



FRONT-END FORMATIONS

Level 1 - Overview & Updates



TABLE OF CONTENTS

- HTML5 Overview
- CSS3 Overview
- Updated HTML5 Elements
- Existing HTML5 Tag Updates

LEVEL 1



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HTML5 OVERVIEW

HTML5 is the new standard, which includes:

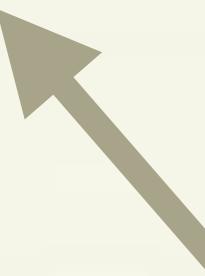
- New HTML elements and attributes
- Full CSS3 Support
- Video and audio elements
- 2D/3D graphics
- Local storage
- Local SQL database



HTML5 OVERVIEW

HTML5 is the new standard, which includes:

- New HTML elements and attributes
- Full CSS3 Support
- Video and audio elements
- 2D/3D graphics
- Local storage
- Local SQL database



In this course, we'll focus on
these areas specifically.



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CSS3 OVERVIEW

CSS3 is the latest
standard of CSS.



CSS3 OVERVIEW

In this course, we'll cover:

- Border radius
- Box shadow, text shadow
- Transitions, transforms
- Gradients
- Multiple backgrounds
- Font face



CSS3 OVERVIEW

In this course, we'll cover:

- Border radius
- Box shadow, text shadow
- Transitions, transforms
- Gradients
- Multiple backgrounds
- Font face

These features predate CSS3,
but we'll still cover them, as
they're important components
of modern CSS.



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UPDATED HTML5 ELEMENTS

- Doctype
- Meta declaration
- Script tag
- Link tag



DOCTYPE

HTML 4.01 Strict

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



DOCTYPE

HTML 4.01 Strict

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

HTML 4.01 Transitional

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



DOCTYPE

HTML 4.01 Strict

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

HTML 4.01 Transitional

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

HTML 4.01 Frameset

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

1.3 UPDATED HTML5 ELEMENTS



DOCTYPE

The new HTML5 doctype:

```
<!DOCTYPE html>
```



DOCTYPE

The new HTML5 doctype:

```
<!DOCTYPE html>
```



This is the HTML5 icon, and it signifies the current code being shown is the updated HTML5 version.



META DECLARATION

The **meta** declaration in HTML4:

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



META DECLARATION

The **meta** declaration in HTML4:

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

```
<meta charset="UTF-8">
```



SCRIPT TAG

In HTML 4.01, we specify the `type` attribute as `text/javascript`:

```
<script type="text/javascript" src="file.js"></script>
```



SCRIPT TAG

In HTML 4.01, we specify the `type` attribute as `text/javascript`:

```
<script type="text/javascript" src="file.js"></script>
```

```
<script src="file.js"></script>
```



SCRIPT TAG

In HTML 4.01, we specify the `type` attribute as `text/javascript`:

```
<script type="text/javascript" src="file.js"></script>
```

```
<script src="file.js"></script>
```



In HTML5, the `type` attribute is not needed, as the browser will infer `javascript` as the type.



LINK TAG

The **link** tag in HTML 4.01:

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



LINK TAG

The **link** tag in HTML 4.01:

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

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



Again, in HTML5, we don't need the
type attribute on the **link** tag.



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EXISTING HTML5 TAG UPDATES

Traditionally presentational tags, the **i**, **b**, **em**, and **strong** tags have been given new semantic meanings.



EXISTING HTML5 TAG UPDATES

In HTML4, the **i** and **b** tags were font style elements:

- The **i** tag rendered an italic font style
- The **b** tag rendered a bold font style



EXISTING HTML5 TAG UPDATES

In HTML5, these tags have new meanings:

- The **i** tag represents text in an “alternate voice” or “mood”
- The **b** tag represents “stylistically offset” text



EXISTING HTML5 TAG UPDATES

Some example uses for the **i** tag:

- Taxonomic designation
- Technical term
- Idiomatic phrase from another language
- Transliteration
- A thought
- Ship name in Western texts



EXISTING HTML5 TAG UPDATES

Example usage of the **i** tag:

```
<p><i>I hope this works</i>, he thought.</p>
```



EXISTING HTML5 TAG UPDATES

Example usage of the **i** tag:

```
<p><i>I hope this works</i>, he thought.</p>
```



Text in an “alternate voice”
or “mood.”



EXISTING HTML5 TAG UPDATES

Some example uses for the **b** tag:

- Key words in a document abstract
- Product names in a review
- Actionable words in interactive text-driven software
- Article lead



EXISTING HTML5 TAG UPDATES

Example usage of the **b** tag:

```
<p><b class="lead">The event takes place this upcoming Saturday, and  
over 3,000 people have already registered.</b></p>
```



EXISTING HTML5 TAG UPDATES

Example usage of the **b** tag:

```
<p><b class="lead">The event takes place this upcoming Saturday, and  
over 3,000 people have already registered.</b></p>
```



Article lead that will be
“stylistically offset.”



EXISTING HTML5 TAG UPDATES

In HTML4:

- The **em** tag meant emphasis
- The **strong** tag meant strong emphasis



EXISTING HTML5 TAG UPDATES

In HTML5, the **em** and **strong** tags have new meanings:

- The **em** tag now means “stress emphasis”
- The **strong** tag now means “strong importance”



EXISTING HTML5 TAG UPDATES

Example usage of the `em` tag:

```
<p>Make sure to sign up <em>before</em> the day of the event, September  
16, 2013.</p>
```



EXISTING HTML5 TAG UPDATES

Example usage of the `em` tag:

```
<p>Make sure to sign up <em>before</em> the day of the event, September  
16, 2013.</p>
```



Here we're giving “*stress emphasis*”
to “before.”



EXISTING HTML5 TAG UPDATES

Example usage of the **strong** tag:

```
<p>Make sure to sign up <em>before</em> the day of the event,  
<strong>September 16, 2013</strong>.</p>
```



EXISTING HTML5 TAG UPDATES

Example usage of the **strong** tag:

```
<p>Make sure to sign up <em>before</em> the day of the event,  
<strong>September 16, 2013</strong>.</p>
```



Here we're giving “**strong importance**”
to the date of the event.





FRONT-END FORMATIONS





FRONT-END FORMATIONS

Level 2 - HTML5 Elements



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- Header
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- Aside
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- Figure/figcaption
- Time

LEVEL 2



Art Gallery

The best art in all of the world

Search



Home

Cart

Logout

The Gallery



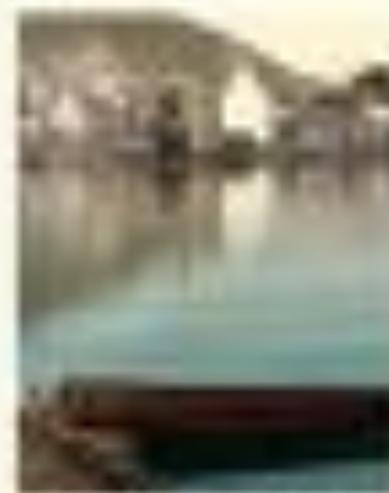
Impressionistic
Painting of a
City Skyline



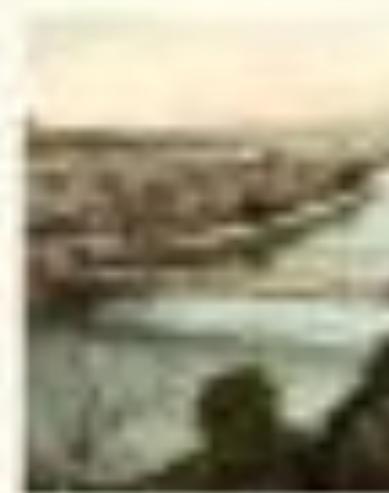
Impressionistic
Painting of a
Bridge and Boat



Impressionistic
Painting of a
Church Spire



Impressionistic
Painting of a
Landscape



Impressionistic
Painting of a
Bridge and Boat



Impressionistic
Painting of a
City Skyline



100+

44

Recent Items
Recently Added
Recently Edited

Albums

You're not alone in this.
Many others have created
their own albums. See them.

New Items

Followers

Sign up and get started
with your art.

Give your art



TABLE OF CONTENTS

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LEVEL 2



SECTION

“ The **section** element represents a generic document or application section.

- W3C SPECIFICATION

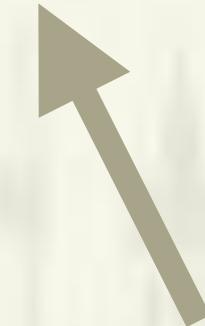


SECTION

“

The **section** element represents a generic document or application section.

- W3C SPECIFICATION



That sounds a lot like the definition for a **div**, doesn't it?



SECTION VS. DIV

A **div** has no semantic meaning,
but the **section** element does.

It's used for grouping together
thematically related content.



SECTION VS. DIV

“ You might want to replace some of your **div** elements with **section** elements, but remember to always ask yourself, “Is all of the content related?”

- JEREMY KEITH IN “HTML5 FOR WEB DESIGNERS”



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Home

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Logout

The Gallery



Impressionistic

Impressionistic



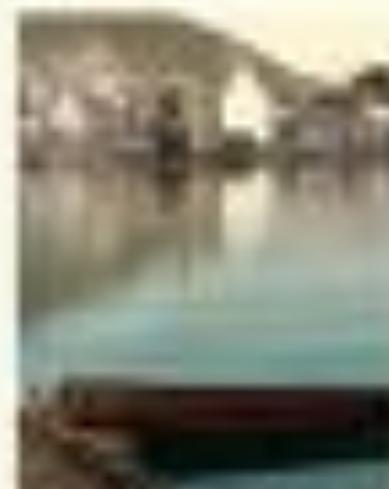
Impressionistic

Impressionistic



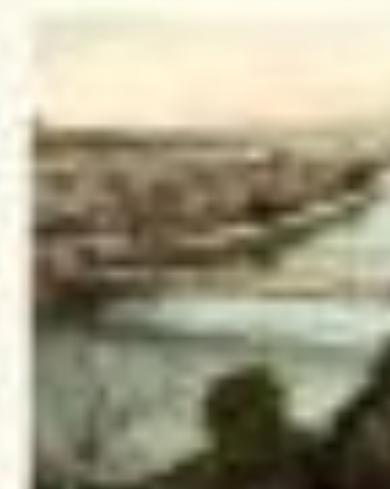
Impressionistic

Impressionistic



Impressionistic

Impressionistic



Impressionistic

Impressionistic



Impressionistic

Impressionistic

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44

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You're not alone in the dark.
Many others have found success
with our courses. See what they say.

Start Learning

Feedback

Sign up for our newsletter
and get updates

Give your review





A grouping of related content that contains a natural heading.

SECTION

Example usage of the **section** tag:

```
<div class="section">
  <h2>The Gallery</h2>
  <!-- ... -->
</div>
```



SECTION

Example usage of the **section** tag:

```
<div class="section">
  <h2>The Gallery</h2>
  <!-- ... -->
</div>
```

```
<section>
  <h2>The Gallery</h2>
  <!-- ... -->
</section>
```



THE DOCUMENT OUTLINE

The document outline
produces an outline summary
of an HTML document based
on how it is marked up.



THE DOCUMENT OUTLINE

The following elements have their own self-contained outline:

- Article
- Aside
- Nav
- Section



THE DOCUMENT OUTLINE

Take the following example:

```
<h1>This is the title of the page.</h1>
<section>
  <h2>This is the title of a sub-section.</h2>
</section>
```



THE DOCUMENT OUTLINE

Take the following example:

```
<h1>This is the title of the page.</h1>
<section>
  <h2>This is the title of a sub-section.</h2>
</section>
```

1. This is the title of the page.
1.1 This is the title of a sub-section.

2.1 SECTION

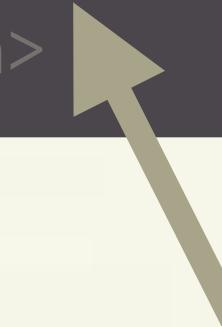
Example output of an
HTML document outline.



THE DOCUMENT OUTLINE

Take the following example:

```
<h1>This is the title of the page.</h1>
<section>
  <h1>This is the title of a sub-section.</h1>
</section>
```



We can use an **h1** inside of the **section** tag, and the document outline is unchanged.



THE DOCUMENT OUTLINE

Take the following example:

```
<h1>This is the title of the page.</h1>
<section>
  <h1>This is the title of a sub-section.</h1>
</section>
```

1. This is the title of the page.
1.1 This is the title of a sub-section.

2.1 SECTION

we get the same outline
as before.



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TABLE OF CONTENTS

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LEVEL 2



HEADER

“

A group of introductory
or navigational aids.

- W3C SPECIFICATION



HEADER

- There can be many different **headers** on a page
- Usually appears at the top of a document or section, but is defined by its content rather than its position



Art Gallery

The best art in all of the world

Search



Home

Artist

Logout

The Gallery



Impressionistic

Impressionistic



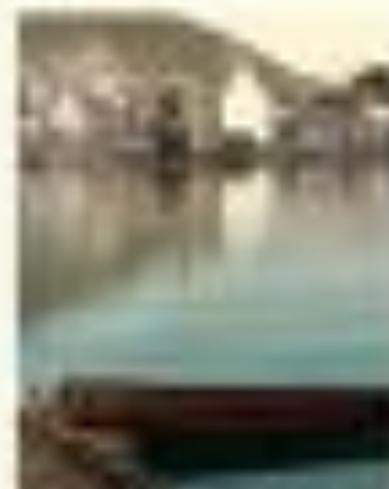
Impressionistic

Impressionistic



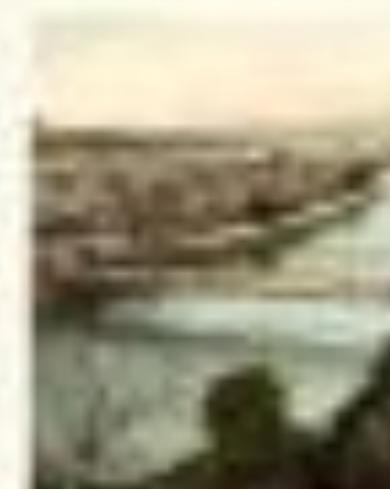
Impressionistic

Impressionistic



Impressionistic

Impressionistic



Impressionistic

Impressionistic



Impressionistic

Impressionistic

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You're not alone in the room
There's others I've never seen
They're here - We're all alone

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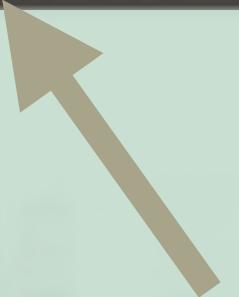


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Introductory content.



Navigational aids.



HEADER

Example usage of the `header` tag:

```
<div class="header">  
  <!-- ... -->  
</div>
```



HEADER

Example usage of the `header` tag:

```
<div class="header">  
  <!-- ... -->  
</div>
```

```
<header>  
  <!-- ... -->  
</header>
```



HEADER

Example usage of the `header` tag within a `section`:

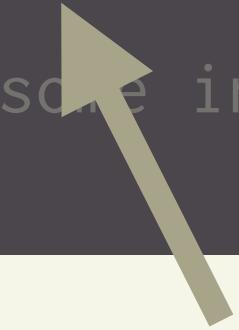
```
<section>
  <header>
    <h1>The heading of the section</h1>
    <p>This is content in the header.</p>
  </header>
  <p>This is some information within the section.</p>
</section>
```



HEADER

Example usage of the **header** tag within a **section**:

```
<section>
  <header>
    <h1>The heading of the section</h1>
    <p>This is content in the header.</p>
  </header>
  <p>This is some information within the section.</p>
</section>
```



The **header** for the **section**.



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FOOTER

“

The **footer** element represents a footer for its nearest ancestor sectioning content or sectioning root element.

- W3C SPECIFICATION



FOOTER

Like the header, the footer element is *not* position-dependent. It should describe the content it is contained within.





Battery Avenue

Download or Buy Now



Battery Avenue

Download or Buy Now



Battery Avenue

Download or Buy Now



Battery Avenue

Download or Buy Now



Battery Avenue

Download or Buy Now



Battery Avenue

Download or Buy Now



Battery Avenue

Download or Buy Now



Battery Avenue

Download or Buy Now



Battery Avenue

High Quality
Printed on
Metal

Start your order...

A footer for the entire site.



FOOTER

Example usage of the `footer` tag:

```
<div class="footer">  
  <!-- ... -->  
</div>
```



FOOTER

Example usage of the **footer** tag:

```
<div class="footer">  
  <!-- ... -->  
</div>
```

```
<footer>  
  <!-- ... -->  
</footer>
```



FOOTER

Example usage of the **footer** tag within a **section** tag:

```
<section>
  <header>
    <h1>The heading of the section</h1>
    <p>This is content in the header.</p>
  </header>
  <p>This is some information within the section.</p>
  <footer>
    <p>By "Author Name"</p>
  </footer>
</section>
```



FOOTER

Example usage of the **footer** tag within a **section** tag:

```
<section>
  <header>
    <h1>The heading of the section</h1>
    <p>This is content in the header.</p>
  </header>
  <p>This is some information within the section.</p>
  <footer>
    <p>By "Author Name"</p>
  </footer>
</section>
```



A **footer** for the **section** element.



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ASIDE

Initially, the HTML5 spec defined the **aside** element as being “tangentially related to the content surrounding it.”



ASIDE

The **aside** now covers various contexts:

- When used **within** an **article** element, the **aside** contents should be related to that particular **article** it is contained within.
- When used **outside** an **article** element, the **aside** contents should be specifically related to the site.



ASIDE

The **aside** now covers various contexts:

- When used **within** an **article** element, the **aside** contents should be related to that particular **article** it is contained within.
- When used **outside** an **article** element, the **aside** contents should be specifically related to the site.



This closely resembles the definition of a sidebar for a site.



ASIDE

An **aside** element is appropriate when it is used to represent content that is *not* the primary focus of an article or page, but it *is* still related to the **article** or page.



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Home

Artist

Logout

The Gallery



Impressionist Fine

Painted in 1880



Impressionist Fine

Painted in 1880



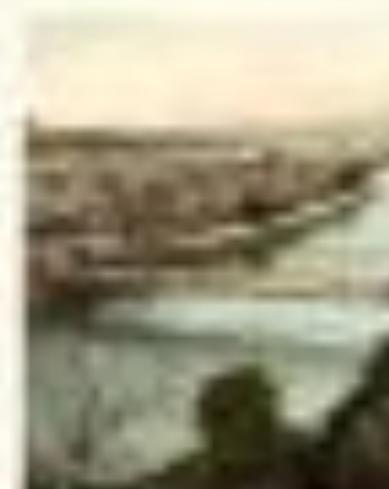
Impressionist Fine

Painted in 1880



Impressionist Fine

Painted in 1880



Impressionist Fine

Painted in 1880



Impressionist Fine

Painted in 1880

10

20

Recent Items

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20

You're not alone in the room
There's others I've never seen
They're here... They're everywhere

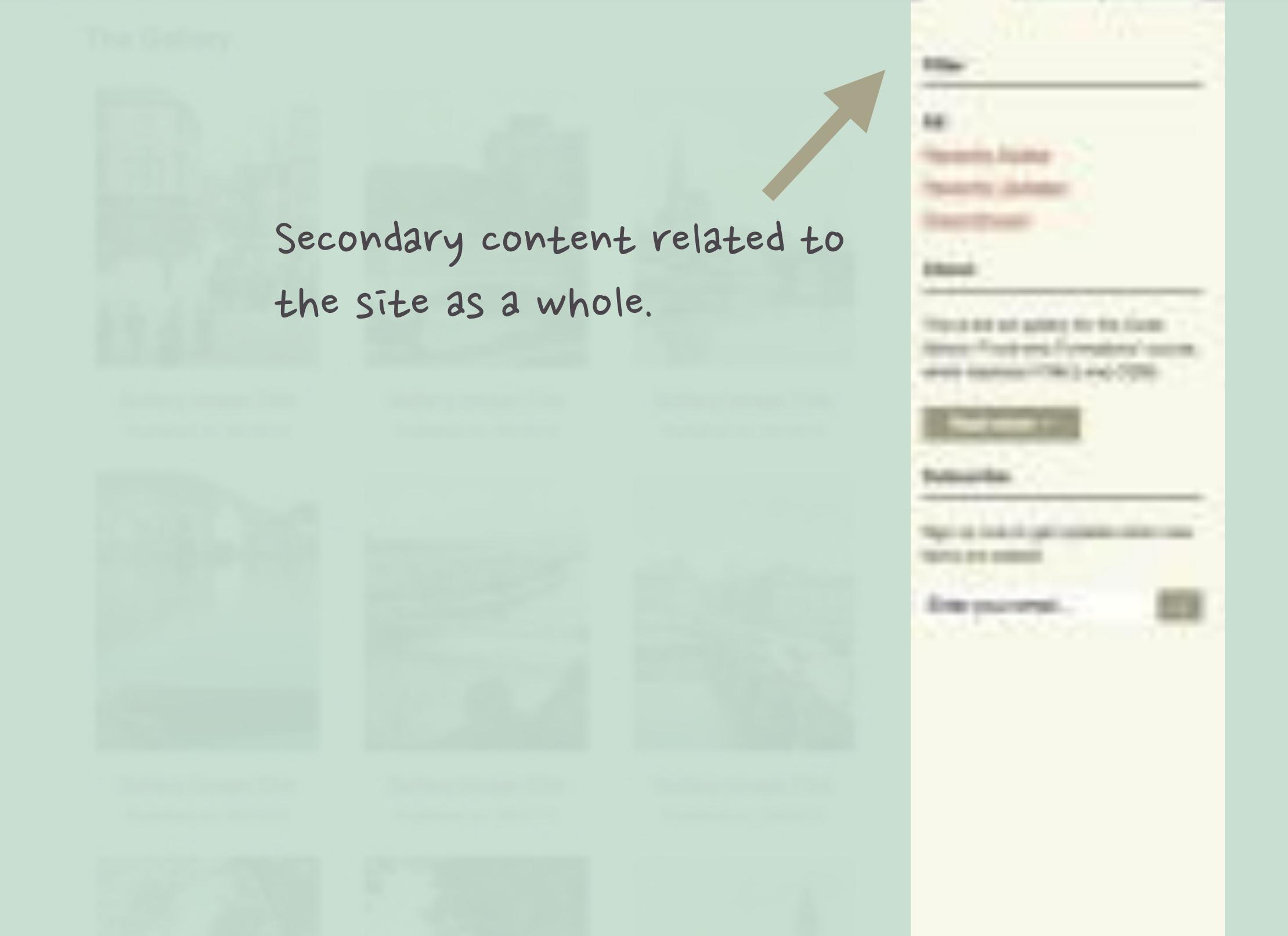
View Details

Feedback

Sign up for our newsletter
We'll keep you posted

Sign up now





Secondary content related to
the site as a whole.

