progressing our layouts: getting out of our ruts.

Follow @JENSIMMONS on Twitter for more as it happens. Sign up for LAYOUT LAND, a place for us to show off new ideas for layout.
h1:nth-child(2) {
  writing-mode: ???;
}

THE EXPERIMENTAL LAYOUT LAB

OF JEN SIMMONS

WORKSHOP EXAMPLES

Includes examples for:
- REVOLUTIONIZE YOUR PAGE
- REAL ART DIRECTION ON THE WEB
- PROGRESSING OUR LAYOUTS
- MODERN LAYOUTS:
  GETTING OUT OF OUR RUTS

Follow @JENSIMMONS on Twitter for more as it happens. Sign up for LAYOUT LAND, a place for us to show all new ideas for layout.
1) text flowing
2) like this

writing-mode: vertical-rl;
writing-mode: vertical-lr;

writing-mode: vertical-rl;

1) text flowing
2) like this

1) text flowing
2) like this

NOPE!
SYSTEMS LIKE MONGOLIAN

1) text flowing
2) like this

HAN-BASED SYSTEMS

1) text flowing
2) like this
SYSTEMS LIKE MONGOLIAN
SYSTEMS LIKE MONGOLIAN

1) text flowing

2) like this

HAN-BASED SYSTEMS

1) text flowing

2) like this
section {
    writing-mode: vertical-rl;
}

(This triggers text-orientation: mixed as the default.)

Example: Writing Mode 1A
Set Writing Mode to Vertical-

(1) Around 1040, the first known movable type script by Bi Sheng used clay type.

(2) Copper movable type printing originated in China during the Southern Song dynasty. It was used in large-scale printing of poems, songs, and other literature.

(3) In the 1370s, the four famous masters of the Southern Song Dynasty used wooden movable type printing.

Dynasty:

Southern Song Dynasty. Movable type spread to Korea in the 12th century.
Example: Writing Mode 1A
Set Writing Mode to vertical-Lr;

Wang Zhen by 1298 had carved a more durable type by Bi Sheng out of porcelain. Sheng used clay type
(1) Around 1040, the first known movable type syst.

Northern Song dynasty. Movable type spread to Korea
(2) Copper movable type printing originated in China
12th century. It was used in large-scale printing of p

bronze. The Jikji, published in 1377, is the earliest k
(3) Around 1230, Koreans invented a metal type mo

modern movable type system in Europe.
(4) Around 1450, Johannes Gutenberg introduced w
THREE OPTIONS FOR WRITING-MODE

writing-mode: horizontal-tb;

writing-mode: vertical-lr;

writing-mode: vertical-rl;

creates a vertical typographic mode
TWO MORE (FUTURE) OPTIONS FOR WRITING-MODE

writing-mode: sideways-lr;

creates a horizontal typographic mode

writing-mode: sideways-rl;
Example: Writing Mode 1A
Example: Writing Mode 1A
writing-mode:
vertical-rl;

writing-mode:
sideways-rl;

文

A
writing-mode: vertical-lr;

writing-mode: sideways-lr;
THREE OPTIONS FOR WRITING-MODE

writing-mode:
horizontal-tb;

writing-mode:
vertical-lr;

creates a vertical typographic mode.

writing-mode:
vertical-rl;

inline direction

toggle w/ dir

block direction

inline direction

direction block

inline direction
My Cool Website
My Cool Website

how?
My Cool Website

writing-mode: vertical-rl;
transform: rotate(180deg);
text-orientation: sideways;
(needed to fix punctuation / underlining)
text-align: right;
text-orientation
HAN-LIKE SYSTEMS
THREE OPTIONS FOR TEXT-ORIENTATION

text-orientation: mixed;
text-orientation: upright;
text-orientation: sideways;

options for vertical writing modes
The CSS `text-orientation` property specifies the orientation of text within a line. Current values only have an effect in vertical typographic modes (defined with the `writing-mode` property).

