

# Cascading Style Sheets III

## CSS3, Box Model & Display



# Introduction

1. Recap of Week 4
2. Revision exercise
3. CSS3
4. Box Model
5. Display attribute

# Revision exercises

## Lighthouse Island Bistro



### Locally Roasted Free-Trade Coffee

Indulge in the aroma of freshly ground roast coffee. Specialty drinks are available hot or cold.

### Specialty Pastries

Enjoy a selection of our fresh-baked, organic pastries, including fresh-fruit muffins, scones, croissants, and cinnamon rolls.

### Lunchtime is Anytime

Savor delicious wraps and sandwiches on hearty, whole-grain breads with locally-grown salad, fruit, and vegetables.

### Panoramic View

Take in some scenery!

The top of our lighthouse offers a panoramic view of the countryside. Challenge your friends to climb our 100-stair tower.

[Home](#)  
[Menu](#)  
[Directions](#)  
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## Lighthouse Island Bistro

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1. Remove all extra space at the bottom and sides of the footer (hint: padding).
2. Make the width of the nav in the footer 30% and centre-align it.

# Revision exercises

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3. Make the footer pink.

4. Make the main navigation menu horizontal (hint: look at the last few slides of last week's lecture). Start with increasing the width to 30%.

# Revision exercises

## Lighthouse Island Bistro



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- When you hover over links in the main navigation menu, they should go pink (but not in the bottom nav).

# Some CSS3 Features

# CSS3 Rounded Corners

This box has rounded corners!

```
div
{
border:2px solid;
border-radius:25px;
}
```

# CSS3 Rounded Corners

## Lighthouse Island Bistro



[Home](#) [Menu](#) [Directions](#) [Contact](#)

### Locally Roasted Free-Trade Coffee

Indulge in the aroma of freshly ground roast coffee. Specialty drinks are available hot or cold.

```
div
{
border:2px solid;
border-radius:25px;
}
```

1. Format the main menu as follows:

- a. Put a box with light blue rounded corners around the main menu.
- b. Centre align the content.
- c. Put 3px margins between each menu item

# CSS3 Box Shadow



```
div
{
  box-shadow: 10px 10px 5px #888888;
}
```

# CSS3 Background-Size

```
div
{
background:url(img_flwr.gif);
background-size:80px 60px;
background-repeat:no-repeat;
}
```

```
div
{
background:url(img_flwr.gif);
background-size:100% 100%;
background-repeat:no-repeat;
}
```

# CSS3 Multiple Background Images



```
body
{
background:url(img_tree.gif),url(img_flwr.gif);
background-size:100% 100%;
background-repeat:no-repeat;
}
```

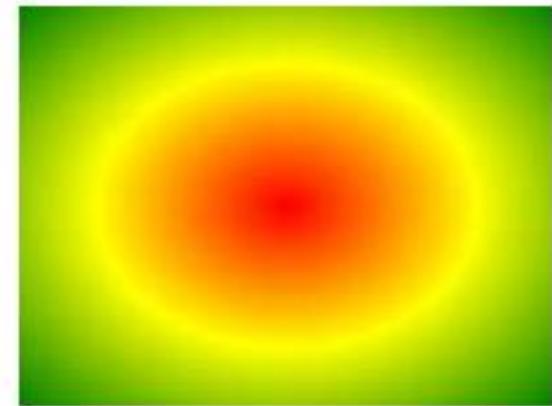
# CSS3 Gradients

- 2 types of gradients
  - Linear gradients
  - Radial gradients

**Example of Linear Gradient:**



**Example of Radial Gradient:**



# CSS3 Linear Gradient

- To create a gradient, you need to define at least 2 colors:



```
#grad1 {  
    height: 200px;  
    background: -webkit-linear-gradient(red, blue); /* For Safari 5.1 to 6.0 */  
    background: -o-linear-gradient(red, blue); /* For Opera 11.1 to 12.0 */  
    background: -moz-linear-gradient(red, blue); /* For Firefox 3.6 to 15 */  
    background: linear-gradient(red, blue); /* Standard syntax (must be last) */  
}
```

# CSS3 Linear Gradient

The screenshot shows a website for "Lighthouse Island Bistro". The header features a large, dark green title "Lighthouse Island Bistro" over a background image of a lighthouse at sunset. Below the title is a navigation bar with links: Home, Menu, Directions, and Contact. The main content area has a light blue background. It includes sections for "Locally Roasted Free-Trade Coffee" (with a note about specialty drinks), "Specialty Pastries" (describing fresh-baked, organic options), "Lunchtime is Anytime" (mentioning wraps and sandwiches), and "Panoramic View" (inviting visitors to climb the 100-stair tower). At the bottom, there's a copyright notice ("Copyright © 2012") and a footer navigation bar with the same links as the header.