ASIDE

Example usage of the aside tag:

```
<div class="sidebar">  
  <!-- ... -->  
</div>
```



ASIDE

Example usage of the aside tag:

```
<div class="sidebar">  
  <!-- ... -->  
</div>
```

```
<aside>  
  <!-- ... -->  
</aside>
```



ASIDE

Example usage of the aside tag within a section:

```
<section>
  <header>
    <h1>The heading of the section</h1>
    <p>This is content in the header.</p>
  </header>
  <p>This is some information within the section.</p>
  <aside>
    <p>Some secondary information.</p>
  </aside>
  <footer>
    <p>By "Author Name"</p>
  </footer>
</section>
```



ASIDE

Example usage of the aside tag within a section:

```
<section>
  <header>
    <h1>The heading of the section</h1>
    <p>This is content in the header.</p>
  </header>
  <p>This is some information within the section.</p>
  <aside>
    <p>Some secondary information.</p>
  </aside>
  <footer>
    <p>By "Author Name"</p>
  </footer>
</section>
```



An aside for the
section element.



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NAV

“ The **nav** element represents a section of a page that links to other pages or to parts within the page: a section with navigation links.

- W3C SPECIFICATION



NAV

The **nav** element is intended for “major navigation.”



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Home

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Album

The Gallery



Impressionistic

Impressionistic



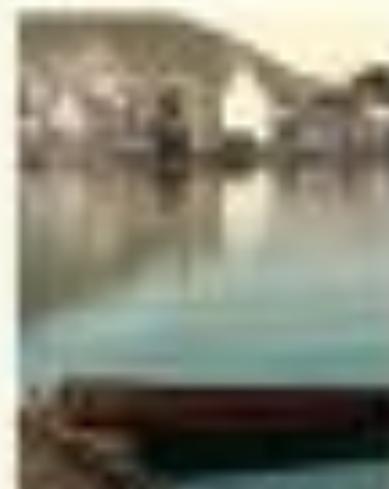
Impressionistic

Impressionistic



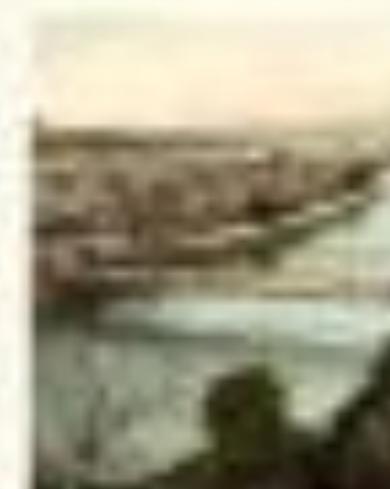
Impressionistic

Impressionistic



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with our courses. See what they say.

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Sign up for our newsletter
and never miss an update.

Like us on Facebook

Follow us on Twitter

Follow us on LinkedIn



Major navigation for
the site.

NAV

Example usage of the `nav` tag:

```
<ul class="nav">  
  <!-- ... -->  
</ul>
```



NAV

Example usage of the **nav** tag:

```
<ul class="nav">  
  <!-- ... -->  
</ul>
```

```
<nav>  
  <ul>  
    <!-- ... -->  
  </ul>  
</nav>
```





FRONT-END FORMATIONS



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ARTICLE

“ The **article** element represents a complete, or self-contained, composition in a document, page, application, or site and that is, in principle, independently distributable or reusable, e.g. in syndication.

- W3C SPECIFICATION



ARTICLE

The **article** element is another type of **section**. It is used for self-contained related content.



ARTICLE

Determining if a particular piece of content is “self-contained:”

Ask yourself if you would syndicate the content in an RSS or Atom feed.



ARTICLE

Some uses for the **article** tag:

- A blog post
- A news story
- A comment on a post
- A review



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Home

Artist

Galleries

The Gallery



Impressionistic

Paintings



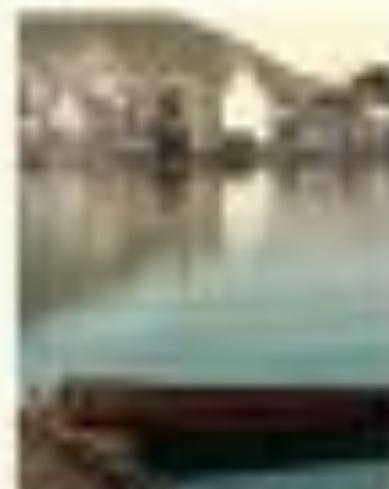
Impressionistic

Paintings



Impressionistic

Paintings



Impressionistic

Paintings



Impressionistic

Paintings



Impressionistic

Paintings



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Syndicated content for
each new gallery item.

ARTICLE

Example usage of the `article` tag:

```
<div class="article">  
  <!-- ... -->  
</div>
```



ARTICLE

Example usage of the `article` tag:

```
<div class="article">  
  <!-- ... -->  
</div>
```

```
<article>  
  <!-- ... -->  
</article>
```



TABLE OF CONTENTS

- Section
- Header
- Footer
- Aside
- Nav
- Article
- Main
- Figure/figcaption
- Time

LEVEL 2



TABLE OF CONTENTS

- Section
- Header
- Footer
- Aside
- Nav
- Article
- Main
- Figure/figcaption
- Time

LEVEL 2



MAIN

“ The **main** element represents the main content of the body of a document or application.

- W3C SPECIFICATION



MAIN

“ The **main** content area consists of content that is directly related to or expands upon the central topic of a document or central functionality of an application.

- W3C SPECIFICATION



MAIN

- *Do not include more than one main element in a document*
- *Do not include the main element inside of an article, aside, footer, header, or nav element*



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The Gallery



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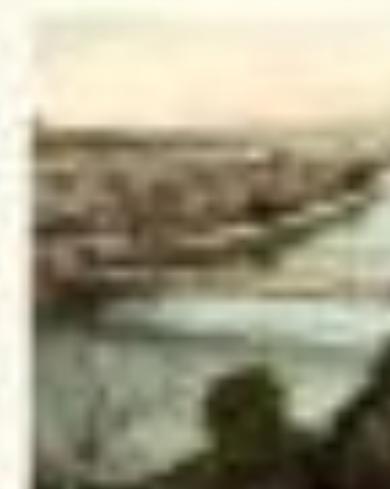
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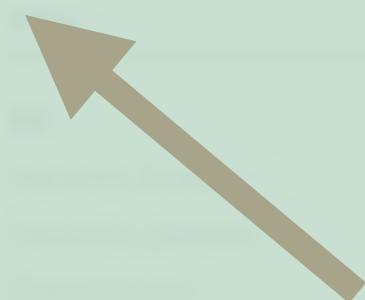
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The main content of
the document.

The Gallery



[Gallery image 1](#)
Thumbnail description



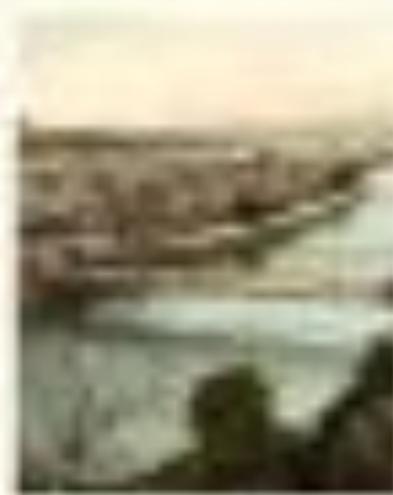
[Gallery image 2](#)
Thumbnail description



[Gallery image 3](#)
Thumbnail description



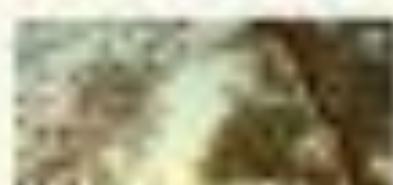
[Gallery image 4](#)
Thumbnail description



[Gallery image 5](#)
Thumbnail description



[Gallery image 6](#)
Thumbnail description



MAIN

Example usage of the `main` tag:

```
<div class="main">  
  <!-- ... -->  
</div>
```



MAIN

Example usage of the `main` tag:

```
<div class="main">  
  <!-- ... -->  
</div>
```

```
<main>  
  <!-- ... -->  
</main>
```



TABLE OF CONTENTS

- Section
- Header
- Footer
- Aside
- Nav
- Article
- Main
- Figure/figcaption
- Time

LEVEL 2



TABLE OF CONTENTS

- Section
- Header
- Footer
- Aside
- Nav
- Article
- Main
- Figure/figcaption
- Time

LEVEL 2



FIGURE

“

The **figure** element represents a unit of content, optionally with a caption, that is self-contained, that is typically referenced as a single unit from the main flow of the document, and that can be moved away from the main flow of the document without affecting the document's meaning.

- W3C SPECIFICATION



FIGURE

A common use of the `figure` tag is for an image within an `article`:

```
<figure>
  
</figure>
```



FIGCAPTION

“ The **figcaption** element represents a caption or legend for a figure.

- W3C SPECIFICATION



FIGCAPTION

Example usage of the `figcaption` tag:

```
<figure>
  
  <figcaption>This is a caption for the picture.</figcaption>
</figure>
```



FIGCAPTION

Example usage of the **figcaption** tag:

```
<figure>
  
  <figcaption>This is a caption for the picture.</figcaption>
</figure>
```



The caption for the picture.



FIGURE & FIGCAPTION

Example output of the `figure` and `figcaption` elements:



This is a caption for the picture.



TABLE OF CONTENTS

- Section
- Header
- Footer
- Aside
- Nav
- Article
- Main
- Figure/figcaption
- Time

LEVEL 2



TABLE OF CONTENTS

- Section
- Header
- Footer
- Aside
- Nav
- Article
- Main
- Figure/figcaption
- Time

LEVEL 2



TIME

“ The **time** element represents either a time on a 24 hour clock, or a precise date in the proleptic Gregorian calendar, optionally with a time and a time-zone offset.

- W3C SPECIFICATION



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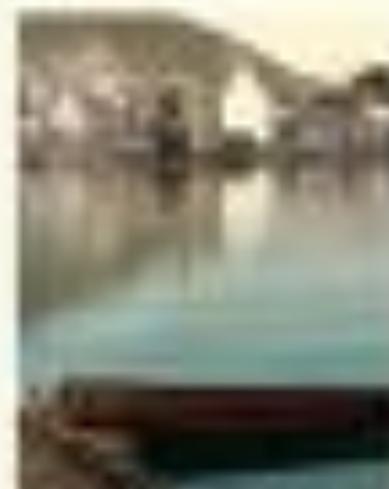
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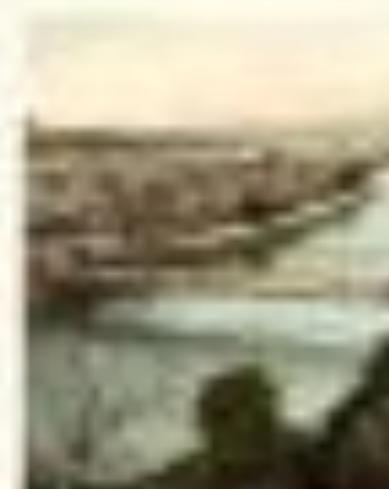
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Published on: 2019-01-01



The published on date can
use a **time** element.

TIME

Example usage of the `time` tag:

```
<time>2013-09-16</time>
```



TIME

Example usage of the `time` tag:

```
<time>2013-09-16</time>
```

We want the format “mm/dd/yyyy”:

```
<time>09/16/2013</time>
```



TIME

Example usage of the `time` tag:

```
<time>2013-09-16</time>
```

We use the `datetime` attribute to get our desired format:

```
<time datetime="2013-09-16">09/16/2013</time>
```



TIME

Example usage of the `time` tag:

```
<time>2013-09-16</time>
```

We use the `datetime` attribute to get our desired format:

```
<time datetime="2013-09-16">09/16/2013</time>
```



With the `datetime` attribute, the content can be anything relevant.



TIME

Without the **datetime** attribute,
content must be a valid date,
time, or precise datetime.





FRONT-END FORMATIONS





FRONT-END FORMATIONS

Level 3 - HTML5 Forms



TABLE OF CONTENTS

- New input types
- New form elements
- New form attributes



TABLE OF CONTENTS

- New input types
- New form elements
- New form attributes



NEW INPUT TYPES

HTML5 provides several new input types:

- Search
- Email
- URL
- Tel
- Number
- Range
- Date
- Month
- Week
- Time
- Datetime
- Datetime-local
- Color



NEW INPUT TYPES

If a browser doesn't support the input **type**, it defaults to "text."



SEARCH

“ The **input** element with a **type** attribute whose value is "**search**" represents a one-line plain-text edit control for entering one or more search terms.

- W3C SPECIFICATION

3.1 NEW INPUT TYPES



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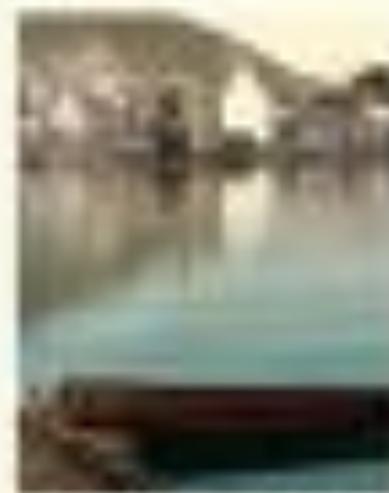
Impressionistic
Painting of a city skyline at sunset



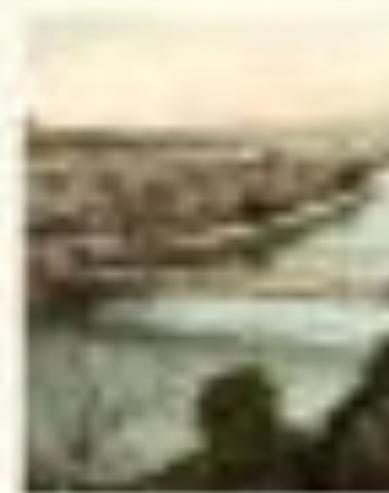
Impressionistic
Painting of a bridge over water with a boat in the foreground



Impressionistic
Painting of a church spire against a bright sky



Impressionistic
Painting of a landscape with a large tree in the foreground



Impressionistic
Painting of a bridge over water with a boat in the foreground



Impressionistic
Painting of a city skyline at sunset



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Recently Added
Recently Edited

Albums

You're not alone in this.
Many others have created
their own albums here.

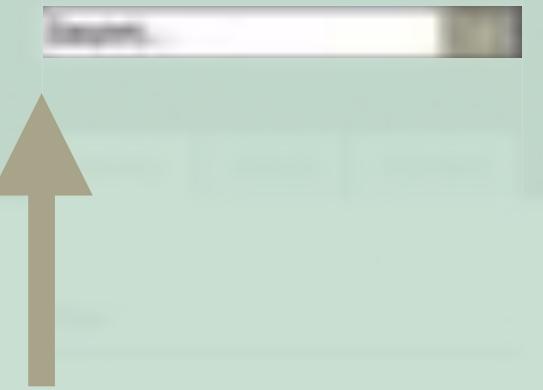
New Items

Followers

Sign up and get started
with your art.

Give your art





A search input.

SEARCH

Example usage of the **search** input type:

```
<input type="text" />
```



SEARCH

Example usage of the **search** input type:

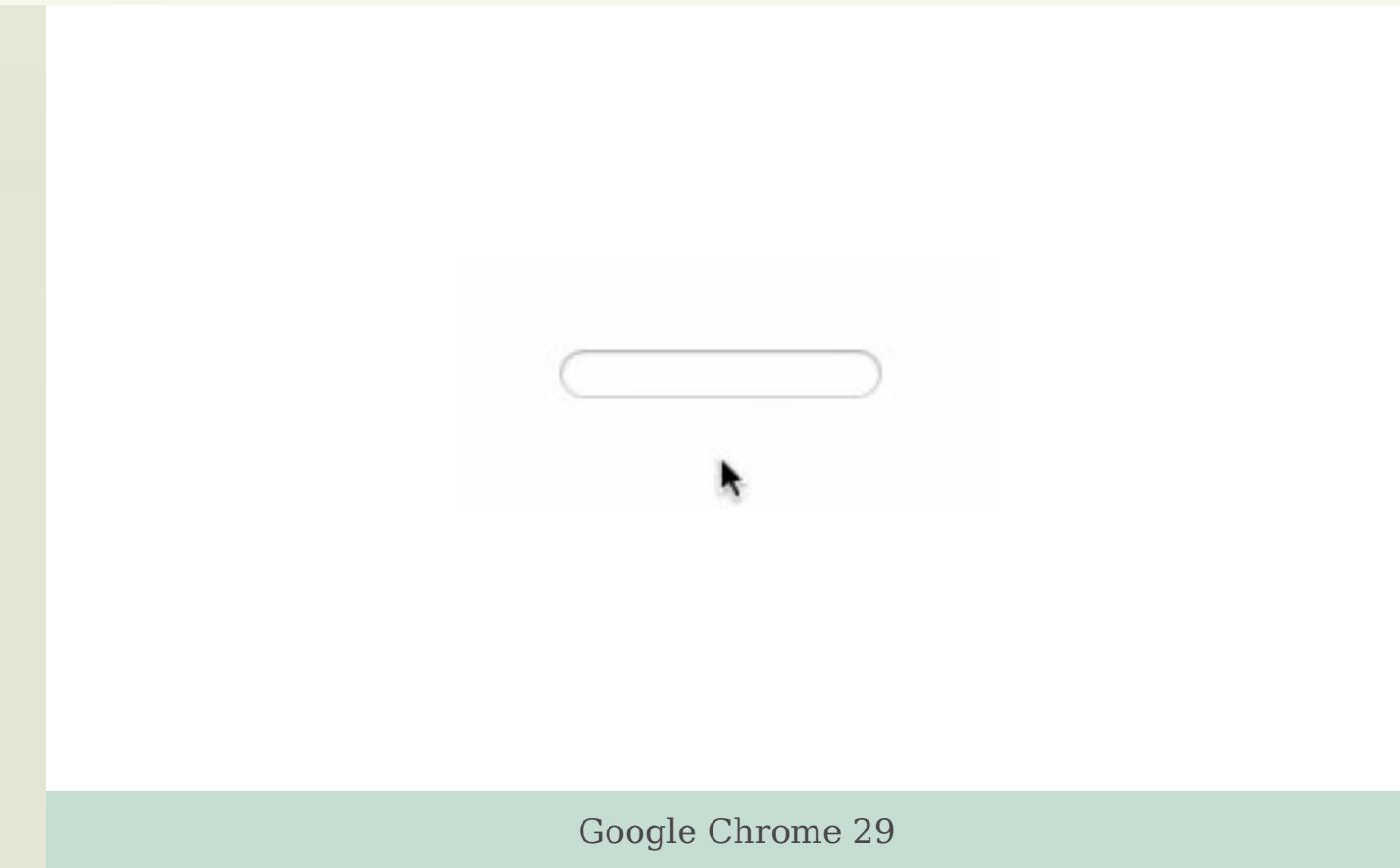
```
<input type="text" />
```

```
<input type="search" />
```



SEARCH

Example output of the **search** input type:



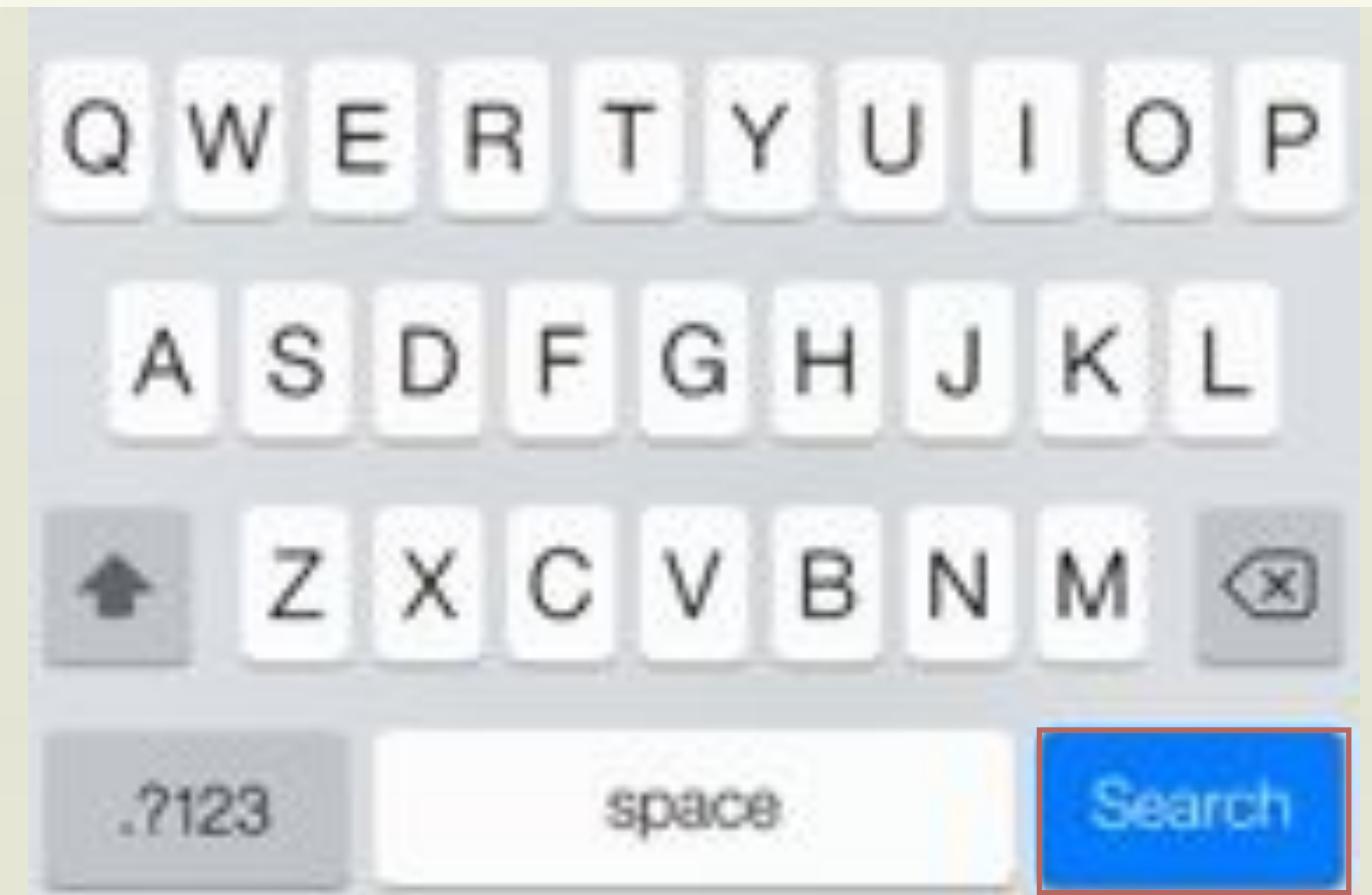
SEARCH

Mobile Safari keyboard with the **search** input type:



SEARCH

Mobile Safari keyboard with the **search** input type:



The action button
changes to 'Search.'



