block layout
background floating
Portfolio tips
Recall: block vs. inline elements in html

HTML Block and Inline Elements

Every HTML element has a default display value depending on what type of element it is. The default display value for most elements is block or inline.

Block-level Elements

A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).

The <div> element is a block-level element.

Examples of block-level elements:
- <div>
- <h1> - <h6>
- <p>
- <form>

The <div> Element

The <div> element is a block-level element that is often used as a container for other HTML elements.

Inline Elements

An inline element does not start on a new line and only takes up as much width as necessary.

This is an inline <span> element inside a paragraph.

Examples of inline elements:
- <span>
- <a>
- <img>

The <span> Element

The <span> element is an inline element that is often used as a container for some text.
The Box Model: The CSS box model is a box that wraps around every HTML element.

- **Content**: The content of the box, where text and images appear.
- **Padding**: Clears an area around the content. The padding is transparent.
- **Border**: A border that goes around the padding and content.
- **Margin**: Clears an area outside the border. The margin is transparent.

The box model allows one to:
1. add a border around elements, and
2. define space between elements.

http://www.w3schools.com/css/css_boxmodel.asp
The Box Model

- border
- padding
- margin

Content

width

height

w3schools.com
<!DOCTYPE html>
<html>
<head>
<style>
  div {
    width: 320px;
    padding: 10px;
    border: 5px solid gray;
    margin: 0;
  }
</style>
</head>
<body>
<h2>Calculate the total width:</h2>
<img src="klematis4_big.jpg" width="350" height="263" alt="Klematis">
<div>The picture above is 350px wide. The total width of this element is also 350px.</div>
</body>
</html>

width = 320 + 10 + 10 + 5 + 5 + 0 + 0
width = ?
Important: When you set the width and height properties of an element with CSS, you just set the width and height of the content area. To calculate the full size of an element, you must also add padding, borders and margins.

http://www.w3schools.com/css/tryit.asp?filename=trycss_boxmodel_width
It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way— in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.

Why don't we see any blue?
It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of believing, it was the epoch of unbelief... It was the season of Light, it was the season of Darkness; it was the spring of hope; it was the winter of despair. We had all跪 direct to Heaven; we had all跪 direct to Hell; in short, the period was so full of paradox that we had little room for error.
Box Model Layout

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way— in short, the period was so far like the present
CSS Padding

CSS has properties for specifying the padding for each side of an element:

- `padding-top`
- `padding-right`
- `padding-bottom`
- `padding-left`

CSS Padding Properties

The CSS padding properties are used to generate space around content. The padding properties set the size of the white space between the element content and the element border.

This element has a padding of 50px.
Box Model Layout

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way – in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.

```
#box {
    background-color: blue;
    padding: 20px 20px 20px 20px;
}
```
CSS Border Properties

The CSS border properties allow you to specify the style, width, and color of an element's border.

This element has a groove border that is 15px wide and green.

Border Style

The `border-style` property specifies what kind of border to display.

The following values are allowed:

- `dotted` - Defines a dotted border
- `dashed` - Defines a dashed border
- `solid` - Defines a solid border
- `double` - Defines a double border
- `groove` - Defines a 3D grooved border. The effect depends on the border-color value
- `ridge` - Defines a 3D ridged border. The effect depends on the border-color value
- `inset` - Defines a 3D inset border. The effect depends on the border-color value
- `outset` - Defines a 3D outset border. The effect depends on the border-color value
- `none` - Defines no border
- `hidden` - Defines a hidden border

The `border-style` property can have from one to four values (for the top border, right border, bottom border, and the left border).
It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way— in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.
p.dotted {border-style: dotted;}
p.dashed {border-style: dashed;}
p.solid {border-style: solid;}
p.double {border-style: double;}
p.groove {border-style: groove;}
p.ridge {border-style: ridge;}
p.inset {border-style: inset;}
p.outset {border-style: outset;}
p.none {border-style: none;}
p.hidden {border-style: hidden;}
p.mix {border-style: dotted dashed solid double;}
Box Model Layout

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way- in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.