2. Make the background of the page a linear gradient from light blue to white.

[https://www.w3schools.com/css/css3\\_gradients.asp](https://www.w3schools.com/css/css3_gradients.asp)

# CSS3 Word Wrap

If a word is too long to fit within an area, it expands outside:

This paragraph contains a very long word:  
thisisaveryveryveryveryveryverylongword.  
The long word will break and wrap to the next line.

In CSS3, the word-wrap property allows you to force the text to wrap - even if it means splitting it in the middle of a word:

This paragraph contains a very long word:  
thisisaveryveryveryveryveryveryverylongword. The long word will break and wrap to the next line.

`p {word-wrap:break-word;}`

[https://www.w3schools.com/cssref/css3\\_pr\\_word-wrap.asp](https://www.w3schools.com/cssref/css3_pr_word-wrap.asp)

# CSS3 Text Shadow

- Horizontal shadow, vertical shadow, blur distance

Text shadow effect!

```
h1
{
text-shadow: 5px 5px 5px #FF0000;
}
```

# CSS3 Multiple Columns

- Specifies the number of columns an element should be divided into

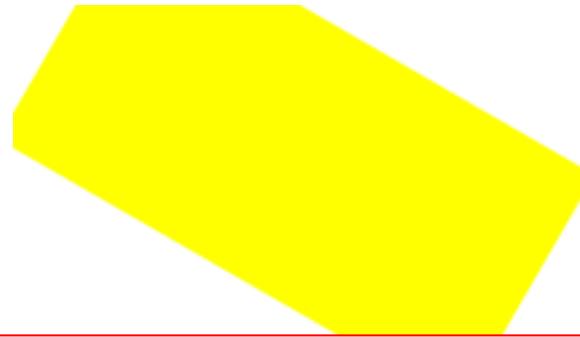
**Note:** Internet Explorer 9, and earlier versions, does not support the column-count property.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed nihm nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duis dolore te feugait nulla facilisi. Nam liber tempor cum soluta nobis eleifend option congue nihil imperdiet doming id quod mazim placerat facer possim assum. Typi non habent claritatem insitam; est usus legentis in iis qui facit eorum claritatem. Investigations demonstraverunt lectores legere me illius quod illegunt saepius.

```
.newspaper {  
    -webkit-column-count: 3; /* Chrome, Safari, Opera */  
    -moz-column-count: 3; /* Firefox */  
    column-count: 3;  
}
```

# CSS3 2D Transforms

- Elements can be moved, scaled, turned, spinned, stretched ...



```
div {  
    width: 200px;  
    height: 100px;  
    background-color: yellow;  
    /* Rotate div */  
    -ms-transform: rotate(30deg); /* IE 9 */  
    -webkit-transform: rotate(30deg); /* Chrome, Safari,  
Opera */  
    transform: rotate(30deg); /* Standard syntax */  
}
```

[https://www.w3schools.com/css/css3\\_2dtransforms.asp](https://www.w3schools.com/css/css3_2dtransforms.asp)