EMAIL

The **email** input looks just like a regular text input, but with added usability on mobile devices.



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Search



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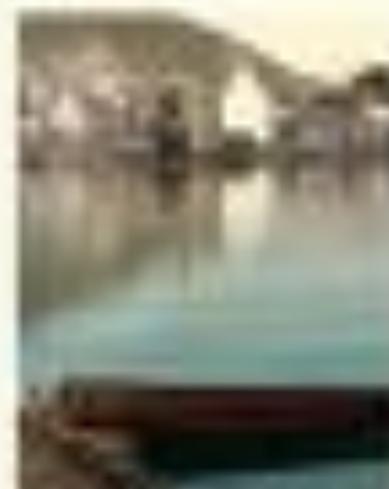
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Impressionistic



Impressionistic

Impressionistic



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Impressionistic



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Enter your email... 



An email input.

EMAIL

Example usage of the `email` input type:

```
<input type="text" />
```



EMAIL

Example usage of the email input type:

```
<input type="text" />
```

```
<input type="email" />
```



EMAIL

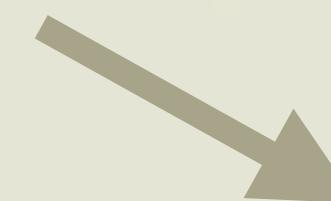
Mobile Safari keyboard with the **email** input type:



EMAIL

Mobile Safari keyboard with the **email** input type:

useful email-related
keys are now set by
default.



URL

The `url` input looks just like a regular text input, but with added usability on mobile devices.



URL

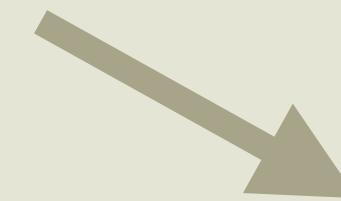
Mobile Safari keyboard with the url input type:



URL

Mobile Safari keyboard with the url input type:

useful url-related
keys are now set by
default.



DATE

“ The **input** element with a type attribute whose value is "**date**" represents a control for setting the element's value to a string representing a date.

- W3C SPECIFICATION



DATE

Example usage of the `date` input type:

```
<input type="text" />
```



DATE

Example usage of the date input type:

```
<input type="text" />
```

```
<input type="date" />
```



DATE

Output of the date input type:



DATE

Mobile Safari keyboard with the **date** input type:



TEL

Again, the **tel** input looks just like a regular text input, but with added usability on mobile devices.



TEL

Example usage of the tel input type:

```
<input type="text" />
```



TEL

Example usage of the tel input type:

```
<input type="text" />
```

```
<input type="tel" />
```



TEL

Mobile Safari keyboard with the tel input type:



NUMBER

“ The input element with a type attribute whose value is "number" represents a precise control for setting the element's value to a string representing a number.

- W3C SPECIFICATION



NUMBER

Example usage of the number input type:

```
<input type="text" />
```



NUMBER

Example usage of the number input type:

```
<input type="text" />
```

```
<input type="number" />
```



NUMBER

Output of the `number` input type:



Google Chrome 29



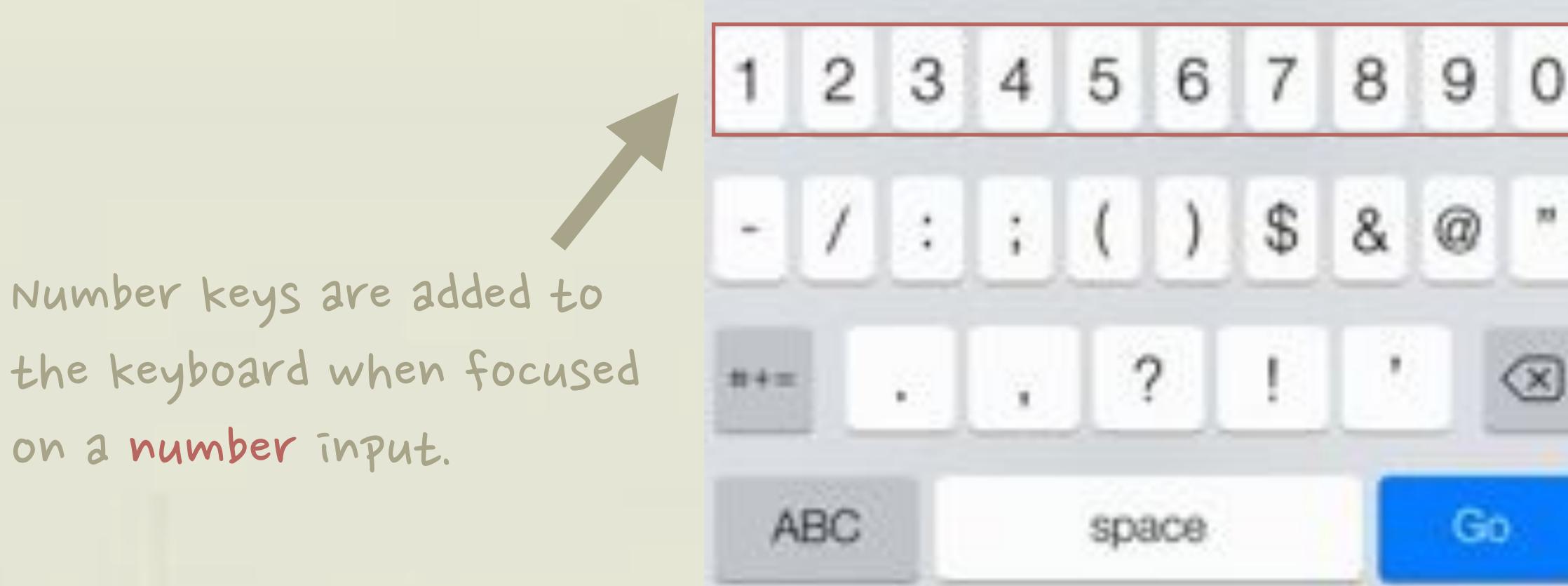
NUMBER

Mobile Safari keyboard with the **number** input type:



NUMBER

Mobile Safari keyboard with the **number** input type:



RANGE

“ The input element with a type attribute whose value is "range" represents an imprecise control for setting the element's value to a string representing a number.

- W3C SPECIFICATION



RANGE

Example usage of the `range` input type:

```
<input type="text" />
```



RANGE

Example usage of the `range` input type:

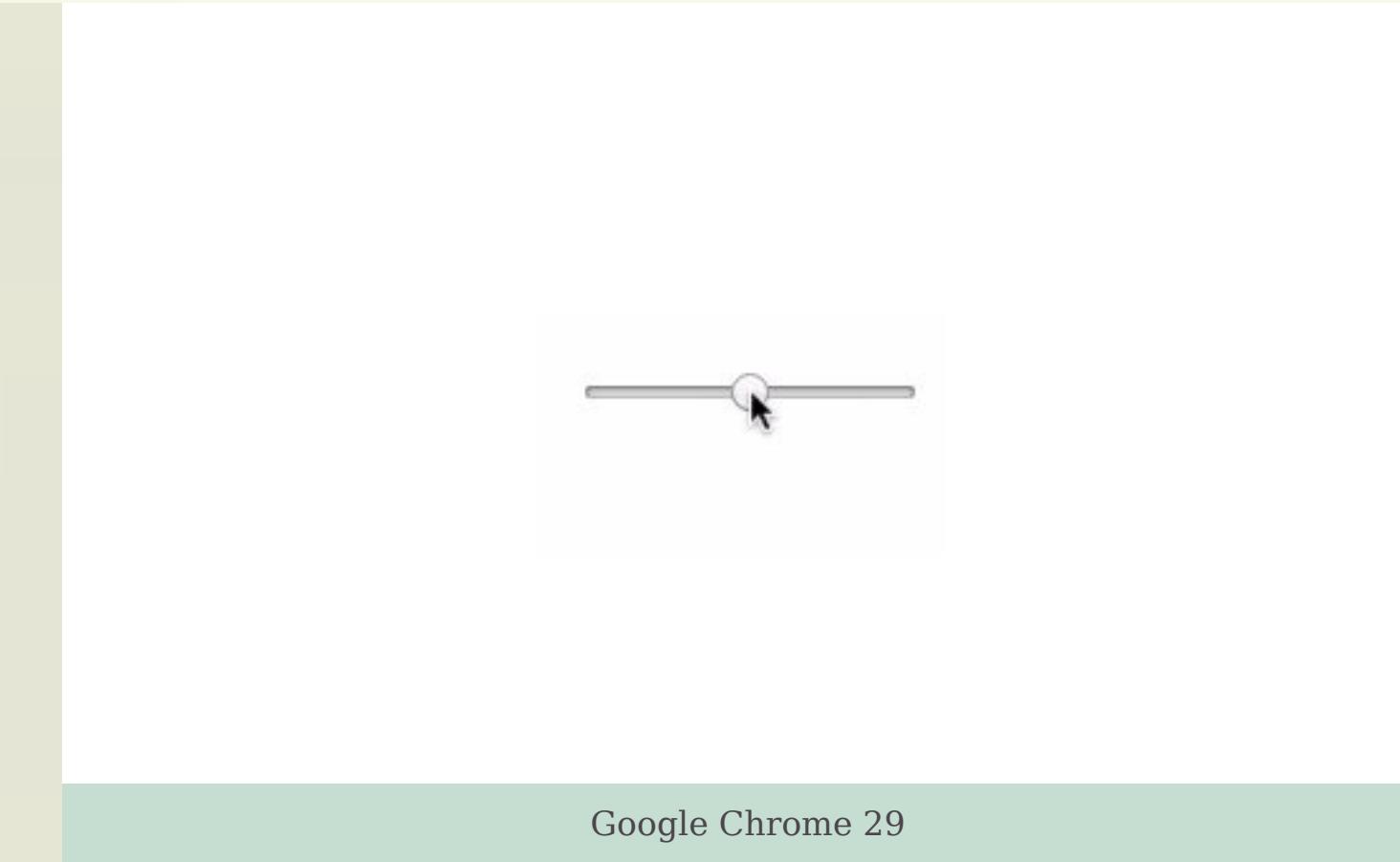
```
<input type="text" />
```

```
<input type="range" />
```



RANGE

Output of the `range` input type:



MONTH, WEEK

Example usage of the month, week input types:

```
<input type="month" />
```



```
<input type="week" />
```



MONTH, WEEK

Output of the month, week input types:



Google Chrome 29



TIME, DATETIME-LOCAL

Example usage of the `time`, `datetime-local` input types:

```
<input type="time" />
```



```
<input type="datetime-local" />
```



TIME, DATETIME-LOCAL

Output of the time, datetime-local input type:



Google Chrome 29



DATETIME-LOCAL VS. DATETIME

“ The input element with a type attribute whose value is "datetime-local" represents a control for setting the element's value to a string representing a local date and time (with no timezone information).

- W3C SPECIFICATION



COLOR

“ The input element with a type attribute whose value is "color" represents a color-well control, for setting the element's value to a string representing a simple color.

- W3C SPECIFICATION



COLOR

Example usage of the color input type:

```
<input type="color" />
```



COLOR

Example output of the **color** input type:

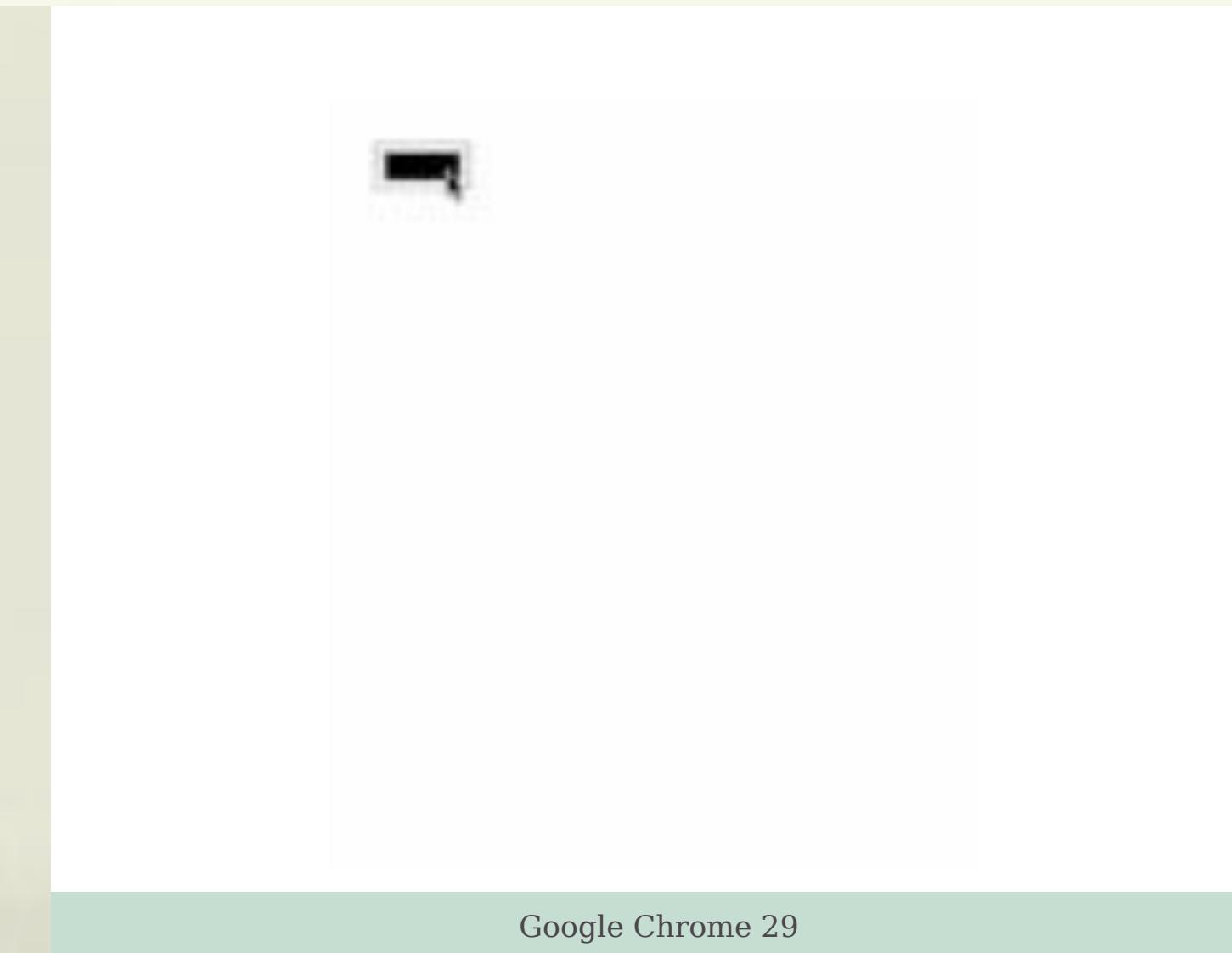


TABLE OF CONTENTS

- New input types
- New form elements
- New form attributes



TABLE OF CONTENTS

- New input types
- New form elements
- New form attributes



NEW FORM ELEMENTS

HTML5 provides new form elements:

- Datalist
- Keygen
- Output



NEW FORM ELEMENTS

HTML5 provides new form elements:

- Datalist
- Keygen
- Output



we're going to focus on the
alist form element.



DATALIST

“ The **datalist** element represents a set of option elements that represent predefined options for other controls.

- W3C SPECIFICATION



DATALIST

Example usage of the datalist form element:

```
<input type="text" list="browsers" />
```



DATALIST

Example usage of the datalist form element:

```
<input type="text" list="browsers" />
<datalist id="browsers">
</datalist>
```



DATALIST

Example usage of the **datalist** form element:

```
<input type="text" list="browsers" />  
<datalist id="browsers">  
    <!-- Content of the datalist -->  
</datalist>
```



*These values need to be the same
for them to link together properly.*



DATALIST

Example usage of the datalist form element:

```
<input type="text" list="browsers" />
<datalist id="browsers">
  <option value="Chrome">
  <option value="Firefox">
  <option value="Internet Explorer">
  <option value="Opera">
  <option value="Safari">
</datalist>
```



DATALIST

Example usage of the `datalist` form element:

```
<input type="text" list="browsers" />  
<datalist id="browsers">  
  <option value="Chrome">  
  <option value="Firefox">  
  <option value="Internet Explorer">  
  <option value="Opera">  
  <option value="Safari">  
</datalist>
```



These `option` values will
be available to our `input`.



DATALIST

Example output of the **datalist** form element:

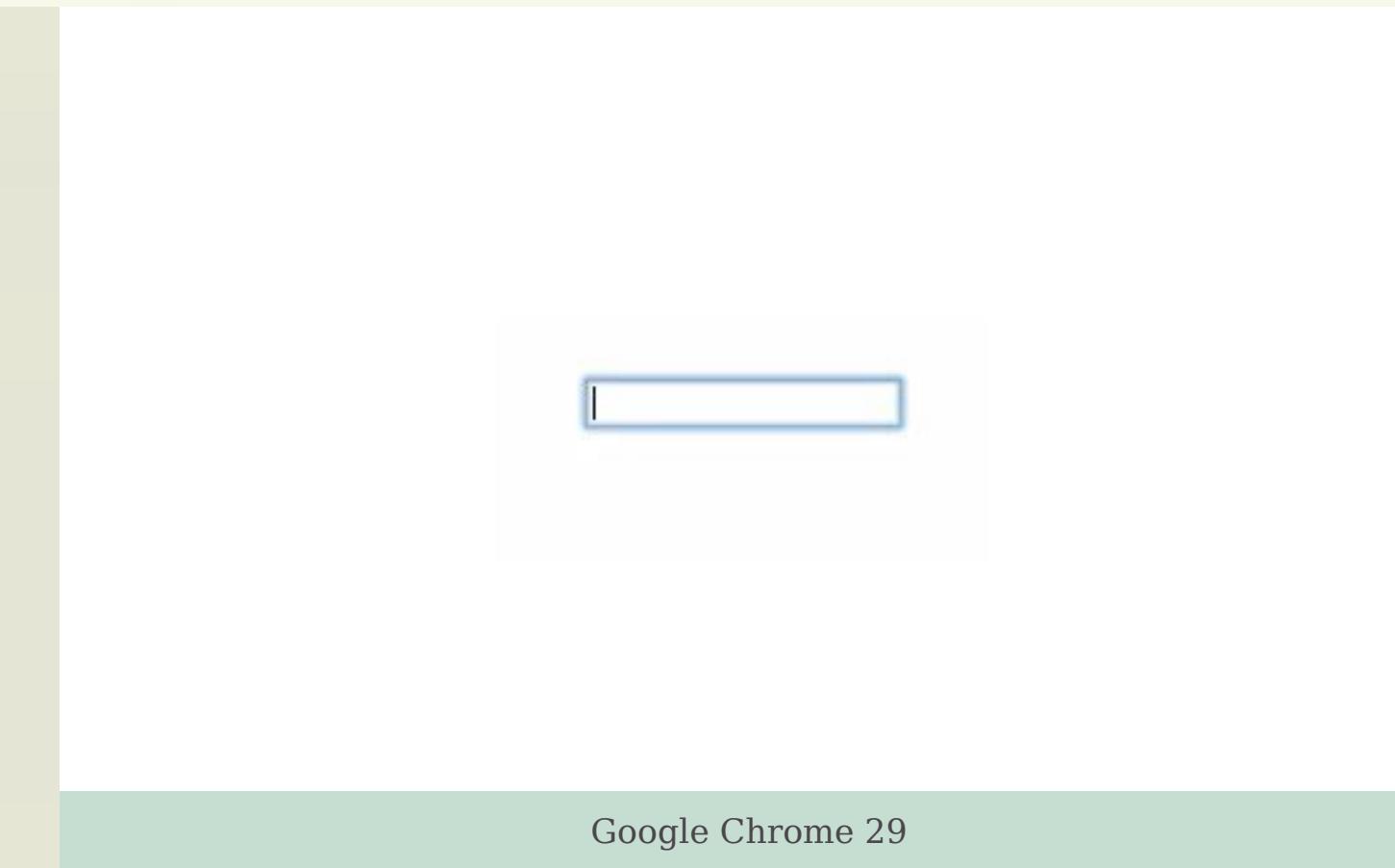


TABLE OF CONTENTS

- New input types
- New form elements
- New form attributes



TABLE OF CONTENTS

- New input types
- New form elements
- New form attributes



NEW FORM ATTRIBUTES

HTML5 provides several new form attributes:

- Placeholder
- Autofocus
- Autocomplete
- Required
- Pattern
- List
- Multiple
- novalidate
- formnovalidate
- form
- formaction
- formenctype
- formmethod
- formtarget



NEW FORM ATTRIBUTES

HTML5 provides several new form attributes:

- Placeholder
- Autofocus
- Autocomplete
- Required
- Pattern
- List
- Multiple
- novalidate
- formnovalidate
- form
- formaction
- formenctype
- formmethod
- formtarget

These are the form attributes we're going to focus on.