#box {
  background-color: blue;
  padding: 20px 20px 20px 20px;
  border: 5px dashed yellow;
  margin: 50px;
}

Box Model Layout
```css
#box {
    background-color: blue;
    padding: 20px 20px 20px 20px;
    border: 5px dashed yellow;
    margin: 50px;
    width: 400px;
}
```

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way- in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.
What is the size of the box?

400 is really the size of the content

```
#box {
    background-color: blue;
    padding: 20px 20px 20px 20px;
    border: 5px dashed yellow;
    margin: 50px;
    width: 400px;
}
```
CSS Syntax

```css
box-sizing: content-box|border-box|initial|inherit;
```

Property Values

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>content-box</td>
<td>Default. The width and height properties (and min/max properties) includes only the content. Border, padding, or margin are not included</td>
</tr>
<tr>
<td>border-box</td>
<td>The width and height properties (and min/max properties) includes content, padding and border, but not the margin</td>
</tr>
<tr>
<td>initial</td>
<td>Sets this property to its default value. Read about initial</td>
</tr>
<tr>
<td>inherit</td>
<td>Inherits this property from its parent element. Read about inherit</td>
</tr>
</tbody>
</table>
content-box vs border-box

Note: bootstrap uses border-box as their sizing model.

Now, what is the size of the box?

350 + 20 + 20 + 5 + 5

???
content-box vs border-box

Now, what is the size of the box?

```
#box {
    background-color: blue;
    padding: 20px 20px 20px 20px;
    border: 5px dashed yellow;
    margin: 50px;
    width: 400px;
    box-sizing: content-box;
}
```

```
400 + 20 + 20 + 5 + 5
```
CSS * Selector

Example

Select all elements, and set their background color to yellow:

```css
* {
    background-color: yellow;
}
```

Try it yourself »

More "Try it Yourself" examples below.

Definition and Usage

The * selector selects all elements.

The * selector can also select all elements inside another element (See "More Examples").
It applies this property to every element in HTML.
Can I use **border-box**?

1 result found

**CSS3 Box-sizing**

Method of specifying whether or not an element's borders and padding should be included in size units

<table>
<thead>
<tr>
<th>Current aligned</th>
<th>Usage relative</th>
<th>Show all</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 8</td>
<td>Firefox 13</td>
<td>Safari 11</td>
</tr>
<tr>
<td>9</td>
<td>48</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>43</td>
<td>34</td>
</tr>
<tr>
<td>11</td>
<td>45</td>
<td>9.2</td>
</tr>
<tr>
<td>14</td>
<td>48</td>
<td>9.3</td>
</tr>
<tr>
<td>46</td>
<td>9.1</td>
<td>47</td>
</tr>
<tr>
<td>47</td>
<td>9.2</td>
<td>51</td>
</tr>
</tbody>
</table>

Notes: Known issues (6), Resources (6), Feedback

Firefox currently also supports the `padding-box` in addition to `content-box` and `border-box`, though this value has been removed from the specification.
More on the margin 😊 ... they are cumulative
What about stacked elements?
<DOCTYPE html>
<html>
<head>
  <meta charset="utf-8">
  <title>Using the Box Model Layout</title>
  <style>
    * { box-sizing: border-box; }

    body {
      margin: 0px;
      padding: 0px;
      background-color: gray;
    }

    #box {
      background-color: blue;
      padding: 20px 20px 20px 20px;
      border: 5px dashed yellow;
      width: 400px;
    }

    #content {background-color: #ccffcc; }

    h1 {margin-bottom: 40px; }
  </style>
</head>
</html>
... what will happen?

add this property
Box Model Layout

It was the best of times, it was the worst of times; it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity; it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair; we had everything before us, we had nothing before us; we were all going direct to Heaven, we were all going direct to Hell.