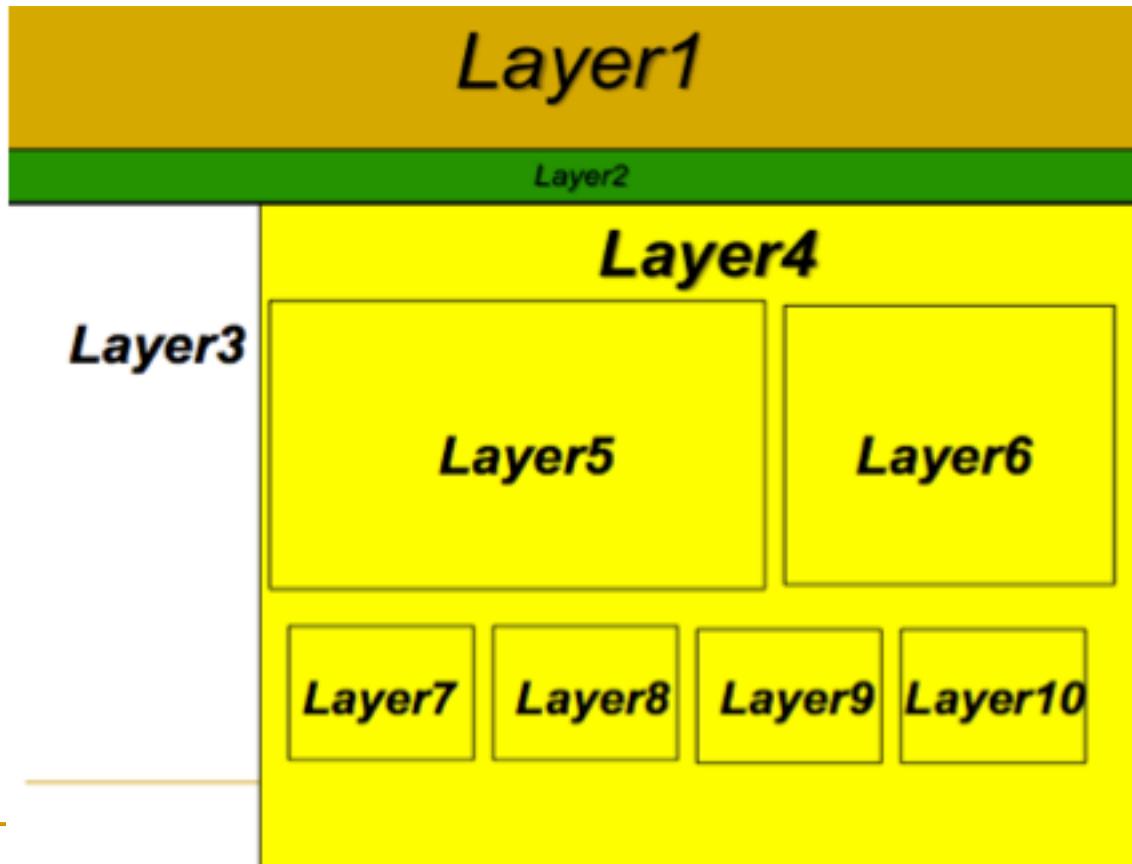
# What else is CSS3 capable of?

- 3D Transforms
- Transitions
- Animations
- .....

# Box Model

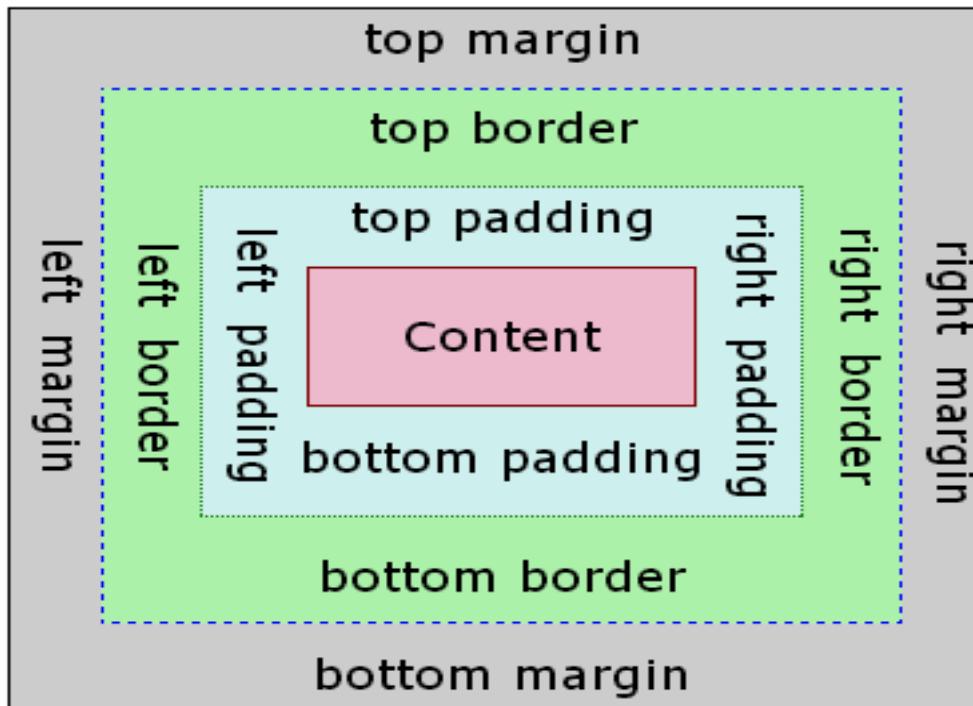
# Reminder...