PLACEHOLDER

The **placeholder** attribute allows you to specify a message that is shown inside the input, hidden when the user starts typing, and then returns when focus is lost on the input (when the input is blank).



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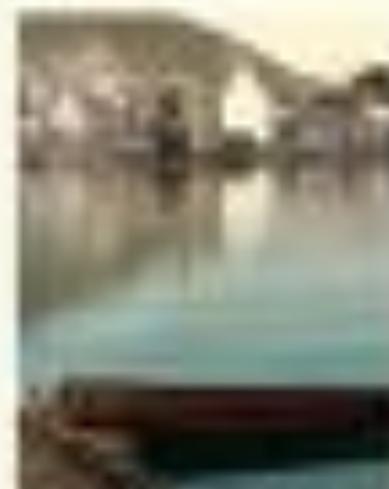
Impressionistic

Impressionistic



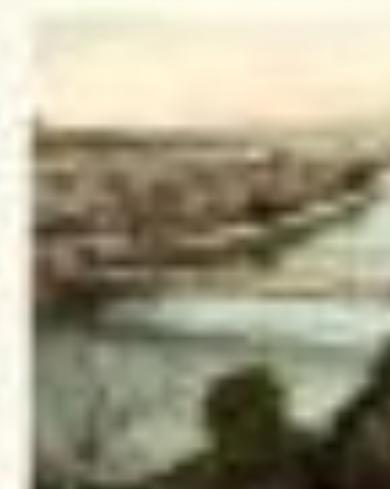
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An input with
“placeholder” text.

PLACEHOLDER

Example usage of the **placeholder** attribute:

```
<input type="text" value="Enter your email..." />
```



PLACEHOLDER

Example usage of the **placeholder** attribute:

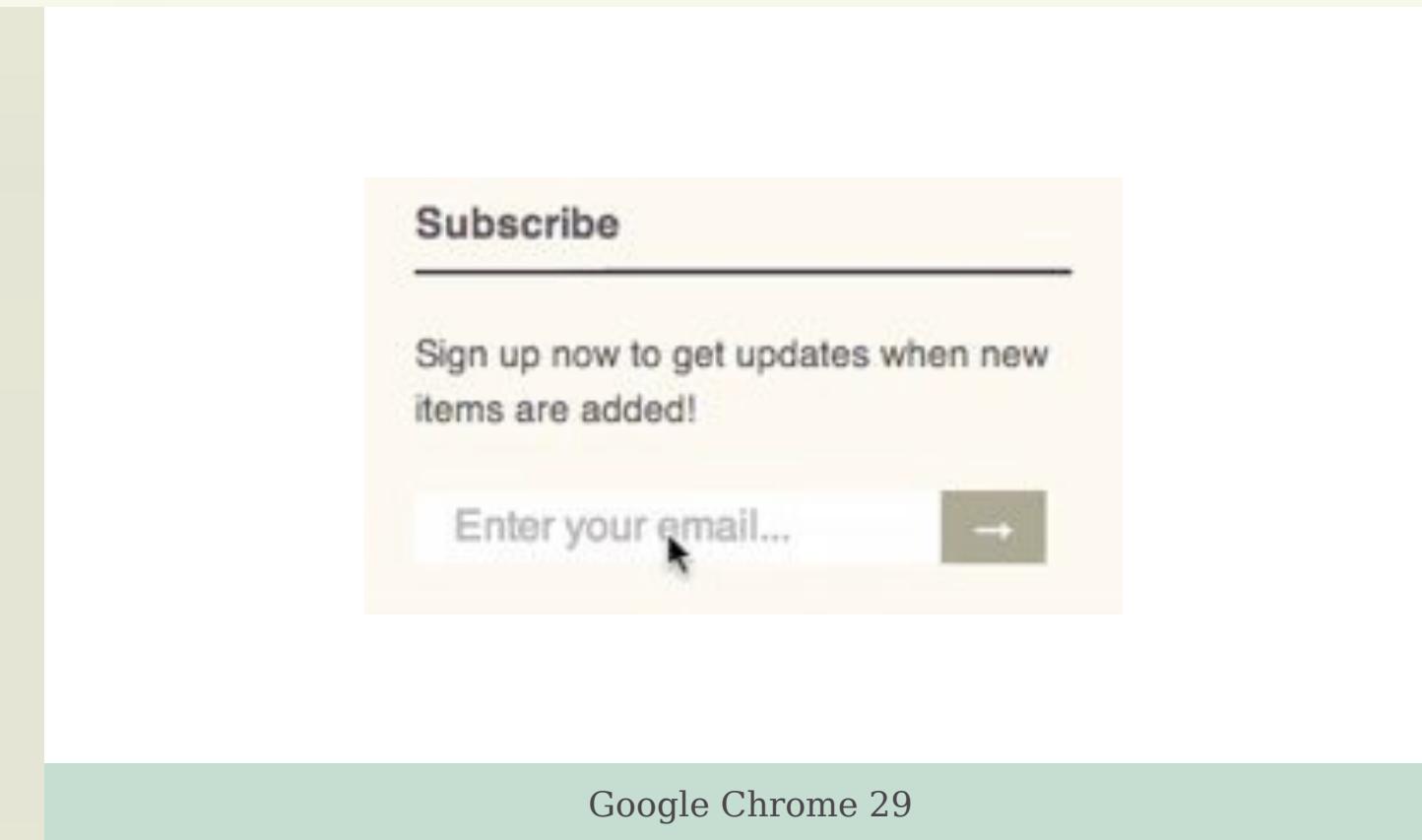
```
<input type="text" value="Enter your email..." />
```

```
<input type="text" placeholder="Enter your email..." />
```



PLACEHOLDER

Example of the **placeholder** attribute:



AUTOFOCUS

The **autofocus** attribute will automatically focus the specified input when the page is rendered.



AUTOFOCUS

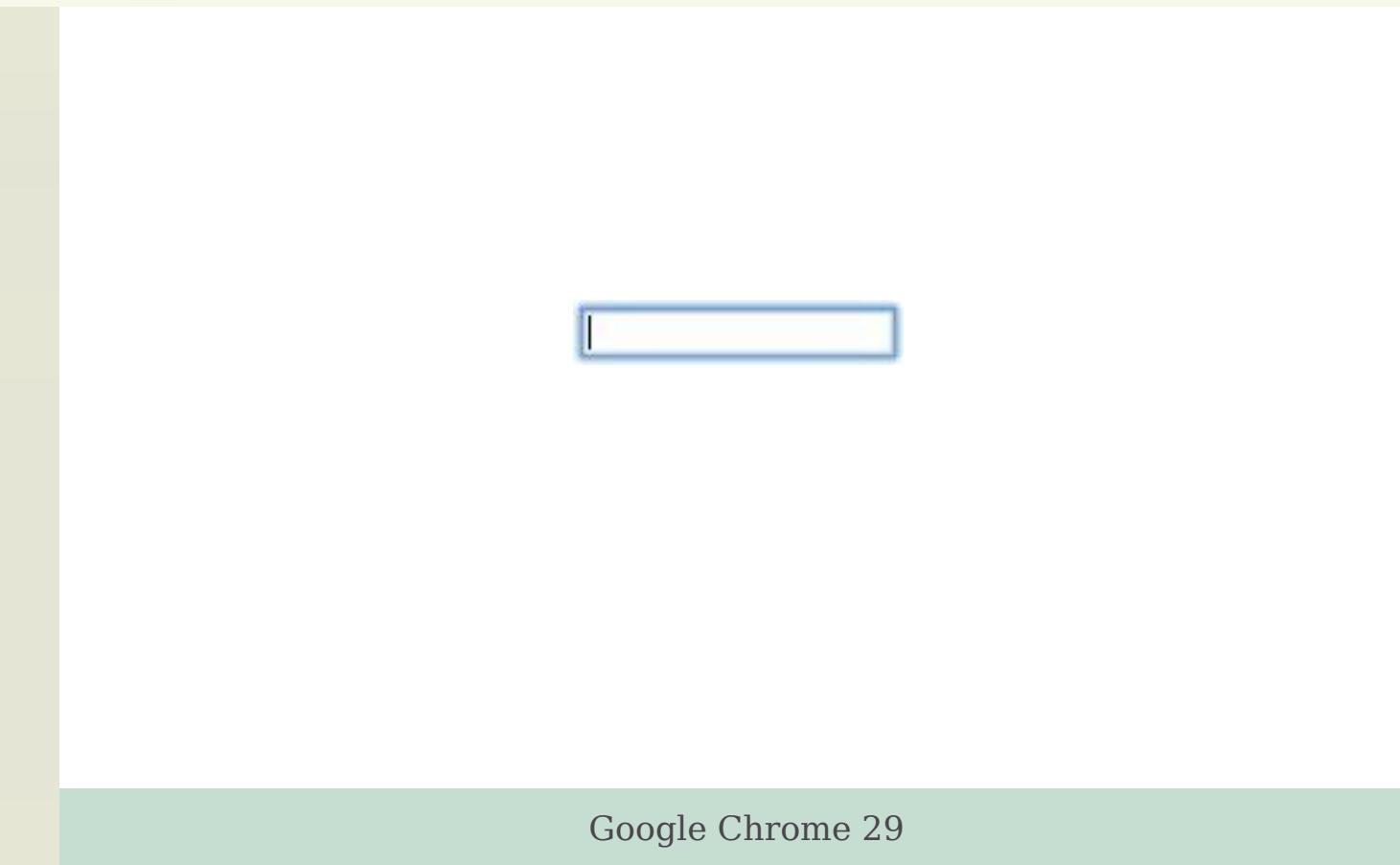
Example usage of the `autofocus` attribute:

```
<input type="text" autofocus />
```



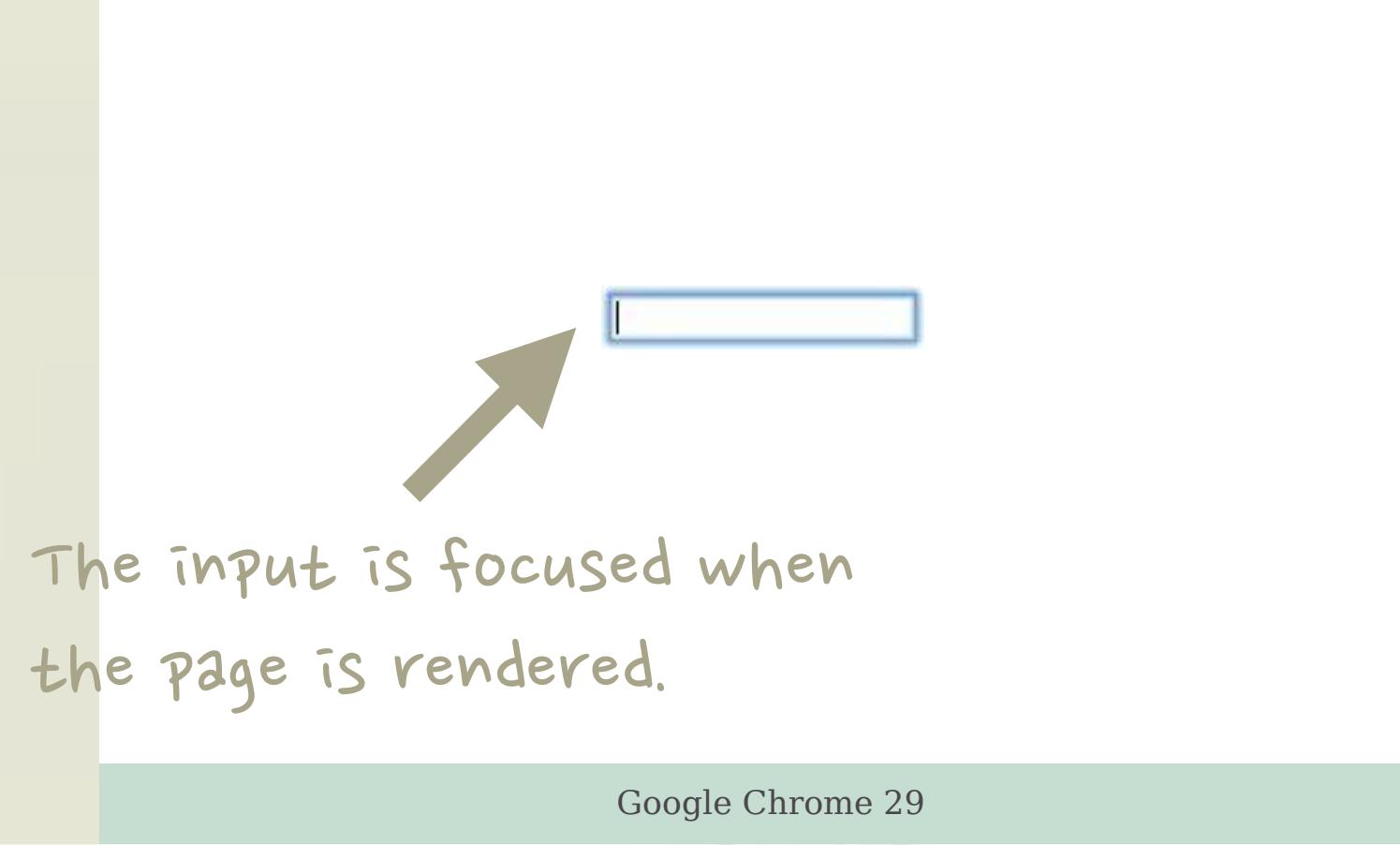
AUTOFOCUS

Example output of the **autofocus** attribute:



AUTOFOCUS

Example output of the **autofocus** attribute:



The input is focused when
the page is rendered.

Google Chrome 29



REQUIRED

If you add the new HTML5 **required** attribute to an input, when the form is submitted, the user will be notified of an error if the field is left blank.



REQUIRED

Example usage of the **required** attribute:

```
<input type="text" required />
```



REQUIRED

Example of the **required** attribute:

Subscribe

Sign up now to get updates when new items are added!

Google Chrome 29



PATTERN

The **pattern** attribute accepts a JavaScript regular expression that can be used to validate a form field to match the pattern.



PATTERN

Example usage of the **pattern** attribute:

```
<input type="text" pattern="[0-9]{3}" />
```



PATTERN

Example usage of the **pattern** attribute:

```
<input type="text" pattern="[0-9]{3}" />
```

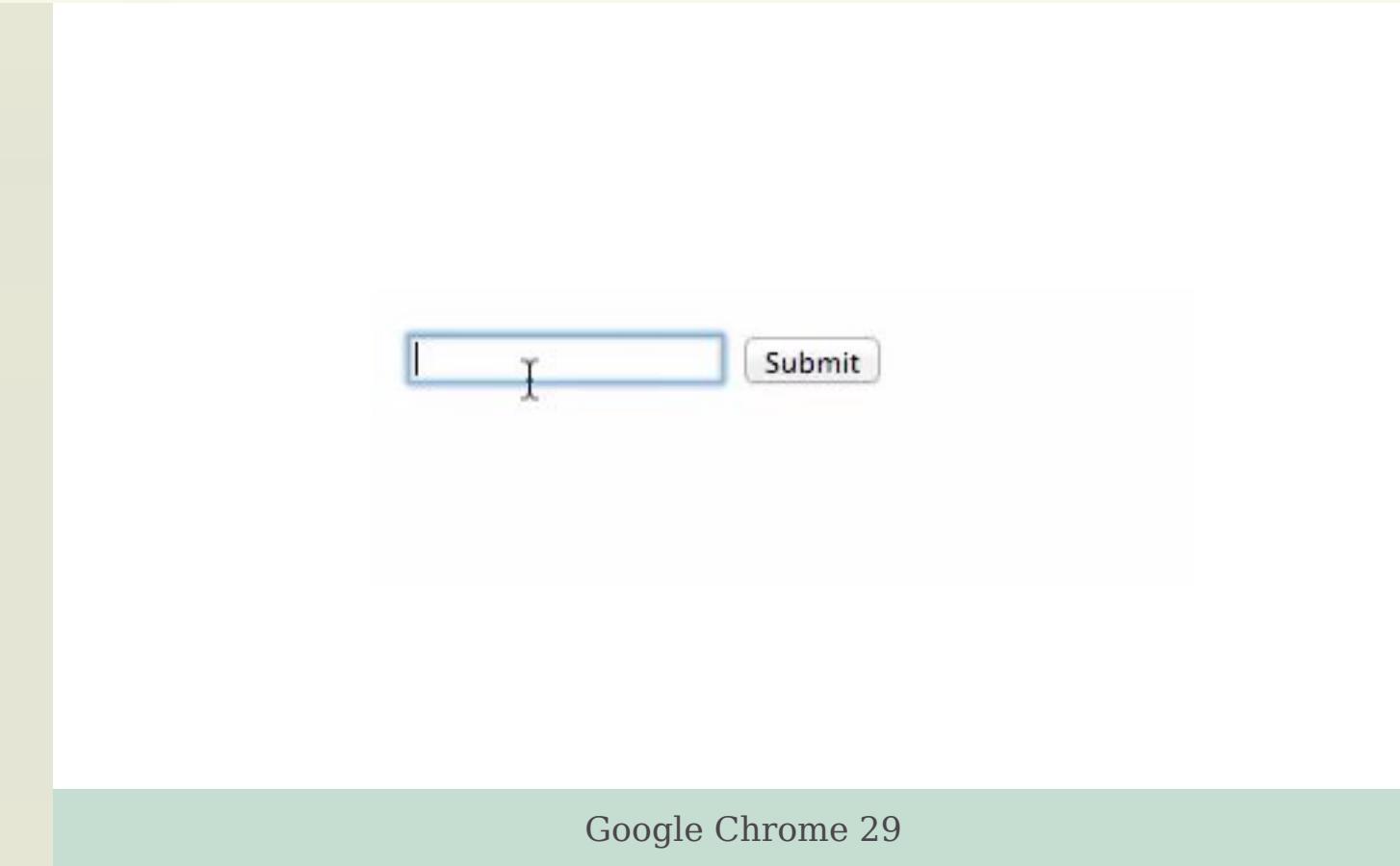


We want the pattern
to be **3 0-9** digits.



PATTERN

Example usage of the **pattern** attribute:





FRONT-END FORMATIONS





FRONT-END FORMATIONS

Level 4 - CSS3 Styles



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- Border Radius
- Box Shadow
- Text Shadow
- Box Sizing
- Multiple Backgrounds
- Color
- Opacity
- Gradients



TABLE OF CONTENTS

- Border Radius
- Box Shadow
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- Multiple Backgrounds
- Color
- Opacity
- Gradients



BORDER RADIUS

The `border-radius` property applies rounded corners to borders.



BORDER RADIUS

The base `.box` element we'll be working with:

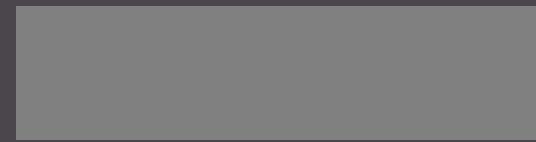
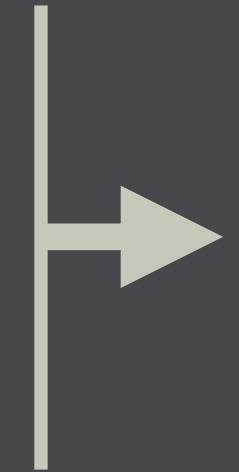
```
.box {  
  background: grey;  
  height: 50px;  
  width: 200px;  
}
```



BORDER RADIUS

The base `.box` element we'll be working with:

```
.box {  
  background: grey;  
  height: 50px;  
  width: 200px;  
}
```



BORDER RADIUS

Example usage of the border-radius property:

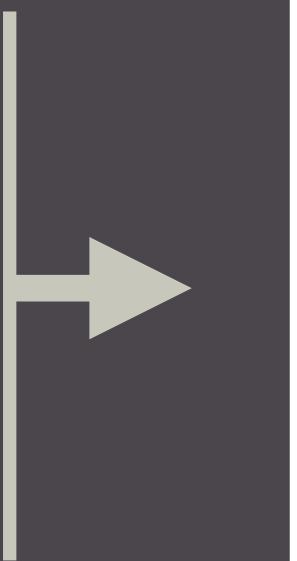
```
.box {  
    border-top-left-radius: 15px;  
    border-top-right-radius: 15px;  
    border-bottom-right-radius: 15px;  
    border-bottom-left-radius: 15px;  
}
```



BORDER RADIUS

Example usage of the border-radius property:

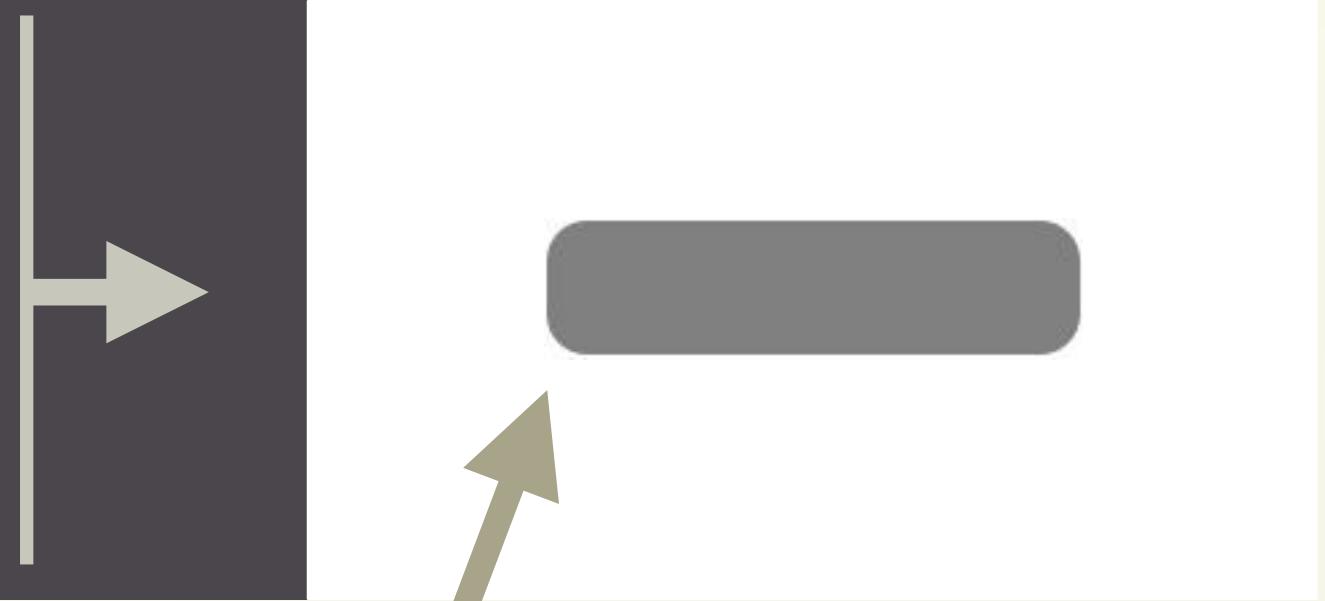
```
.box {  
    border-top-left-radius: 15px;  
    border-top-right-radius: 15px;  
    border-bottom-right-radius: 15px;  
    border-bottom-left-radius: 15px;  
}
```



BORDER RADIUS

Example usage of the border-radius property:

```
.box {  
  border-top-left-radius: 15px;  
  border-top-right-radius: 15px;  
  border-bottom-right-radius: 15px;  
  border-bottom-left-radius: 15px;  
}
```



Applies a **15px** rounded corner to our `.box`.