The period was so like the present period, that some of its worthiest authorities insisted on its being received, for good or for evil, in the supposition of comparison only.
It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of unbelief; it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair; we had everything before us, we had nothing before us; we were all going direct to Heaven, we were all going direct the other way; in short, the period was so far like the present period, that some of its feature antireproduced in our minds, for good or for evil, in the superlative degree of comparison only.
It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way—in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.
Resetting browser defaults using universal * selector
It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way— in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.
Box Model Layout

In the olden days, it was the age of innocence, it was the age of foolishness, it was the age of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the springtime of life, we had everything before us, we had nothing before us. We were all going direct to Heaven, we were all going direct to Hell. He who had the 'best period,' the 'sweetest period,' the 'purer period,' the 'prospect of greatest success,' the 'best of all possible worlds,' was the man for the age. The man of the age was the man who had the greatest number of the best of all possible worlds before him. The age of the greatest number of the best of all possible worlds,
Working with overflows

Box Model Layout

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct to Hell, in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.
It was the best of times, it was the worst of times, it was
the age of wisdom, it was the age of foolishness, it was
the epoch of belief, it was the epoch of incredulity, it was
the season of Light, it was the season of Darkness, it was
the spring of hope, it was the winter of despair, we had
everything before us, we had nothing before us, we were
all going direct to Heaven, we were all going direct the
other way— in short, the period was so far like the present
period, that some of its noisiest authorities insisted on its
being received, for good or for evil, in the superlative
degree of comparison only.
Box Model Layout

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct to Hell; in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.
Definition and Usage

The overflow property specifies what happens if content overflows an element's box.

**Default value:** visible

**Inherited:** no

**Animatable:** no. Read about animatable

**Version:** CSS2

**JavaScript syntax:** `object.style.overflow = "scroll"`

CSS Syntax

```css
overflow: visible|hidden|scroll|auto|initial|inherit;
```

Property Values

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Play it</th>
</tr>
</thead>
<tbody>
<tr>
<td>visible</td>
<td>The overflow is not clipped. It renders outside the element's box. This is default</td>
<td>Play it</td>
</tr>
<tr>
<td>hidden</td>
<td>The overflow is clipped, and the rest of the content will be invisible</td>
<td>Play it</td>
</tr>
<tr>
<td>scroll</td>
<td>The overflow is clipped, but a scroll-bar is added to see the rest of the content</td>
<td>Play it</td>
</tr>
<tr>
<td>auto</td>
<td>If overflow is clipped, a scroll-bar should be added to see the rest of the content</td>
<td>Play it</td>
</tr>
<tr>
<td>initial</td>
<td>Sets this property to its default value. Read about initial</td>
<td>Play it</td>
</tr>
<tr>
<td>inherit</td>
<td>Inherits this property from its parent element. Read about inherit</td>
<td>Play it</td>
</tr>
</tbody>
</table>
It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we
This is a short demo on background properties

Many properties associated with the background.
<title>Background Stuff</title>
<style>
    #bg {
        width: 500px;
        height: 500px;
        background-color: pink;
    }
</style>

This is a short demo on background properties

Many properties associated with the background.
Backgrounds in your webpage:

CSS Backgrounds

Previous

The CSS background properties are used to define the background effects for elements.

CSS background properties:

- background-color
- background-image
- background-repeat
- background-attachment
- background-position
The URL supplied is relative variable, but it has to be relative to your CSS. If we were to put it inside of a subfolder like CSS or styles subfolder, the URL would be different.
This is a short demo on background properties

Many properties associated with the background.
We are using a background-color property and a background-image property at the same time. Image wins in terms of priority. It is on top of the color.

no-repeat will just put one image in the top left corner by default.
One can also specify the position of the image within the element.
background-color, background-image, repeat, etc are individual properties

one can combine them all into one

it disappeared is because background property is being specified after background-color property – the background property is over-riding the subproperty specifications.

What happened to the "pink"?
CSS Layout - float and clear

The **float** property specifies whether or not an element should float.

The **clear** property is used to control the behavior of floating elements.

---

The float Property

In its simplest use, the **float** property can be used to wrap text around images.