- A web page is made up of layers or boxes



# What is the Box Model?

- Each box looks like this:



# How can I view my web page like this?

- Go into **Developer tools** on Firefox

Or

- Go into **Developer tools** on Chrome

# Box Model in Firefox

## Lighthouse Island Bistro

Home Menu Directions Contact

### Locally Roasted Free-Trade Coffee

Indulge in the aroma of freshly ground roast coffee. Specialty drinks are available hot or cold.

### Specialty Pastries

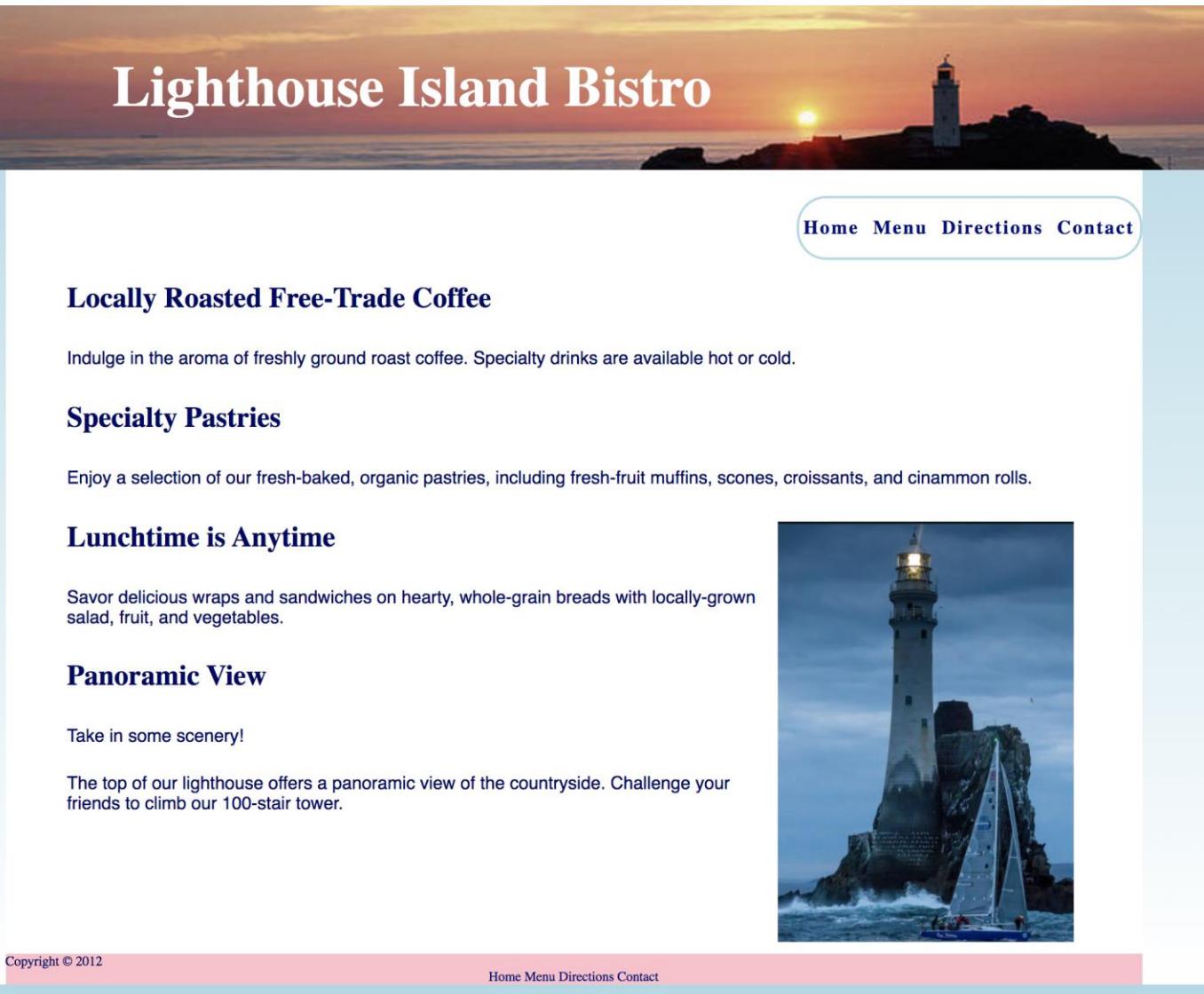
The screenshot shows the Firefox Developer Tools interface with the "Layout" tab selected in the top bar. The left sidebar displays the page's HTML structure, with the `<header>` element highlighted. The right panel shows the CSS properties for the `header` element, including its background color, font size, padding, and background image. A detailed box model diagram is overlaid on the page, illustrating the element's dimensions: width 1096px, height 121.933px, border 10px, padding 10px, and margin 0px. The overall background of the page features a sunset over a lighthouse on an island.

```
<!DOCTYPE html>
<html lang="en"> scroll
  <head> ... </head>
  <body>
    <header>
      <h1>Lighthouse Island Bistro</h1>
    </header>
    <div id="wrapper">
      <nav id="mainnav"> ... </nav>
      <div id="maincontent">
        <h2>Locally Roasted Free-Trade Coffee</h2>
        <p>...</p>
        <h2>Specialty Pastries</h2>
        <p>...</p>
        
        <h2>Lunchtime is Anytime</h2>
        <p>...</p>
    
```