BORDER RADIUS

Example usage of the border-radius property:

```
.box {  
  border-radius: 15px;  
}
```



BORDER RADIUS

Example usage of the border-radius property:

```
.box {  
  border-radius: 15px;  
}
```



We can use the shorthand property
to specify all sides at once.



BORDER RADIUS

Example usage of the border-radius property:

```
.box {  
  border-radius: 4px 15px 12px 10px;  
}
```



BORDER RADIUS

Example usage of the `border-radius` property:

```
.box {  
  border-radius: 4px 15px 12px 10px;  
}
```



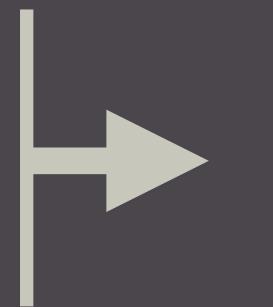
We can specify each `border-radius` value individually, as well.



BORDER RADIUS

Example usage of the border-radius property:

```
.box {  
  border-radius: 4px 15px 12px 10px;  
}
```



BORDER RADIUS

Example usage of the border-radius property:

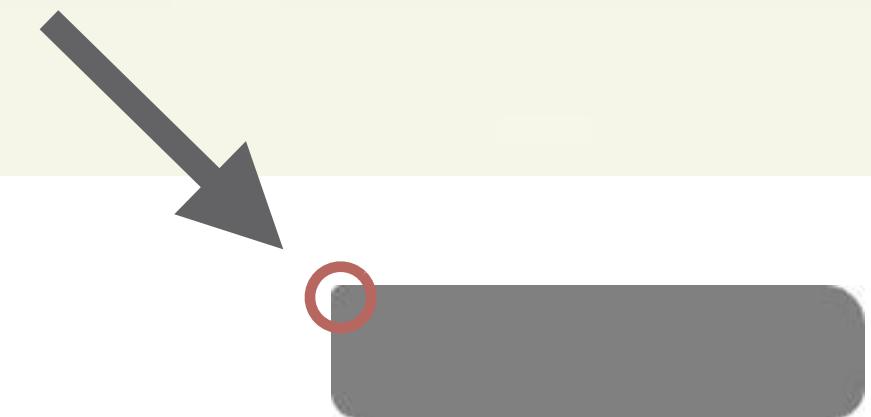
```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

Example usage of the border-radius property:

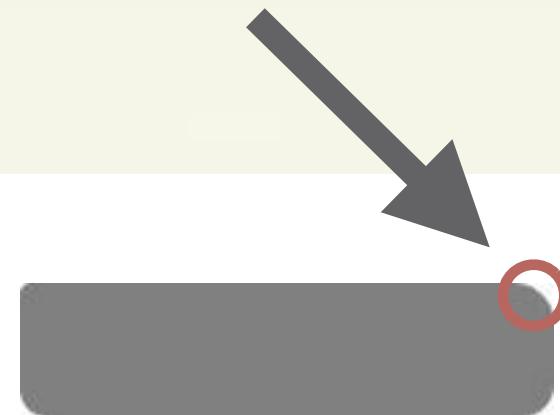
```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

Example usage of the border-radius property:

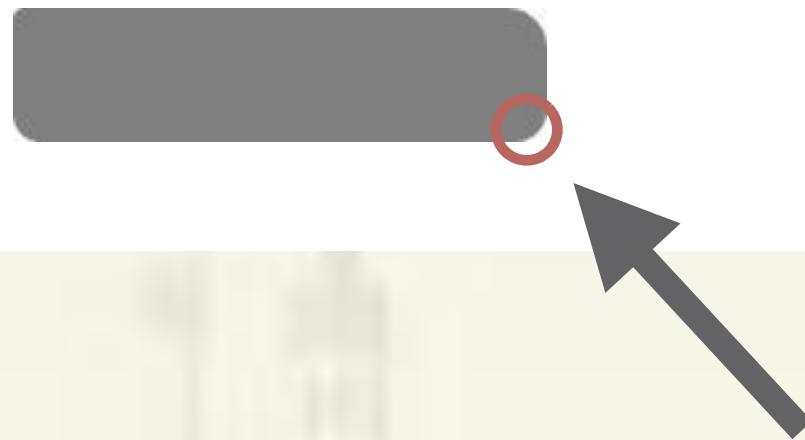
```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

Example usage of the border-radius property:

```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

Example usage of the border-radius property:

```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

You can also specify
the **border-radius**
value in percentages.



BORDER RADIUS

Example usage of the border-radius property:

```
.box {  
  border-radius: 50%;  
}
```



BORDER RADIUS

Example usage of the border-radius property:

```
.box {  
  border-radius: 50%;  
}
```

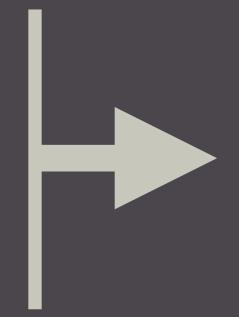


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LEVEL 4



BOX SHADOW

The **box-shadow** property specifies a shadow on an element.



BOX SHADOW

Example usage of the `box-shadow` property:

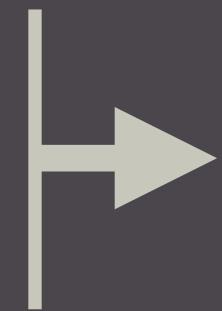
```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



If it is not specified (which is the default), a **drop shadow** is created, rather than an **inset shadow**.



BOX SHADOW

Example usage of the box-shadow property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



If it is not specified (which is the default), a drop shadow is created, rather than an inset shadow.



This icon denotes that the highlighted argument is optional.



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The shadow
offset **x** value.



BOX SHADOW

Example usage of the `box-shadow` property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The shadow
offset y value.



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The **blur-radius** alters the blur amount of the shadow, causing it to become *bigger and lighter* (with a larger value).



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The **spread-radius** causes the shadow to expand *or* shrink.



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The **color** of
the shadow.



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



No `inset` value is specified,
so this is a drop shadow.



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



「 A 1px offset-x value. 」



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



「A 2px offset-y value.」



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



「 A 2px blur-radius. 」



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



No spread-radius value is specified, so the drop shadow is the same size as the element.



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



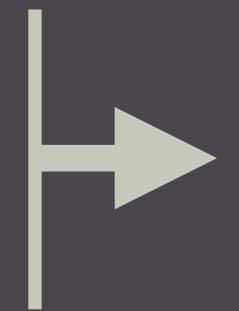
The drop shadow
color is black.



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



BOX SHADOW

What if we wanted the
blur-radius value to instead
be the spread-radius?



BOX SHADOW

Example usage of the `box-shadow` property:

```
box-shadow: 1px 2px 2px #000;
```



If we wanted this `2px` to be the `spread-radius` instead, we'd need to specify `0` as the `blur-radius` first.



BOX SHADOW

Example usage of the `box-shadow` property:

```
box-shadow: 1px 2px 0 2px #000;
```



BOX SHADOW

Example usage of the `box-shadow` property:

```
box-shadow: 1px 2px 0 2px #000;
```

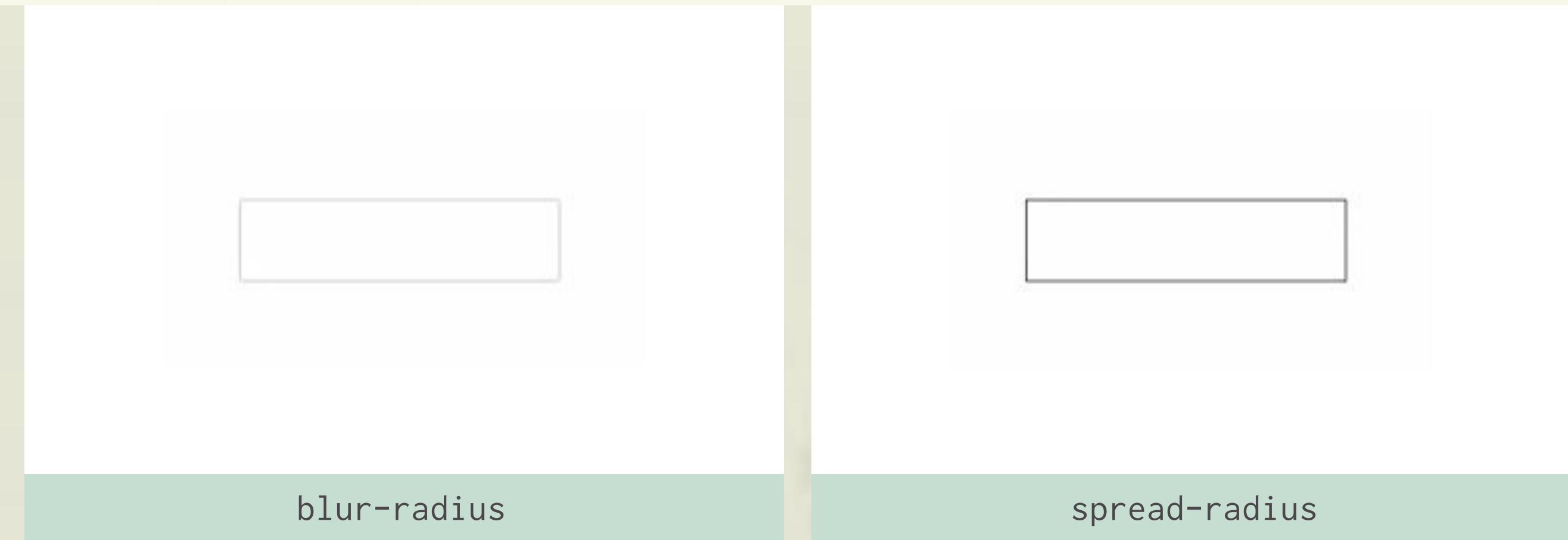


`2px` is now the `spread-radius`.



BOX SHADOW

Example of the **blur-radius** and **spread-radius** properties:



BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
}
```



BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
}
```



our first **box-shadow**.



BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
    inset 1px 1px 2px blue;  
}
```



BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
    inset 1px 1px 2px blue;  
}
```



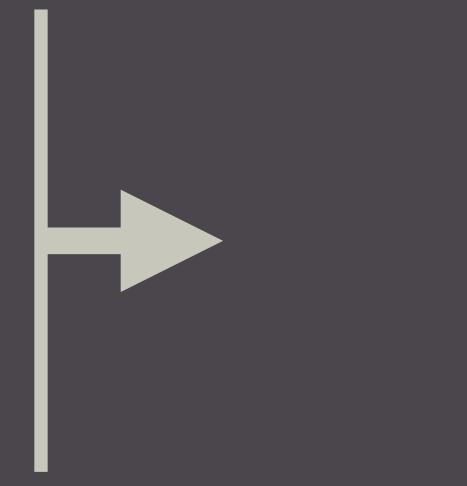
Our second **box-shadow**.



BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
    inset 1px 1px 2px blue;  
}
```



BOX SHADOW

You can also specify negative values:

```
.box {  
  box-shadow: -1px -2px 2px #000;  
}
```



BOX SHADOW

You can also specify negative values:

```
.box {  
  box-shadow: -1px -2px 2px #000;  
}
```

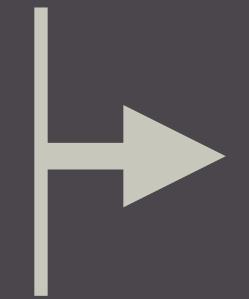


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TEXT SHADOW

The **text-shadow** property is very similar to **box-shadow**, but it applies the shadow to text, as the name implies.



TEXT SHADOW

Example usage of the `text-shadow` property:

```
<h1>I have a shadow!</h1>
```



TEXT SHADOW

Example usage of the `text-shadow` property:

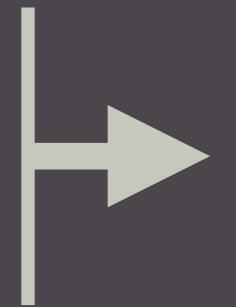
```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



I have a shadow!



TEXT SHADOW

Example usage of the `text-shadow` property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



TEXT SHADOW

Example usage of the `text-shadow` property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



The shadow
offset x value.



TEXT SHADOW

Example usage of the `text-shadow` property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



The shadow
offset `y` value.



TEXT SHADOW

Example usage of the `text-shadow` property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



?

The `blur-radius` alters the blur amount of the shadow, causing it to become *bigger and lighter* (with a larger value).



TEXT SHADOW

Example usage of the `text-shadow` property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



?

The `color` of
the shadow.



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
    text-shadow: 1px 2px 2px #000;  
}
```



「A `1px` offset-x value.」



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



A 2px offset-y value.



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
    text-shadow: 1px 2px 2px #000;  
}
```



A 2px blur-radius.



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



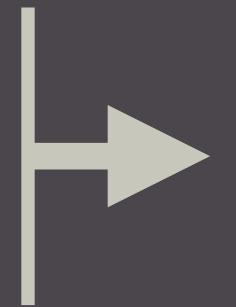
The drop shadow
color is black.



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



I have a shadow!



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LEVEL 4



BOX SIZING

The **box-sizing** property is used to change the default CSS box model, which is used to calculate widths and heights of given elements.



BOX MODEL REFRESHER

- The CSS box model references the design and layout of given HTML elements
- Each HTML element is a “box,” which consists of margins, borders, padding, and the content of the element
- The “box model” refers to how those properties are calculated in conjunction with one another in order to set the element’s dimensions



BOX MODEL REFRESHER

The **content** of the box is where the actual **content**,
the **text** and **images**, is located:



CONTENT



BOX MODEL REFRESHER

The **padding** clears the area around the **content**:



BOX MODEL REFRESHER

The **border** goes around the padding and content:



BOX MODEL REFRESHER

The **margin** clears the area around the border:



BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box {  
    border: 2px solid black;  
    margin: 20px;  
    padding: 10px;  
    width: 300px;  
}
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box { width: 300px; }
```



300px



BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box { padding: 10px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

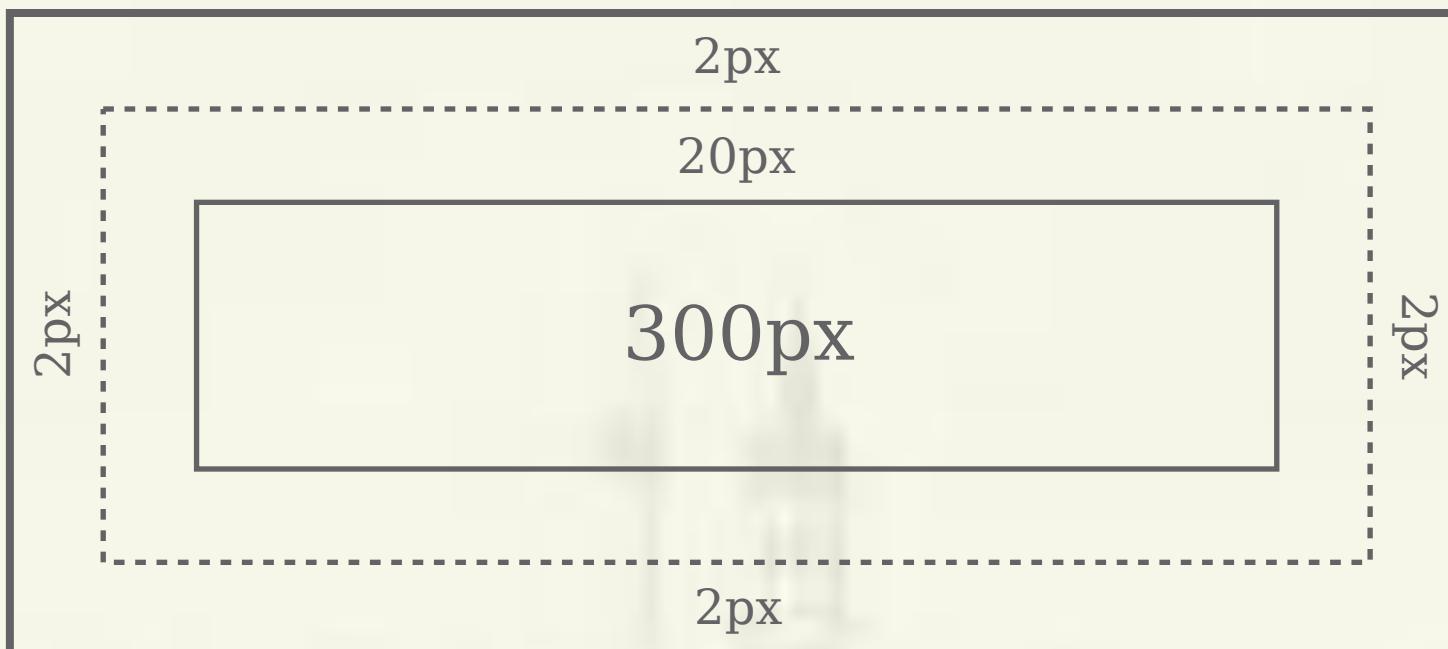
```
.box { padding: 10px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