<table>
<thead>
<tr>
<th></th>
<th>IE</th>
<th>Edge</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Safari</th>
<th>Opera</th>
<th>iOS Safari</th>
<th>Opera Mini</th>
<th>Android Browser</th>
<th>Chrome for Android</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current aligned</td>
<td>14</td>
<td>52</td>
<td>57</td>
<td>10.1</td>
<td>44</td>
<td>10.2</td>
<td>45</td>
<td>all</td>
<td>56</td>
<td>57</td>
</tr>
<tr>
<td>Usage relative</td>
<td>11</td>
<td>53</td>
<td>58</td>
<td>10.3</td>
<td>44</td>
<td>10.3</td>
<td>45</td>
<td>all</td>
<td>56</td>
<td>57</td>
</tr>
<tr>
<td>Date relative</td>
<td></td>
<td></td>
<td>TP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: No notes

Known issues: 0

Resources: 2

Feedback:
<table>
<thead>
<tr>
<th>Browser</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edge</td>
<td>41</td>
</tr>
<tr>
<td>Firefox</td>
<td>46</td>
</tr>
<tr>
<td>Chrome</td>
<td>32</td>
</tr>
<tr>
<td>Safari</td>
<td>43</td>
</tr>
<tr>
<td>Opera</td>
<td>5</td>
</tr>
<tr>
<td>iOS Safari</td>
<td>33</td>
</tr>
<tr>
<td>Opera Mini</td>
<td>34</td>
</tr>
<tr>
<td>Android Browser</td>
<td>4.3</td>
</tr>
<tr>
<td>BlackBerry Browser</td>
<td>2.1</td>
</tr>
<tr>
<td>Opera Mobile</td>
<td>6.1</td>
</tr>
<tr>
<td>Chrome for Android</td>
<td>6.1</td>
</tr>
<tr>
<td>Firefox for Android</td>
<td>7.1</td>
</tr>
<tr>
<td>UC Browser for Android</td>
<td>4.1</td>
</tr>
<tr>
<td>Samsung Internet</td>
<td>57</td>
</tr>
<tr>
<td>QQ Browser</td>
<td>52</td>
</tr>
<tr>
<td>Baidu Browser</td>
<td>10</td>
</tr>
</tbody>
</table>

Notes: 
- Known issues (0)
- Resources (2)
- Feedback
Example: Writing Mode 1A
section {
  writing-mode: vertical-lr;
  text-orientation: upright;
}

Example: Writing Mode 1A
writing-mode: vertical-rl;

creates a *vertical* typographic mode

text-orientation: mixed;

writing-mode: sideways-rl;

creates a *horizontal* typographic mode
My Cool Website

writing-mode: vertical-rl;
transform: rotate(180deg);
text-orientation: sideways;
(needed to fix punctuation / underlining)
text-align: right;
h1 {
  writing-mode: vertical-rl;
}

Example: Writing Mode 4A
Example: Writing Mode 4B
h1 {
  writing-mode: vertical-rl;
  text-orientation: upright;
  text-transform: uppercase;
}

Example: Writing Mode 4C
Example: Writing Mode 4D
BUNGEE!

FONTS FOR VERTICAL AND MULTICOLOR TYPOGRAPHY
MADE BY FEW

The conference for makers of the web.
<main>
  <h1>
    <span>Made</span> by <span>Few</span>
  </h1>
</main>

Example: Writing Mode 3A
Example: Writing Mode 3A
Example: Writing Mode 3A
SYSTEMS LIKE LATIN
SYSTEMS LIKE ARABIC
★フォーグを彩ったスタイルアイコン列伝。　
7回の結婚を繰り返しても、孤独に生きた、
“世界で一番お金持ちだった女の子”。

Text: Rinko Kawakami
MONGOLIAN-LIKE SYSTEMS
dir
writing-mode
text-orientation
<html dir="ltr">
  <bdi dir="ltr">
  </bdi>
</html>

<html dir="rtl">
  <bdi dir="rtl">
  </bdi>
</html>
THREE OPTIONS FOR WRITING-MODE

writing-mode:
horizontal-tb;

writing-mode:
vertical-lr;

creates a vertical typographic mode

writing-mode:
vertical-rl;
TWO MORE (FUTURE) OPTIONS FOR WRITING-MODE

writing-mode: sideways-lr;

writing-mode: sideways-rl;

creates a horizontal typographic mode
THREE OPTIONS FOR TEXT-ORIENTATION

text-orientation: mixed;
text-orientation: upright;
text-orientation: sideways;

options for vertical writing modes
Logical Properties
margin-block-start: 1rem;
padding-inline-end: 1rem;
border-block-end: 1px solid black;
text-align: start;
float: inline-start;
# CSS Logical Properties

Use start/end properties that depend on LTR or RTL writing direction instead of left/right.