element { inline }  
header { lighthouse.css:2  
background-color: #869dc7;  
font-size: 150%;  
padding: 10px 10px 10px 155px;  
background-image:  
url(lighthouseLogo.png);  
background-repeat: no-repeat;  
color: white;  
position: sticky;⚠  
position: sticky;  
top: 0%;  
width: 100%; }

position | 0  
margin 0  
border 0  
padding 10  
0 0 155 1096x121.933 10 0 0 0  
auto 10  
0 0 0 0

# Box Model in Chrome



Lighthouse Island Bistro

Home Menu Directions Contact

**Locally Roasted Free-Trade Coffee**

Indulge in the aroma of freshly ground roast coffee. Specialty drinks are available hot or cold.

**Specialty Pastries**

Enjoy a selection of our fresh-baked, organic pastries, including fresh-fruit muffins, scones, croissants, and cinnamon rolls.

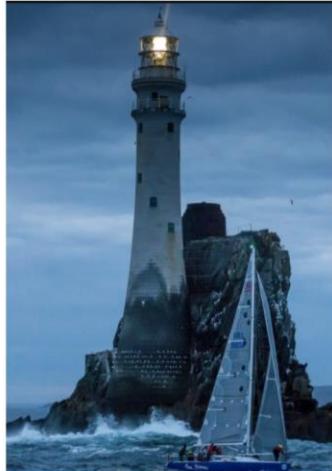
**Lunchtime is Anytime**

Savor delicious wraps and sandwiches on hearty, whole-grain breads with locally-grown salad, fruit, and vegetables.

**Panoramic View**

Take in some scenery!

The top of our lighthouse offers a panoramic view of the countryside. Challenge your friends to climb our 100-stair tower.



```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    ... <header> == $0
      <h1>Lighthouse Island Bistro</h1>
    </header>
    <div id="wrapper">...</div>
  </body>
</html>
```

html body header

Styles Computed Event Listeners >

Filter :hover .cls + □

element.style { }

header { background-color: #869dc7; font-size: 150%; padding: 10px 10px 10px 155px; background-image: url(lighthouseLogo.png); background-repeat: no-repeat; color: white; position: sticky; top: 0%; width: 100%; }

header { display: block; }

position 0 margin - border padding 10 155 1089 x 119.312 10 10

# What is the Box Model?

- Each box has the following properties:
  - Margin
  - Border
  - Padding
  - Content

# Margin

- Margin is the space around the element or box

**margin: 2px** – margin around entire box is 2px

**margin: 2px 1px 0 1px** – margin: top right bottom left

**margin: 2px 1px** – margin: top&bottom right&left

**margin: auto** – margins are calculated based on what's available

**margin-left: 2px** – left margin is 2px

**margin-right: 2px** – right margin is 2px

**margin-top: 2px** – top margin is 2px

**margin-bottom: 2px** – bottom margin is 2px

# Border

- **Border** is the visible edges around the box

**border: 2px** – border around entire box is 2px

**border: 2px 1px 0 1px** – border: top right bottom left

**border: 2px 1px** – border: top&bottom right&left

**border-left: 2px** – left border is 2px

**border-right: 2px** – right border is 2px

**border-top: 2px** – top border is 2px

**border-bottom: 2px** – bottom border is 2px

# Padding

- **Padding** is the space between the content and the border

**padding: 2px** – padding around content is 2px

**padding: 2px 1px 0 1px** – padding: top right bottom left

**padding: 2px 1px** – padding: top&bottom right&left

**padding-left: 2px** – left padding is 2px

**padding-right: 2px** – right padding is 2px

**padding-top: 2px** – top padding is 2px

**padding-bottom: 2px** – bottom padding is 2px

# Content

- **Content** is the actual content in the box

# Another useful attribute - display

- The **display** property specifies the type of box to be used
- Examples:

[https://www.w3schools.com/cssref/pr\\_class\\_display.asp](https://www.w3schools.com/cssref/pr_class_display.asp)

[https://www.w3schools.com/cssref/playit.asp?filename=playcss\\_display&preval=inline](https://www.w3schools.com/cssref/playit.asp?filename=playcss_display&preval=inline)

# display: inline (default)

```
div {  
    height: 50px;  
    width: 100px;  
    border: 2px solid black;  
    border-radius: 5px;  
    display:inline|;  
}
```



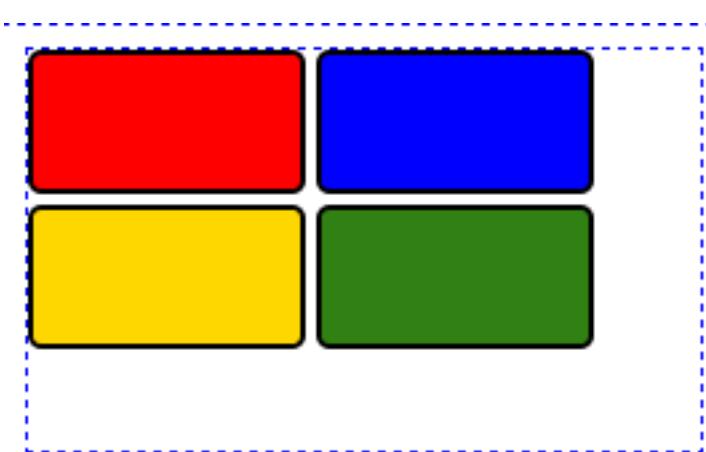
# display: block

```
div {  
    height: 50px;  
    width: 100px;  
    border: 2px solid black;  
    border-radius: 5px;  
    display: block;  
}
```



# display: inline-block

```
div {  
    height: 50px;  
    width: 100px;  
    border: 2px solid black;  
    border-radius: 5px;  
    display:inline-block;  
}
```



# display: none

```
div {  
    height: 50px;  
    width: 100px;  
    border: 2px solid black;  
    border-radius: 5px;  
    display:none;  
}
```



# Hide an Element - `display:none` or `visibility:hidden`?

- Hiding an element can be done by **`display:none`**. The element will be hidden, and the page will be displayed as if the element is not there.
- **`visibility:hidden`** also hides an element. However, the element will still take up the same space as before. The element will be hidden, but still affect the layout

# Difference between **display:none** and **visibility: hidden**

**visibility:hidden** hides the element, but it still takes up space in the layout.

**display:none** removes the element from the document. It does not take up any space.

Box 1



Remove

Box 2



Hide

Box 3



Reset All

Box 1



Remove

Box 3



Reset All

Box 2



Hide

Box 3



Reset All

# A reminder to keep an eye on Twitter for useful articles

← → 🔍 [twitter.com/dt265](https://twitter.com/dt265) ⌂

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**MSc Qualifier** 817 Tweets

**MSc Qualifier** @dt265 · 1m  
Display property in CSS

display | CSS-Tricks  
Every element on a web page is a rectangular box. The display property in CSS determines just how...  
[css-tricks.com](https://css-tricks.com)

**MSc Qualifier** @dt265 · 1h  
Box Model Introduction Playground

Let's put some happy little clouds in our world. Isn't that fantastic? You can do it. Let's make some happy little clouds in our world. They say everything looks better with odd numbers of things. But sometimes I put even numbers—just to upset the critics. The little tiny Tim easels will let you down. Let your imagination be your guide. We don't need any guidelines or formats. All we need to do is just let it flow right out of us. Let's give him a friend too. Everybody needs a friend.

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Box Model Introduction Playground  
A brief CSS playground on CSS box model and CSS properties like padding, border and margin.  
[css-playground.com](https://css-playground.com)

**MSc Qualifier** @dt265 · 1h  
Introduction to the CSS basic box model

 Introduction to the CSS basic box model  
When laying out a document, the browser's rendering engine represents each element as a ...  
[developer.mozilla.org](https://developer.mozilla.org)

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Trending in Ireland  
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32.2K Tweets

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