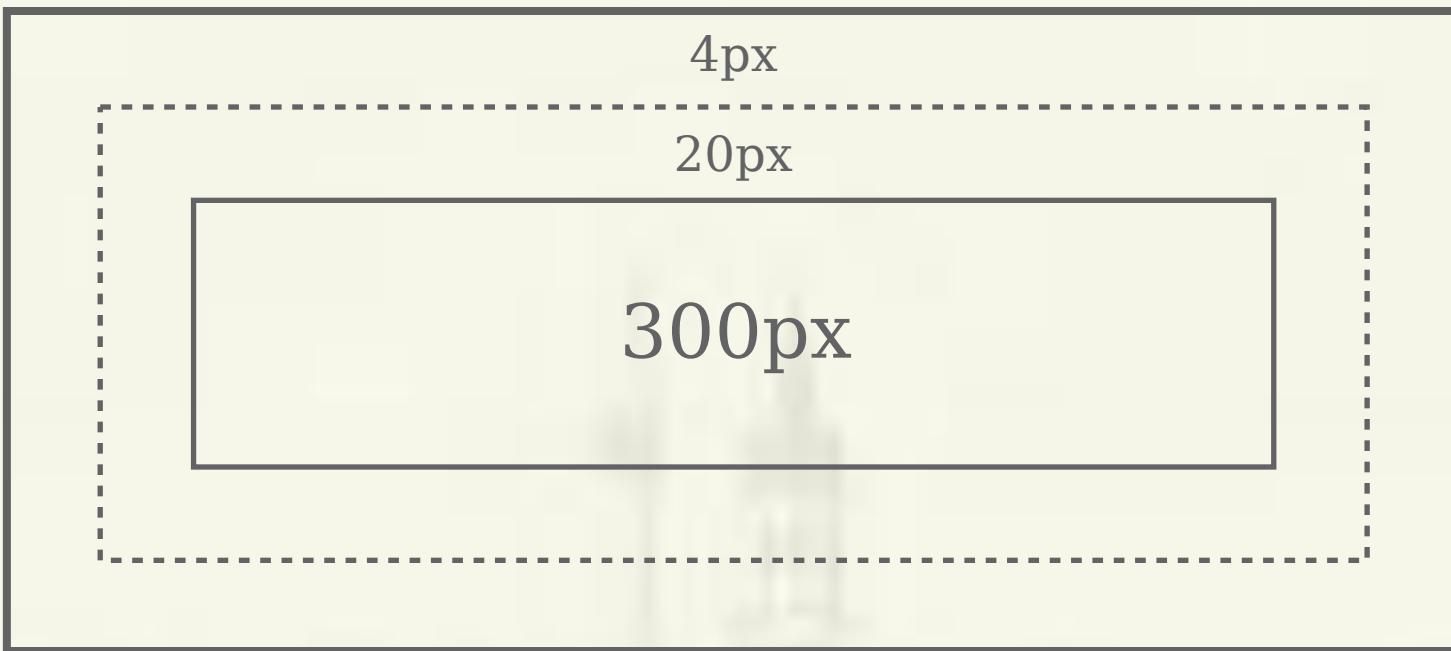
```
.box { border: 2px solid black; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

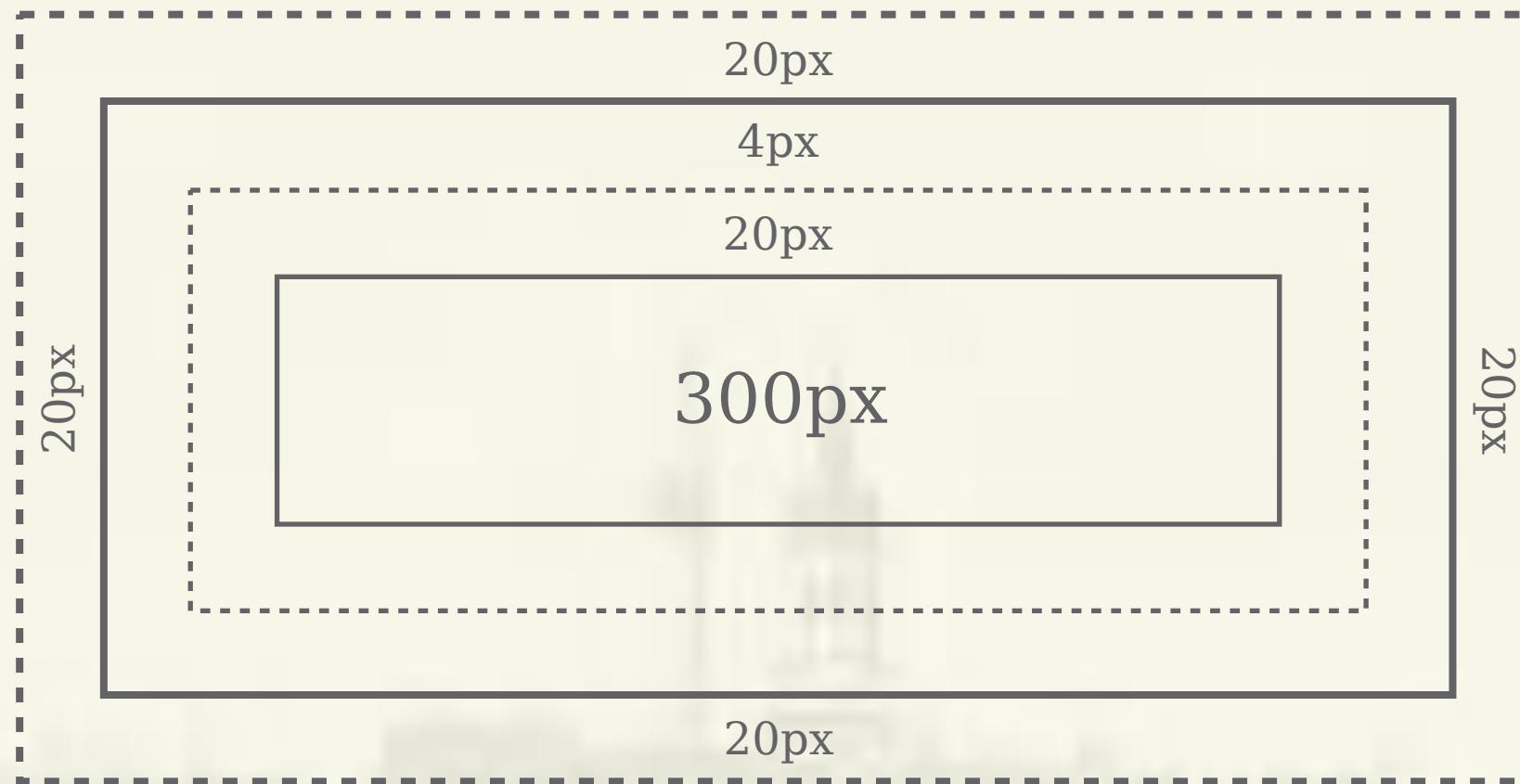
```
.box { border: 2px solid black; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

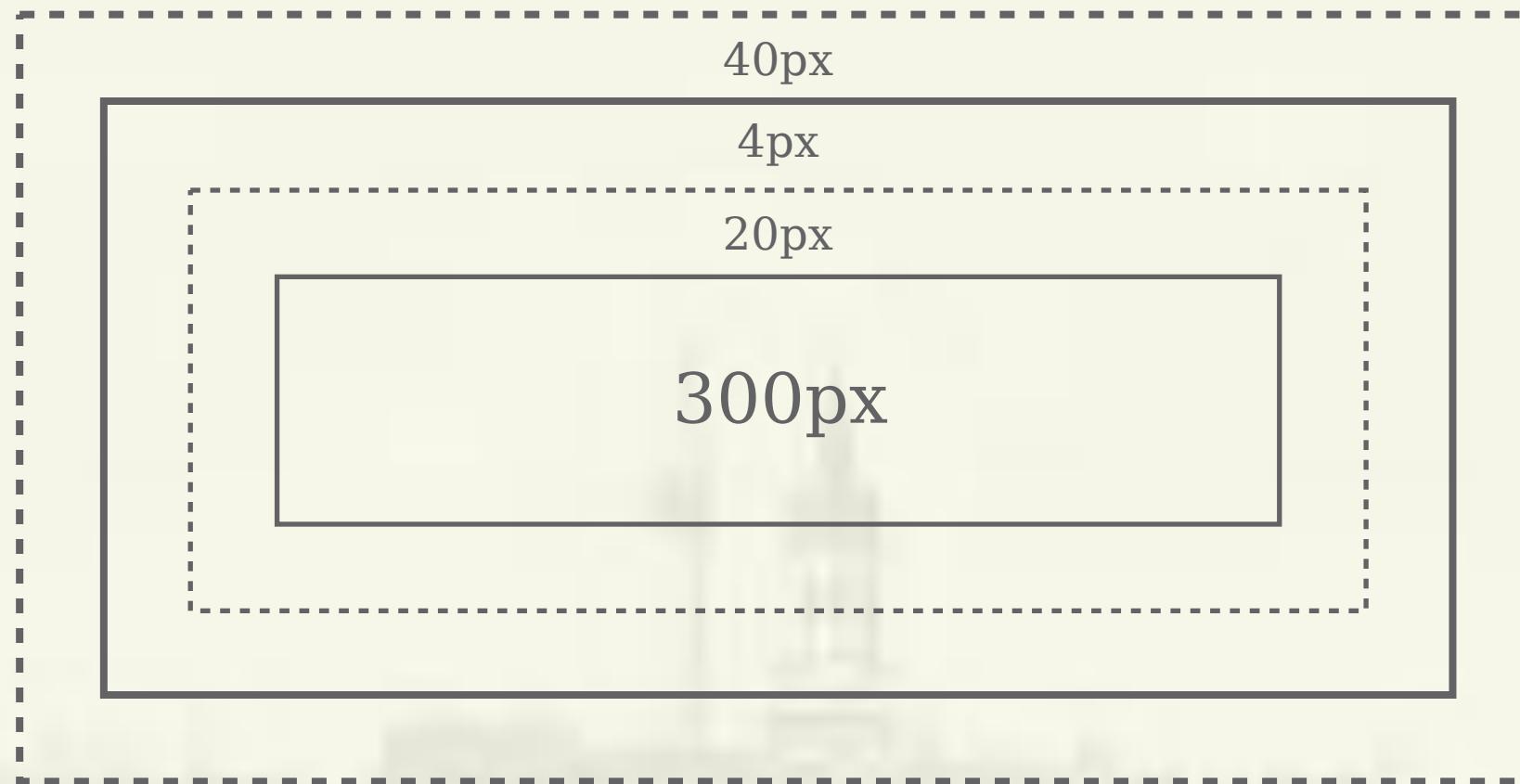
```
.box { margin: 20px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

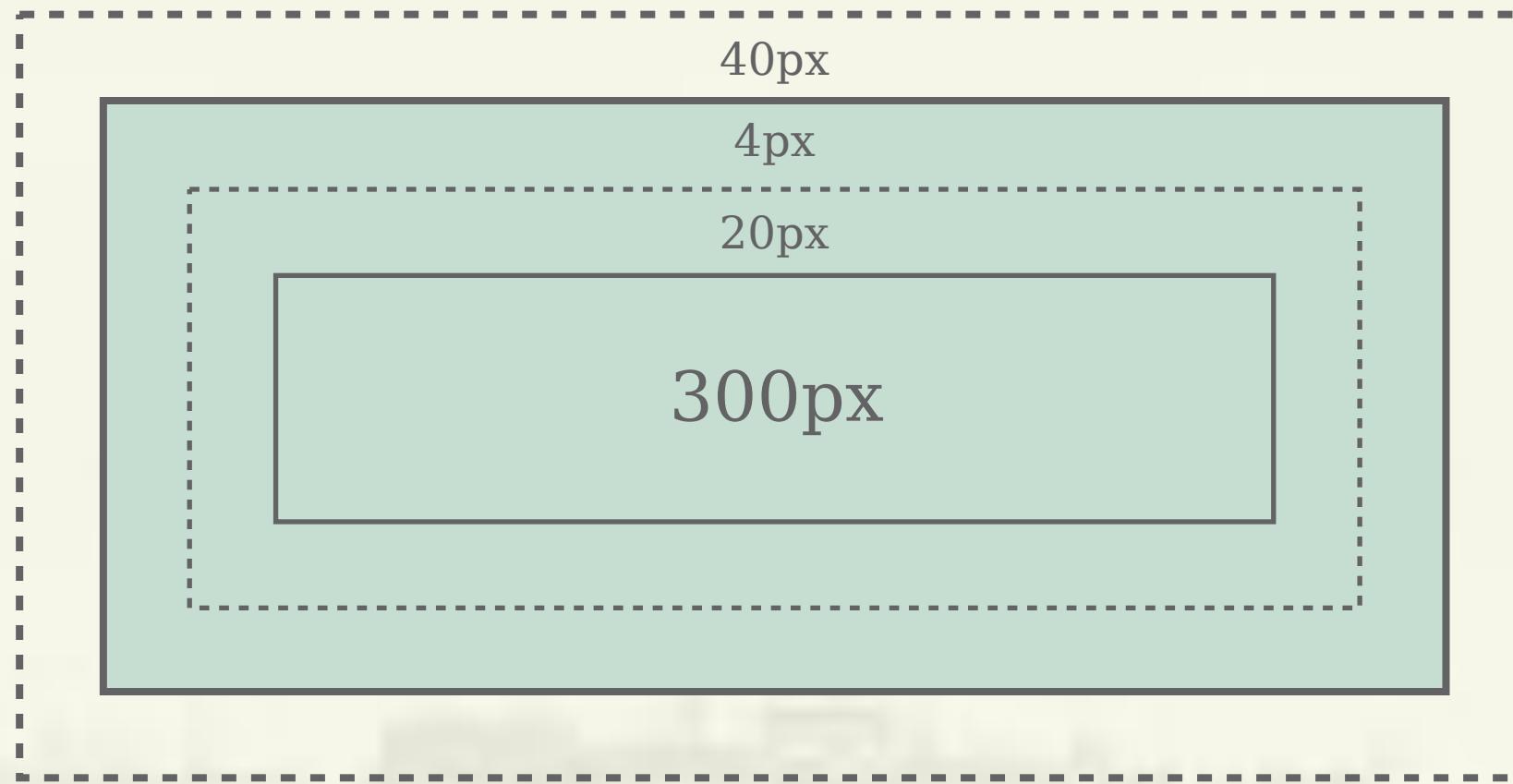
```
.box { margin: 20px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box { margin: 20px; }
```

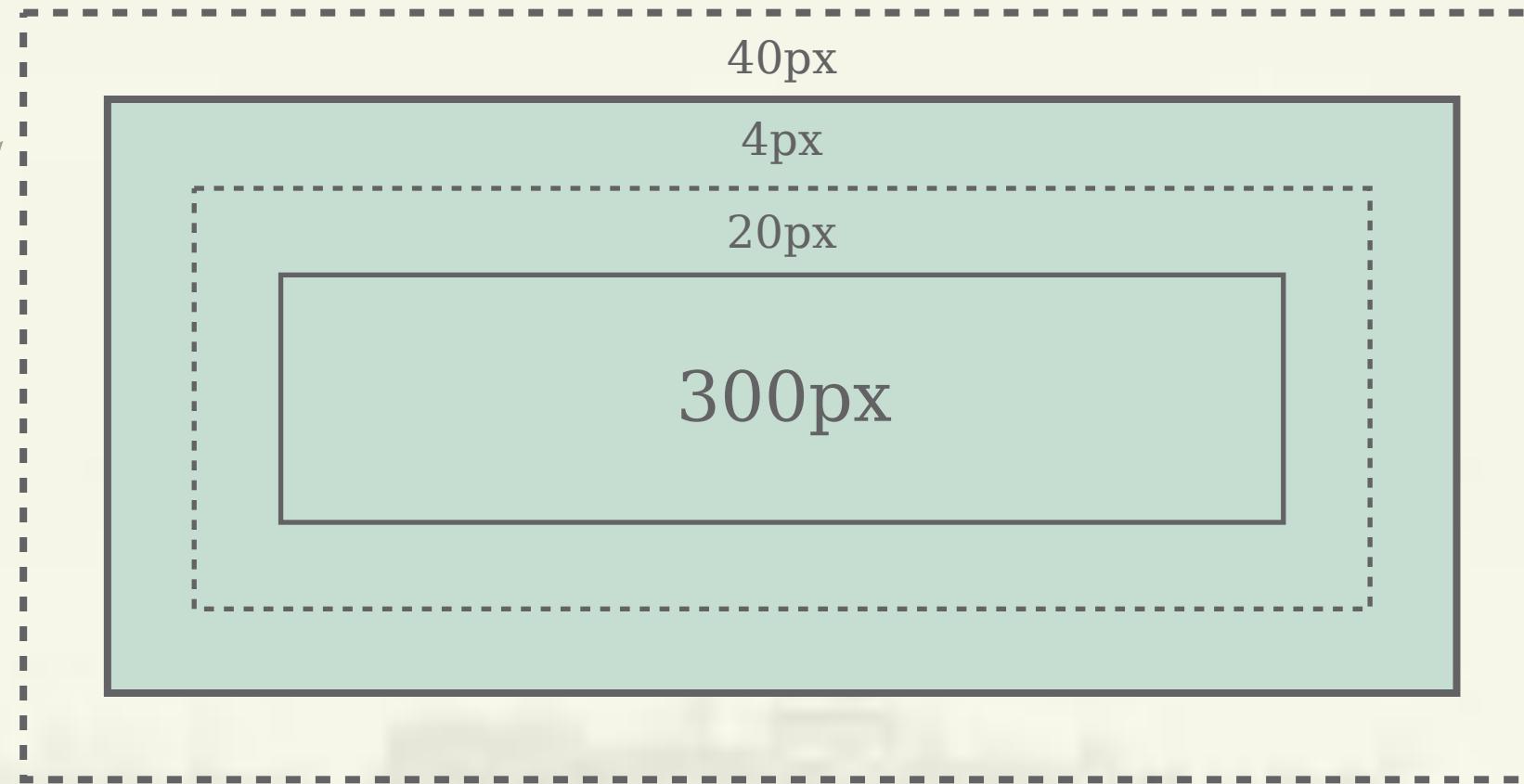


BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box { margin: 20px; }
```

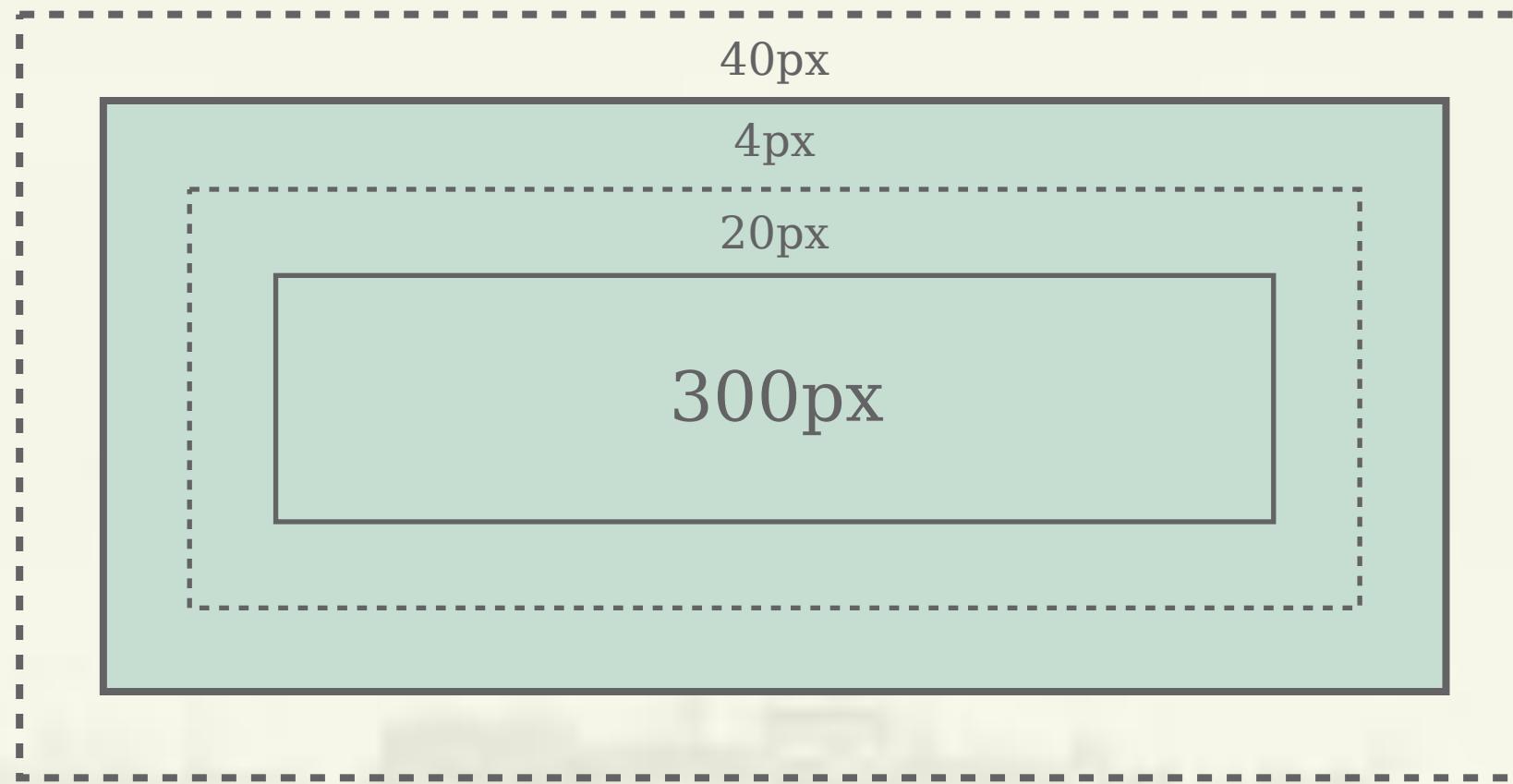
The `margin` isn't
part of the `width`.



BOX MODEL REFRESHER

Calculating the width of the `.box`:

$$300 + 20 + 4 = 324\text{px}$$



BOX SIZING

The **box-sizing** property is used to change the default CSS box model, which is used to calculate widths and heights of given elements.



BOX SIZING

There are three different values for box-sizing:

- content-box
- padding-box
- border-box



CONTENT-BOX

This is the **default value**. The width and height are measured by including *only* the content, but *not* the border, margin, or padding.



PADDING-BOX

The width and height include the **padding**, but *do not* include the border or margin.



PADDING-BOX

Calculating the width of the `.box`:

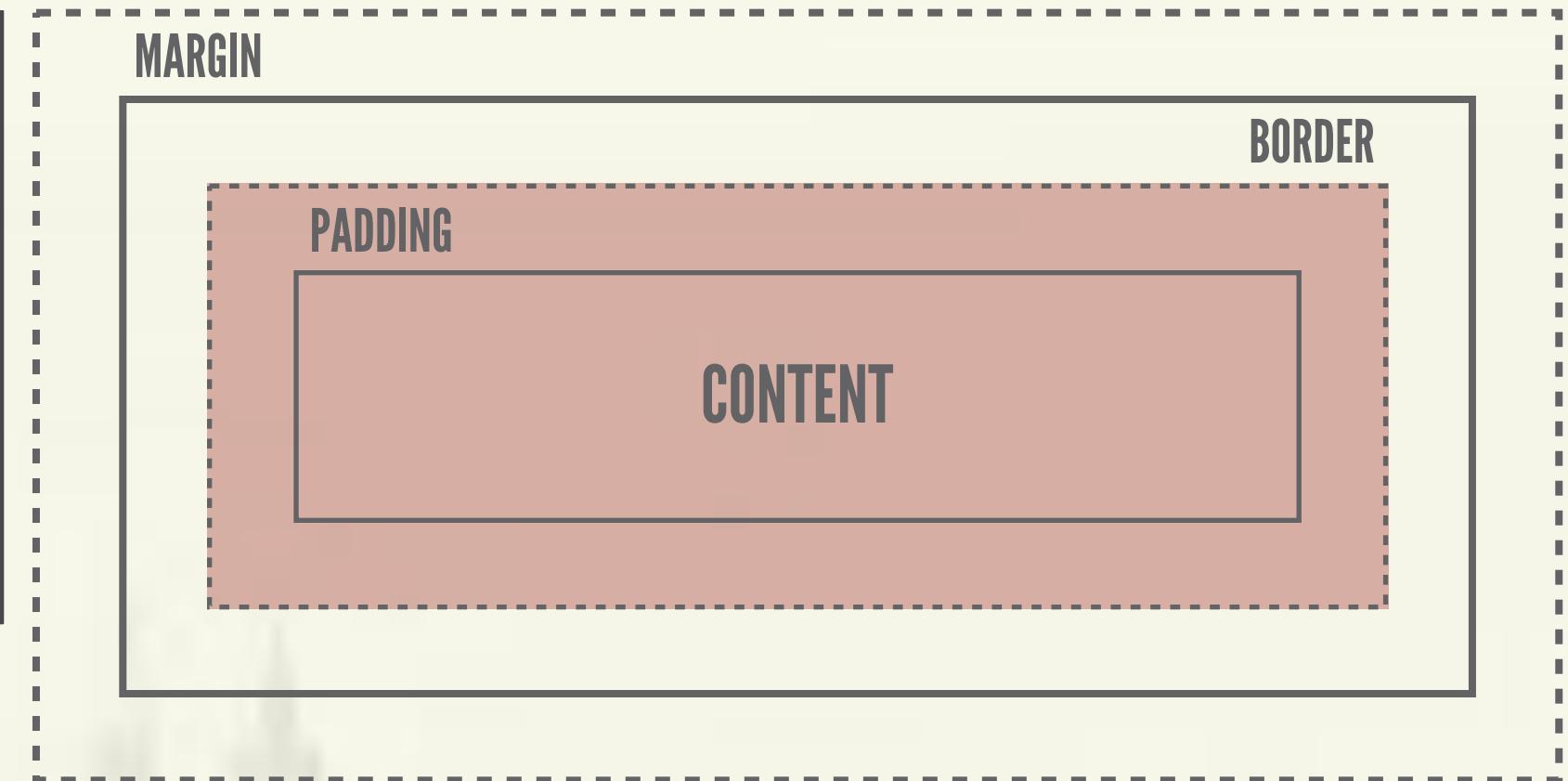
```
.box {  
  box-sizing: padding-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



PADDING-BOX

Calculating the width of the `.box`:

```
.box {  
  box-sizing: padding-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



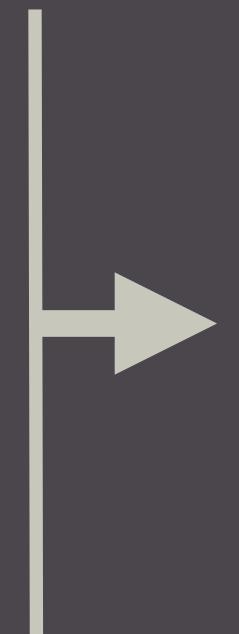
The `padding` has been included in
the `width` (content) area, so
they are treated as one region.