<table>
<thead>
<tr>
<th>Browser</th>
<th>IE</th>
<th>Edge</th>
<th>Firefox</th>
<th>Chrome</th>
<th>Safari</th>
<th>Opera</th>
<th>iOS Safari</th>
<th>Opera Mini</th>
<th>Android Browser</th>
<th>Chrome for Android</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Known issues (0), Resources (5), Feedback

MS Edge status: Under Consideration

2 Like #1 but also supports *-before and *-end for *-block-start and *-block-end properties as well as start and end values for text-align.
CSS Logical Properties and Values Level 1

W3C First Public Working Draft, 16 May 2017

This version:
https://www.w3.org/TR/2017WD-css-logical-1-20170516/

Latest published version:
https://www.w3.org/TR/css-logical/

Editor's Draft:
https://drafts.csswg.org/css-logical/

Issue Tracking:
GitHub Issues

Editors:
Rossen Atanassov (Microsoft)
Eika J. Etemad / fantasai (Invited Expert)

Abstract

This module introduces logical properties and values that provide the author with the ability to control layout through logical, rather than physical, direction and dimension mappings. The module defines logical properties and values for the features defined in [CSS21]. These properties are writing-mode relative equivalents of their corresponding physical properties.
justify-content

- flex-start
- flex-end
- center
- space-between
- space-around

This defines the alignment along the main axis. It helps distribute extra free space left over when either all the flex items on a line are inflexible, or are flexible but have reached their maximum size. It also exerts some control over the alignment of items when they overflow the line.

align-content

- flex-start
- flex-end
- center
- stretch
- space-between
- space-around

This aligns a flex container's lines within when there is extra space in the cross-axis, similar to how justify-content aligns individual items within the main-axis.

align-items

- flex-start
- flex-end
- center
- stretch
- baseline
- text{text}

This defines the default behaviour for how flex items are laid out along the cross axis on the current line. Think of it as the justify-content version for the cross-axis (perpendicular to the main-axis).

from CSS Tricks’ Complete Guide to Flexbox
<table>
<thead>
<tr>
<th>Common</th>
<th>Axis</th>
<th>Aligns</th>
<th>Applies to</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘justify-content’</td>
<td>main/inline</td>
<td>content within element</td>
<td>block containers, flex containers, and grid containers</td>
</tr>
<tr>
<td>‘align-content’</td>
<td>cross/block</td>
<td>(effectively adjusts padding)</td>
<td>block containers, flex containers, and grid containers</td>
</tr>
<tr>
<td>‘justify-items’</td>
<td>inline</td>
<td>items inside element</td>
<td>grid containers</td>
</tr>
<tr>
<td>‘align-items’</td>
<td>cross/block</td>
<td>(controls child items’ ‘justify-self: auto’)</td>
<td>flex containers and grid containers</td>
</tr>
<tr>
<td>‘justify-self’</td>
<td>inline</td>
<td>element within parent</td>
<td>block-level elements and grid items</td>
</tr>
<tr>
<td>‘align-self’</td>
<td>cross/block</td>
<td>(effectively adjusts margins)</td>
<td>flex items and grid items</td>
</tr>
</tbody>
</table>
Justify vs. Align
Align

start  stretch  center  stretch  end
Align
Justify

start  center  end

stretch  stretch
Justify
cross axis

cross axis

main axis

flex-direction: row;
align

flex-direction: column;
Grid

Align

Justify

writing-mode: horizontal-tb;
grid-auto-flow: row;
writing-mode: horizontal-tb;
grid-auto-flow: column;
THANKS!

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