The following example specifies that an image should float to the right in a text:

```
Example

img {
  float: right;
  margin: 0 0 10px 10px;
}
```
https://www.youtube.com/watch?v=xara4Z1b18I
<html>
  <head>
    <meta charset="utf-8">
    <title>Position Elements by Floating</title>
    <style>
      div{
        background-color: #cccccc;
      }
      p{
        width: 50px;
        height: 50px;
        border: 1px solid black;
      }
      #p1 {
        background-color: #a52a2a;
      }
      #p2 {
        background-color: #de8878;
      }
      #p3 {
        background-color: #5f92a0;
      }
      #p4 {
        background-color: #ff7f50;
      }
    </style>
  </head>
  <body>
    <h1>Floating through life!</h1>
    <div>
      <section>
        Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...
      </section>
    </div>
  </body>
</html>
When you float elements, the browser takes them out of the regular document flow.

The box jumped all the way to the right.

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...
When elements are floated...

They are taken out of the regular document “flow”

to illustrate this:
remove the float right (p1), and instead make every single paragraph box float to the left – giving a margin-right of 10px so that the boxes are spaced.

what happened to the div?

div seemed to have completely collapsed and the only thing that's really keeping it open at all is the text.
To correct it, we need to tell the browser that when it comes to this section element, the browser should resume the regular document flow.
By adding to the section styling `clear: left`. It tells the browser that the section element is announcing that nothing should be allowed to be floating to the left of it.

Remember that all of the paragraphs that are being floated are being floated to the left.
By adding `clear: left` nothing should be allowed to flow to the left of it.

box number three moved in its own line again and is floated to the left again

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...
Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...
float the first element to the left
float the second box to the right
both boxes (box 1 and box 2) floated and the other two (boxes 3 and 4) moved up into their places

In order to move them to the next line, we can just say clear. And now we need to clear what?
box floating to the left and there's a box floating to the right, so we can say clear: left and it will work.

So it seems like in this particular circumstance, it doesn't make any difference whether you clear left or right.
make the right box much taller than it is now. Change the height of box 2 to 100 pixels

This clear is being ignored as the box went all the way down --- box 3 should be on a line after box 2.

The reason this is happening is because this element is only being cleared from the left --- I'm not clearing it from the right floating elements.

Floating through life!

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...
Floating through life!

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...
Floating through life!

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...
Floating through life!

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...

To ensure that both columns, or both left and right floated elements are not encroaching on our space here of the third element. Use `clear: both`!
what we want to achieve is that this first paragraph should be the left column and the second paragraph should be the right column
we're still using the default box sizing which is content-box.

The second paragraph is still on the bottom. Why is this happening?

width should be 50% of its containing element, and the containing element is the div

the div is a block level element, so it tries to fill in the entire width of its containing element, which is the body or the entire browser
This illustrates that floated elements will float to the next line when they can't fit on the same line.
Floating through life with two columns!

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...

There was a miller whose only inheritance to his three sons was his mill, his donkey, and his cat. The division was soon made. They hired neither a clerk nor an attorney, for they would have eaten up all the poor patrimony. The eldest took the mill, the second the donkey, and the youngest nothing but the cat.

This is the next section in your layout.
Floating through life with two columns!

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding... There was a miller whose only inheritance to his three sons was his mill, his donkey, and his cat. The division was soon made. They hired neither a clerk nor an attorney, for they would have eaten up all the poor patrimony. The eldest took the mill, the second the donkey, and the youngest nothing but the cat.

This is the next section in your layout.
Floating through life with two columns!

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...

There was a miller whose only inheritance to his three sons was his mill, his donkey, and his cat. The division was soon made. They hired neither a clerk nor an attorney, for they would have eaten up all the poor patrimony. The eldest took the mill, the second the donkey, and the youngest nothing but the cat.

This is the next section in your layout.

Floating through life with two columns!

Once upon a time, there was a little girl who lived in a village near the forest. Whenever she went out, the little girl wore a red riding...

There was a miller whose only inheritance to his three sons was his mill, his donkey, and his cat. The division was soon made. They hired neither a clerk nor an attorney, for they would have eaten up all the poor patrimony. The eldest took the mill, the second the donkey, and the youngest nothing but the cat.

This is the next section in your layout.
Floating elements can produce very flexible layouts. Floats are taken out of normal document flow. Floats don’t have vertical margin collapse. To resume normal document flow, use the `clear` property.