PADDING-BOX

Calculating the width of the `.box`:

```
.box {  
  box-sizing: padding-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



304px



BORDER-BOX

The width and height
include the **padding** and
border, but *not* the margin.



BORDER-BOX

Calculating the width of the `.box`:

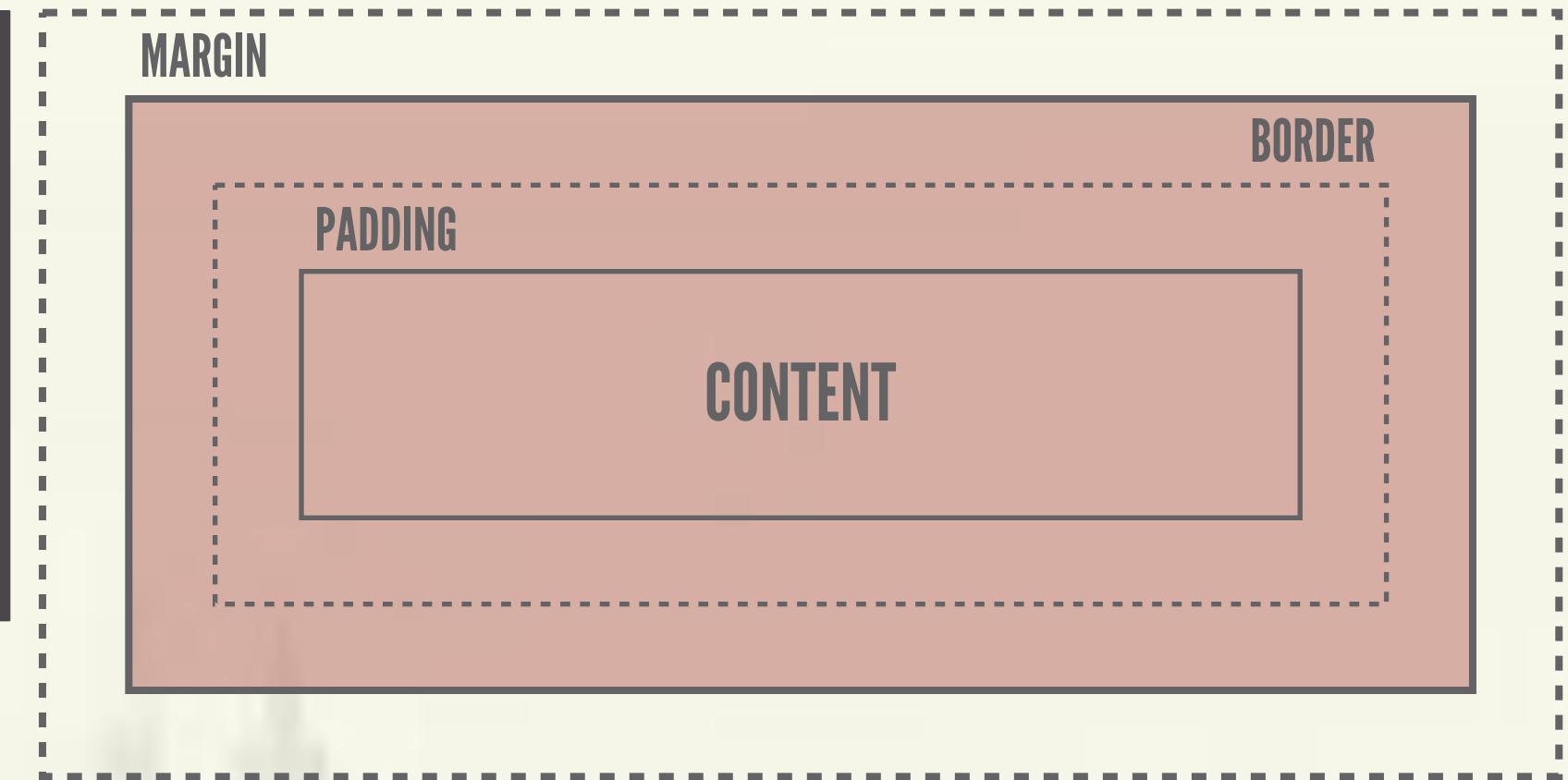
```
.box {  
  box-sizing: border-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



BORDER-BOX

Calculating the width of the `.box`:

```
.box {  
  box-sizing: border-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



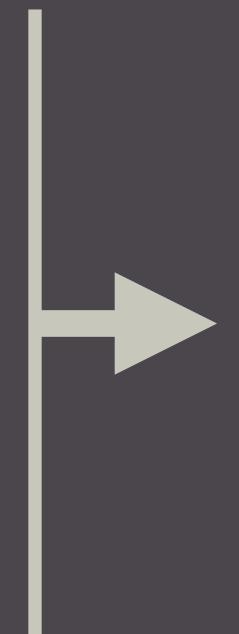
The `padding` and `border` has been included in the `width` (`content`) area, so they are treated as one region.



BORDER-BOX

Calculating the width of the `.box`:

```
.box {  
  box-sizing: border-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



300px





FRONT-END FORMATIONS



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MULTIPLE BACKGROUNDS

CSS3 allows you to apply **multiple backgrounds** to an element. They are stacked in the order in which you specify them.



MULTIPLE BACKGROUNDS

First, specify your **background-images** in a comma-delimited list:

```
.element {  
  background-image: url(bg1.png), url(bg2.png);  
}
```



MULTIPLE BACKGROUNDS

Then specify the `background-position` for each, in order:

```
.element {  
  background-image: url(bg1.png), url(bg2.png);  
  background-position: top left, center right;  
}
```



MULTIPLE BACKGROUNDS

Finally, specify the background-repeat for each:

```
.element {  
  background-image: url(bg1.png), url(bg2.png);  
  background-position: top left, center right;  
  background-repeat: no-repeat, no-repeat;  
}
```



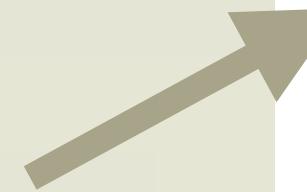
MULTIPLE BACKGROUNDS



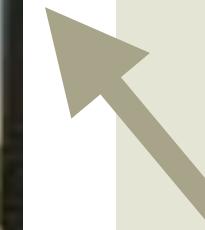
4.5 MULTIPLE BACKGROUNDS

MULTIPLE BACKGROUNDS

The first **background-image** we specified.



The second **background-image** we specified.



MULTIPLE BACKGROUNDS

You can also use the shorthand **background**:

```
.element {  
  background:  
    url(bg1.png) top left no-repeat,  
}
```



MULTIPLE BACKGROUNDS

You can also use the shorthand **background**:

```
.element {  
  background:  
    url(bg1.png) top left no-repeat,  
    url(bg2.png) center right no-repeat;  
}
```



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COLOR

CSS3 provides multiple ways to work with color:

- RGBa
- HSLa



RG**a**

RGB represents the three additive primary colors, red, green, and blue. In CSS3, we can also pass the alpha value (the “a” in **RG**a****), which represents the opacity of a color.



RGBa

Example usage of `rgba`:

```
.element {  
  color: rgba(0, 0, 0, 0.75);  
}
```



RGBa

Example usage of `rgba`:

```
.element {  
  color: rgba(0, 0, 0, 0.75);  
}
```



Here we're specifying a 75% opaque black `color` value.



RGBa

Example usage of `rgba`:

```
.element {  
  color: rgba(0, 0, 0, 0.75);  
}
```



Here we're specifying “0 0 0” as
the `RGB` value, which is black.



RGBa

Example usage of `rgba`:

```
.element {  
  color: rgba(0, 0, 0, 0.75);  
}
```



Here we're specifying a “0.75”
`alpha` value, which is 75% opaque.



HSLa

CSS3 also adds **HSLa** (Hue, Saturation, Lightness). In addition to providing the hue, saturation, and lightness values, you can specify the alpha value for the opacity of the color.



HSLa

Example usage of hsla:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



HSLa

Example usage of **hsla**:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



The **hue** value.



HSLa

Example usage of **hsla**:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



The **saturation** value.



HSLa

Example usage of **hsla**:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



The **lightness** value.



HSLa

Example usage of hsla:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



The alpha value.



HSLa + RGBa

HSLa is more intuitive than RGBa, and it's much easier to make color adjustments on the fly.



HSLa + RGBa

HSLa is more intuitive than RGBa, and it's much easier to make color adjustments on the fly.

However, use whichever color utility you prefer.



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OPACITY

CSS3 allows you to specify the **opacity** of an element using the **opacity** property.



OPACITY

Example usage of the `opacity` property:

```
.element {  
    opacity: 0.45;  
}
```



OPACITY

Example usage of the `opacity` property:

```
.element {  
  opacity: 0.45;  
}
```



Here we're specifying a “`0.45`”
`opacity` value, which is 45% opaque.



OPACITY

Example output of the opacity property:



OPACITY

Example output of the **opacity** property:



OPACITY

Opacity on an element
affects all elements that
are nested inside.



OPACITY

Example of the **opacity** property with nested elements:

```
<div class="element">  
  <h2>Hello.</h2>  
</div>
```

```
.element {  
  background: url(bg.jpg) center no-repeat;  
  opacity: 0.45;  
}
```



OPACITY

Example output of the `opacity` property with nested elements:



OPACITY

Example output of the `opacity` property with nested elements:



OPACITY

Example output of the **opacity** property with nested elements:

The **0.45 opacity** on the element affects the text as well as the image.



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GRADIENTS

CSS3 provides the ability to create **gradients**, smooth transitions between two or more colors.



GRADIENTS

There are two types of gradients that browsers support:

- Linear gradients
- Radial gradients



LINEAR GRADIENT

To create a **linear gradient**, we need to specify the starting point, the ending point, and optional stop-color points.



LINEAR GRADIENT

Example usage of a `linear-gradient`:

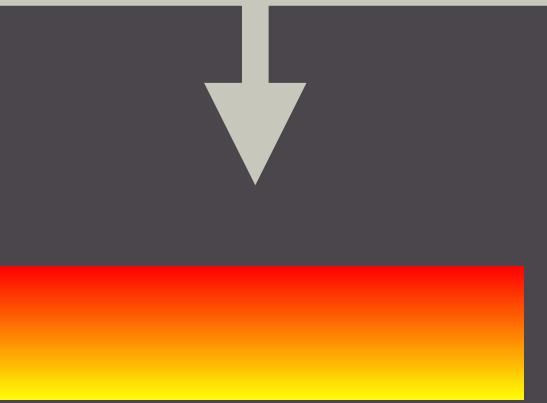
```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



LINEAR GRADIENT

Example usage of a `linear-gradient`:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



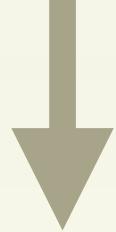
We can specify the direction through an angle or a keyword.



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



The **angle** is generally a degree (e.g. 45deg).



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



The **side-or-corner** consists of two keywords:

Horizontal: left or right

Vertical: top or bottom



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



The **color-stops** consists of a color and an optional stop position, which can be either a percentage or length.



LINEAR GRADIENT

Example usage of a `linear-gradient`:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



LINEAR GRADIENT

Example usage of a `linear-gradient`:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



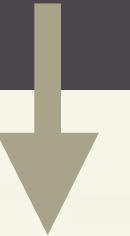
No angle is specified.



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



The **side-or-corner** is bottom, which makes the gradient go from the top to the bottom.



LINEAR GRADIENT

Example usage of a linear-gradient:

KEYWORDS

.element {	to top	→	0deg
background: linear-gradient(to bottom, #000, yellow);}	to bottom	→	180deg
	to right	→	270deg
	to left	→	90deg



LINEAR GRADIENT

Example usage of a `linear-gradient`:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



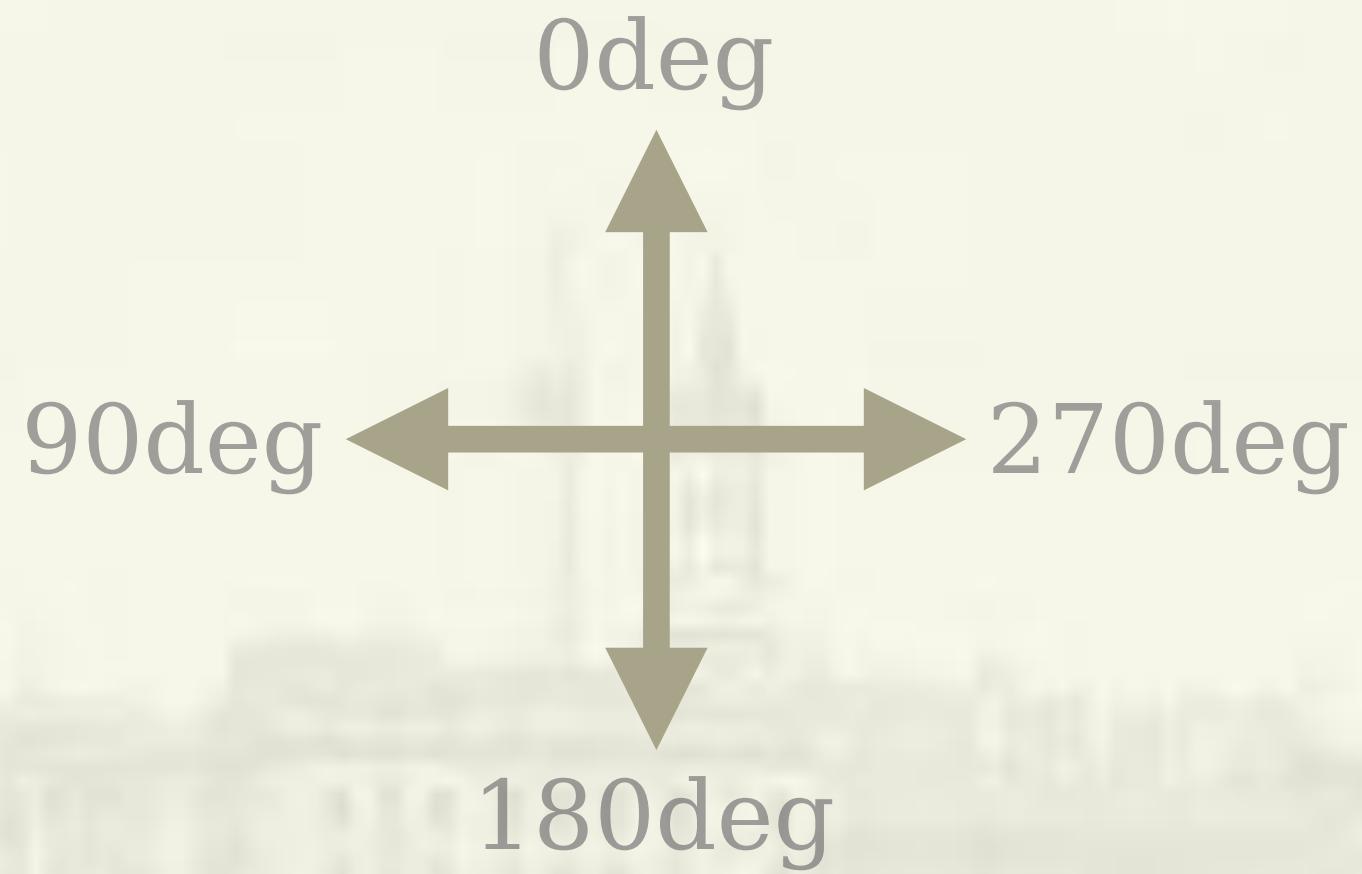
This is translated into `180deg`.



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



The top of the
gradient starts at **red**.



LINEAR GRADIENT

Example usage of a `linear-gradient`:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



The gradient ends at
`yellow` at the bottom.



RADIAL GRADIENT

A radial gradient, unlike a linear gradient, creates a gradient that extends from an origin, the center of the element, extending outward in a circular or elliptical shape.



RADIAL GRADIENT

A radial-gradient consists of:

- The center
- The ending shape contour and position
- Color stops



RADIAL GRADIENT

Example usage of a **radial-gradient** in its simplest form:

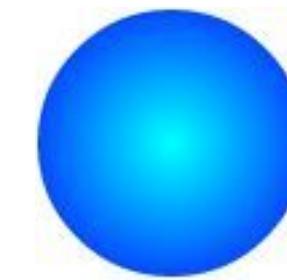
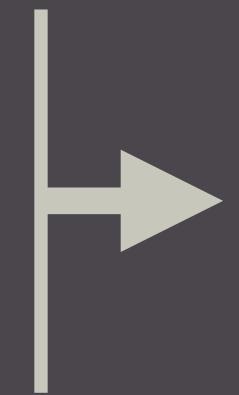
```
.element {  
  background:  
    radial-gradient(aqua, blue);  
}
```



RADIAL GRADIENT

Example usage of a **radial-gradient** in its simplest form:

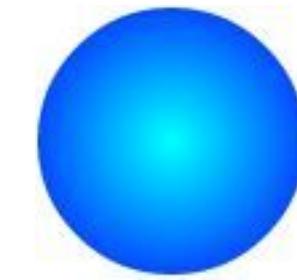
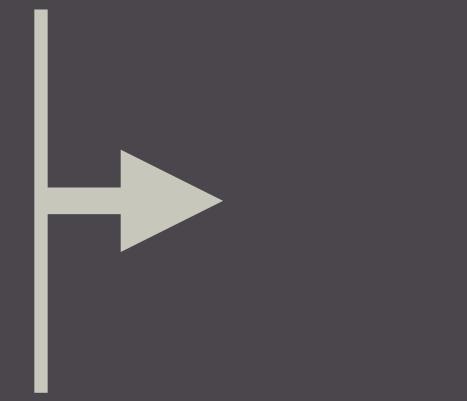
```
.element {  
  background:  
    radial-gradient(aqua, blue);  
}
```



RADIAL GRADIENT

Example usage of a **radial-gradient** in its simplest form:

```
.element {  
  background:  
    radial-gradient(aqua, blue);  
}
```



This creates a two-color elliptical gradient that radiates from the **center** by default.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



Specify the **shape** or **size** of the gradient.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



The shape of the gradient; **circle** or **ellipse**. The default is **ellipse**.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



The size of the gradient,
which consist of keywords.



RADIAL GRADIENT

Example usage of a radial-gradient:

KEYWORDS

```
radial-gradient( <size> [at <position>] )
```

closest-side

closest-corner

The size of the gradient,
which controls the size of the gradient.

farthest-side

farthest-corner



RADIAL GRADIENT

Example usage of a radial-gradient:

KEYWORDS

```
radial-gradient( <size> [at <position>] )
```

closest-side

closest-corner

The size of the gradient,
which controls the size of the gradient.

farthest-side

farthest-corner



The default value.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



The size can also be a
length or percentage.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



Same as **background-position**. Default is **center**.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



The **color-stops** consists of a color and an optional stop position, which can be either a percentage or length.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



The **shape** of the gradient is **circle**, rather than **ellipse**.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



The **position** of the gradient is **top left**.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



The first color-stop
is aqua.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



The last **color-stop**
is **blue**.



RADIAL GRADIENT

Example output of the `radial-gradient`:





FRONT-END FORMATIONS





FRONT-END FORMATIONS

Level 5 - Fonts & Interactions



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FONT FACE

Using `@font-face`, we have the ability to provide online fonts for use on our websites.



FONT FACE

Example usage of @font-face:

```
@font-face {  
}  
}
```



FONT FACE

We specify the `font-family`, which is what we'll use to call the font:

```
@font-face {  
    font-family: 'OpenSansRegular';  
}
```



FONT FACE

We add the location of the font files through the `src` property:

```
@font-face {  
    font-family: 'OpenSansRegular';  
    src: url('OpenSansRegular-webfont.eot');  
}
```



FONT FACE

We add the location of the font files through the `src` property:

```
@font-face {  
    font-family: 'OpenSansRegular';  
    src: url('OpenSansRegular-webfont.eot');  
}
```



we'll have to specify multiple
font types, which can be added
as additional `url()`'s to the files.



FONT FACE

We specify the **font-style**:

```
@font-face {  
    font-family: 'OpenSansRegular';  
    src: url('OpenSansRegular-webfont.eot');  
    font-style: normal;  
  
}
```



FONT FACE

We specify the **font-weight**:

```
@font-face {  
    font-family: 'OpenSansRegular';  
    src: url('OpenSansRegular-webfont.eot');  
    font-style: normal;  
    font-weight: normal;  
}
```



FONT FACE

Using `@font-face` in our stylesheet:

```
h1 {  
  font-family: 'OpenSansRegular';  
}
```



FONT FACE

Using `@font-face` in our stylesheet:

```
h1 {  
  font-family: 'OpenSansRegular';  
}
```



We specify the `font-family` as
the same one established in
the `@font-face` call.



FONT FACE

With `@font-face` fonts,
just like any other font
declaration, we'll want
to add fallback fonts.



FONT FACE

Using `@font-face` in our stylesheet with fallbacks:

```
h1 {  
  font-family: 'OpenSansRegular', Helvetica, Arial, sans-serif;  
}
```



Provide fallback fonts here,
as you normally would.



FONT FACE

Using varying weights with @font-face:

```
@font-face {  
    font-family: 'OpenSansBold';  
    src: url('OpenSansBold-webfont.eot');  
    font-style: normal;  
    font-weight: normal;  
}
```



FONT FACE

Using varying weights with @font-face:

```
@font-face {  
    font-family: 'OpenSansBold';  
    src: url('OpenSansBold-webfont.eot');  
    font-style: normal;  
    font-weight: normal;  
}
```



we're using a **bold** font
family of '**OpenSansBold**'.



FONT FACE

Using varying weights with @font-face:

```
h1 {  
  font-family: 'OpenSansBold';  
}
```



We use the bold version by
changing the **font-family**.



FONT FACE

We can alter the `@font-face` call in order to use the `font-weight` and `font-style` properties as usual.



FONT FACE

Using varying weights with @font-face:

```
@font-face {  
    font-family: 'OpenSansBold';  
    src: url('OpenSansBold-webfont.eot');  
    font-style: normal;  
    font-weight: normal;  
}
```



FONT FACE

Using varying weights with @font-face:

```
@font-face {  
    font-family: 'OpenSansRegular';  
    src: url('OpenSansBold-webfont.eot');  
    font-style: normal;  
    font-weight: normal;  
}
```



We can instead change the **font-family** to the same name as the regular weight version.



FONT FACE

Using varying weights with @font-face:

```
@font-face {  
    font-family: 'OpenSansRegular';  
    src: url('OpenSansBold-webfont.eot');  
    font-style: normal;  
    font-weight: normal;  
}
```



we keep the **src url()** the same in
order to include the **bold** font weight.



FONT FACE

Using varying weights with @font-face:

```
@font-face {  
    font-family: 'OpenSansRegular';  
    src: url('OpenSansBold-webfont.eot');  
    font-style: normal;  
    font-weight: bold;  
}
```



we change the `font-weight`
to **bold**.



FONT FACE

Using varying weights with @font-face:

```
h1 {  
    font-weight: bold;  
}
```



We use the bold version by
changing the `font-weight`
instead of the `font-family`.



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TRANSFORM

Using the **transform** property in CSS3, we can translate, rotate, scale, and skew elements in CSS.



TRANSLATE

You can create a 2D translation using **transform**:

```
.element {  
  transform: translate(20px, 30px);  
}
```



TRANSLATE

You can create a 2D translation using **transform**:

```
.element {  
  transform: translate(20px, 30px);  
}
```



Translate the **.element** 20px
to the right (x-axis).



TRANSLATE

You can create a 2D translation using **transform**:

```
.element {  
  transform: translate(20px, 30px);  
}
```



Translate the **.element**
30px down (y-axis).



TRANSLATE

Example output of the `transform translate`:



TRANSLATE

Example usage of a 2D translation using **transform**:

```
translate(<tx>, <ty>)
```



TRANSLATE

Example usage of a 2D translation using **transform**:

```
translate(<tx>, <ty>)
```



A **<transition-value>** for the **x-axis**, which can be either a length or percentage.



TRANSLATE

Example usage of a 2D translation using **transform**:

```
translate(<tx>, <ty>)
```



A **<transition-value>** for the y-axis, which can be either a length or percentage. If not specified, the value is 0.



TRANSLATE

You can use `translateX` and `translateY` to translate the `x` and `y` values individually:

```
.element {  
  transform: translateX(20px);  
}
```

```
.element {  
  transform: translateY(30px);  
}
```



TRANSLATE

You can use `translateX` and `translateY` to translate the `x` and `y` values individually:

```
translateX(<tx>)
```

```
translateY(<ty>)
```



ROTATE

With `rotate`, you can rotate an element clockwise around its origin by the specified angle.



ROTATE

Example usage of `rotate`:

```
.element {  
  transform: rotate(45deg);  
}
```



ROTATE

Example usage of **rotate**:

```
.element {  
  transform: rotate(45deg);  
}
```



The element is rotated **45** degrees.



ROTATE

Example output of the `transform rotate`:



SCALE

With `scale`, you can do a 2D scale by a specified unitless number:

```
.element {  
  transform: scale(1.2);  
}
```



SCALE

With `scale`, you can do a 2D scale by a specified unitless number:

```
.element {  
  transform: scale(1.2);  
}
```



The element is scaled to
the unitless number, `1.2`.



SCALE

Example output of the transform scale:



SCALE

Exampled usage of scale:

```
scale(<sx>, <sy>)
```



SCALE

Exampled usage of **scale**:

```
scale(<sx>, <sy>)
```



A unitless number
for the **x-axis**.



SCALE

Exampled usage of **scale**:

```
scale(<sx>, <sy>)
```



A unitless number for the **y-axis**. If not specified, it defaults to the value of **<sx>**.



SCALE

You can use `scaleX` and `scaleY` to translate the `x` and `y` values individually:

```
.element {  
  transform: scaleX(1.2);  
}
```

```
.element {  
  transform: scaleY(0.3);  
}
```



SCALE

You can use `scaleX` and `scaleY` to **scale** the x and y values individually:

```
scaleX(<sx>)
```

```
scaleY(<sy>)
```



SKEW

With **skew**, an element is skewed around the x or y axis by the angle specified.



SKEW

Example usage of `skewX`:

```
.element {  
  transform: skewX(-25deg);  
}
```



SKEW

Example usage of `skewX`:

```
.element {  
  transform: skewX(-25deg);  
}
```



The element is skewed -25
degrees along the x-axis.



SKEW

Example output of the `transform skewX`:



SKEW

Example usage of `skewX`:

```
skewX(<ax>)
```



SKEW

Example usage of `skewX`:

```
skewX(<ax>)
```



An `<angle>`
for the x-axis.



SKEW

Example usage of `skewY`:

```
skewY(<ay>)
```



SKEW

Example usage of `skewY`:

```
skewY(<ay>)
```



An `<angle>`
for the y-axis.



SKEW

Example usage of `skewX` and `skewY`:

```
.element {  
  transform: skewX(25deg);  
}
```

```
.element {  
  transform: skewY(-85deg);  
}
```



SKEW

Example output of the `transform skewX` and `skewY`:



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TRANSITION

CSS3 provides **transitions**, which allow you to transition between two states of a specified element.



TRANSITION

Example usage of **transition**:

```
.element {  
  background-color: black;  
}  
  
```



TRANSITION

Example usage of **transition**:

```
.element {  
    background-color: black;  
}
```

```
.element:hover {  
    background-color: blue;  
}
```



TRANSITION

Example usage of **transition**:

```
.element {  
    background-color: black;  
    transition: background-color 0.2s ease-in-out;  
}
```

```
.element:hover {  
    background-color: blue;  
}
```

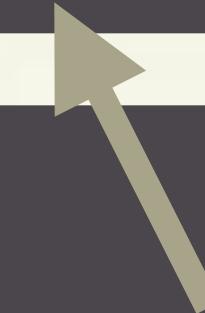


TRANSITION

Example usage of **transition**:

```
.element {  
  background-color: black;  
  transition: background-color 0.2s ease-in-out;  
}
```

```
.element:hover {  
  background-color: blue;  
}
```

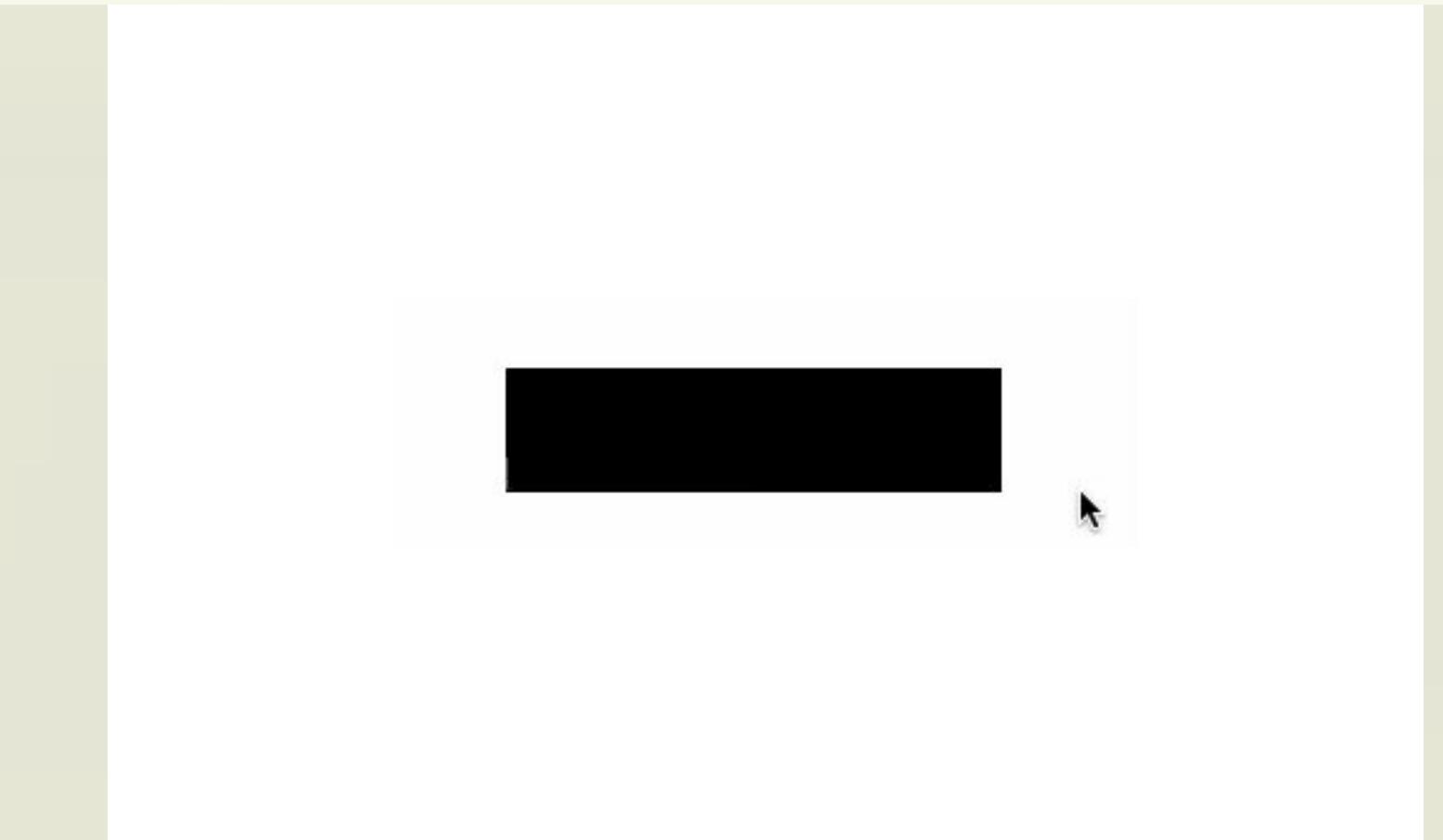


The **background-color** transitions
from **black** to **blue** over the period
of 0.2 seconds.



TRANSITION

Example output of the transition:



TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



The CSS property you
want to **transition**.



TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



The **duration** of the **transition**. The default value is 0s, or 0 seconds.



TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



The timing of the
transition itself.



TRANSITION

Example usage of the shorthand transition property:

```
transition: <property> <duration> <timing-function> <on> <delay>
```

- ease
- ease-in
- ease-in-out
- linear
- cubic-bezier
 - step-start
 - step-end
 - steps()

The timing of the
transition itself?



TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



?

The amount of time to wait between the change that is being requested on a specific property, and the start of the **transition**.



TRANSITION

You can set the `transition` values individually, as well:

```
.element {  
}  
}
```



TRANSITION

You can set the `transition` values individually, as well:

```
.element {  
  transition-property: background-color;  
  
}
```



TRANSITION

You can set the `transition` values individually, as well:

```
.element {  
  transition-property: background-color;  
  transition-duration: 0.2s;  
}
```



TRANSITION

You can set the `transition` values individually, as well:

```
.element {  
  transition-property: background-color;  
  transition-duration: 0.2s;  
  transition-timing-function: ease-in-out;  
}
```



TRANSITION

You can set the `transition` values individually, as well:

```
.element {  
  transition-property: background-color;  
  transition-duration: 0.2s;  
  transition-timing-function: ease-in-out;  
  transition-delay: 0.1s;  
}
```



TRANSITION

Using all as the transition-property, we can transition multiple properties at once.



TRANSITION

Example usage of **transition** using the `all` property:

```
.element {  
    background-color: black;  
    color: white;  
}
```

```
.element:hover {  
    background-color: grey;  
    color: black;  
}
```



TRANSITION

Example usage of **transition** using the **all** property:

```
.element {  
    background-color: black;  
    color: white;  
    transition: all 0.2s ease-in-out;  
}
```

```
.element:hover {  
    background-color: grey;  
    color: black;  
}
```



TRANSITION

Example usage of **transition** using the **all** property:

```
.element {  
  background-color: black;  
  color: white;  
  transition: all 0.2s ease-in-out;  
}
```

```
.element:hover {  
  background-color: grey;  
  color: black;  
}
```

The **all** property will transition
both the **background-color** AND
the **color** properties.



TRANSITION

Example output of the **transition** using the **all** property:

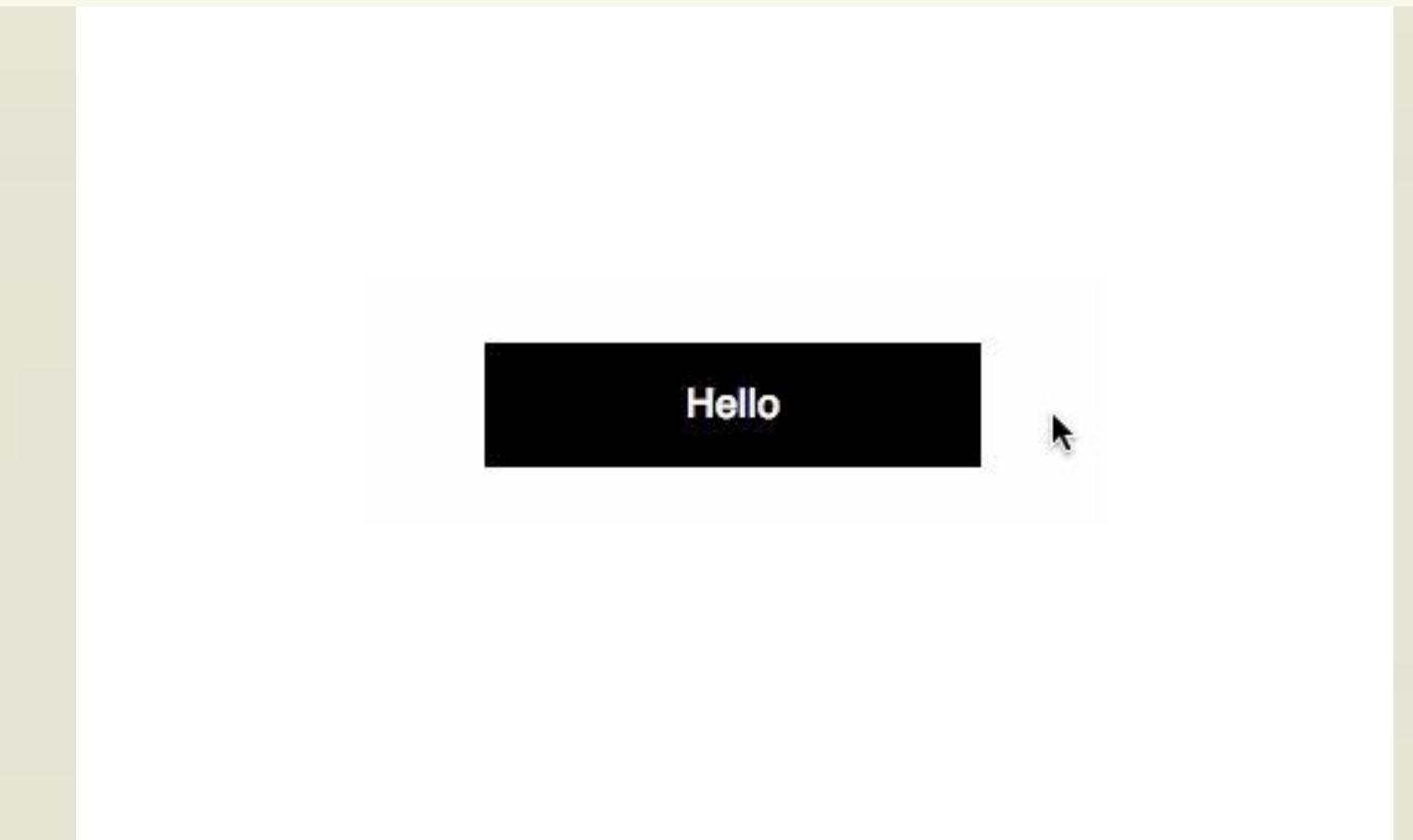


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PROGRESSIVE ENHANCEMENT

The term “progressive enhancement” refers to the use of newer features that add to the experience in modern browsers that support those features, but doesn’t detract from the experience in older browsers.



PROGRESSIVE ENHANCEMENT

Example of progressive enhancement:

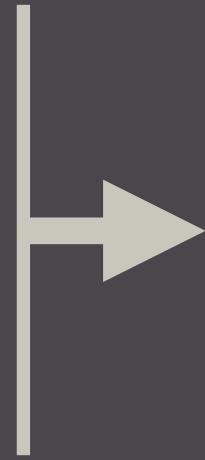
```
.element {  
    background: #ccc;  
    border-radius: 10px;  
    box-shadow: 0 1px 1px rgba(0, 0, 0, 0.75);  
}
```



PROGRESSIVE ENHANCEMENT

Example of progressive enhancement:

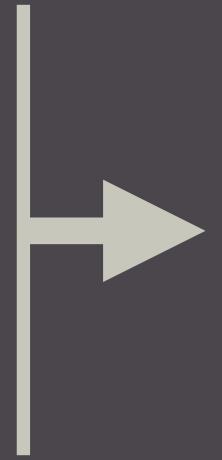
```
.element {  
    background: #ccc;  
    border-radius: 10px;  
    box-shadow: 0 1px 1px rgba(0, 0, 0, 0.75);  
}
```



PROGRESSIVE ENHANCEMENT

Example of progressive enhancement:

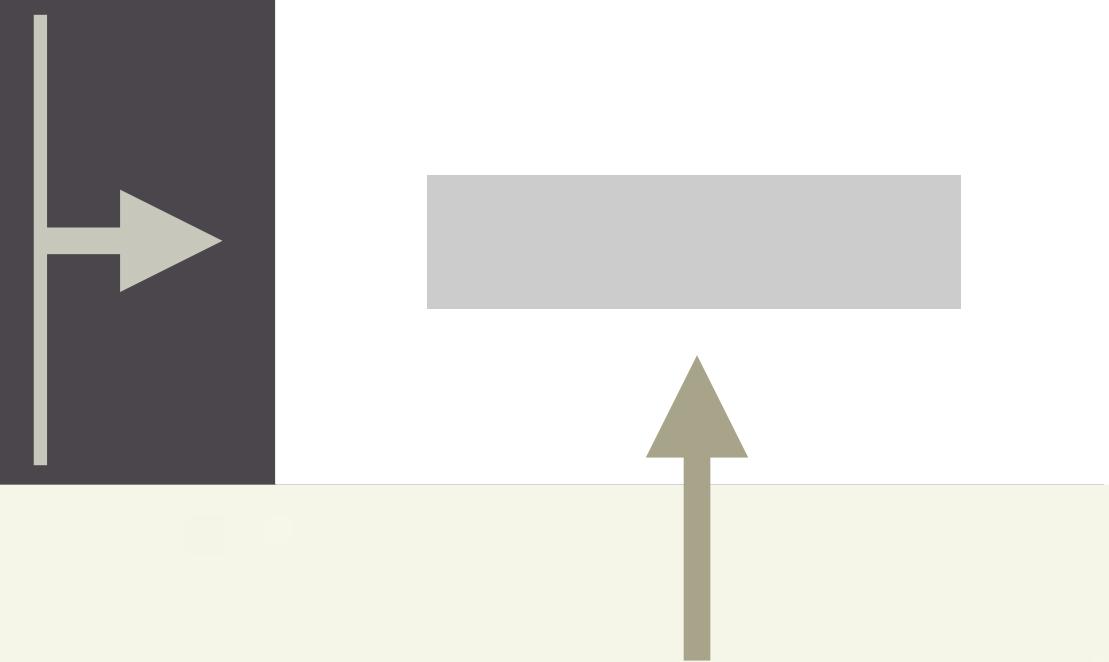
```
.element {  
    background: #ccc;  
    border-radius: 10px;  
    box-shadow: 0 1px 1px rgba(0, 0, 0, 0.75);  
}
```



PROGRESSIVE ENHANCEMENT

Example of progressive enhancement:

```
.element {  
    background: #ccc;  
    border-radius: 10px;  
    box-shadow: 0 1px 1px rgba(0, 0, 0, 0.75);  
}
```



If the `border-radius` and `box-shadow` properties aren't supported, we still get a usable design.





FRONT-END FORMATIONS

