

# Web Engineering

## Lect 7 (CSS Extra)

Instructor: Faheem Shaukat

Meeting Hours

Wednesday and Thursday

12PM to 02PM

# Some Concepts

origin

merge

inheritance

specificity

## Origin Precedence (when in conflict)

simple rule

### Last Declaration Wins

- ❖ Remember, HTML is processed sequentially, top to bottom.
- ❖ For precedence, think of external CSS as declared at the spot where it's linked to.

## Origin Precedence (when no conflict)

even simpler rule

**Declarations Merge**

external.css — course4-examples

```
origin.html      external.css
1 p {           1 p {
2   font-size: 130%; 2   font-size: 130%; /* From external.css */
3   background-color: gray; 3   background-color: gray; /* From external.css */
4   color: white; 4   color: white; /* From external.css */
5 }             5 }           /* From origin.html */

6
```

Cascade of CSS

file:///Users/yaakov/workspace/coursera/fullstack-course4/...

## Origin Example

The rule is simple: last declaration wins.

If there is no conflict, declarations merge into one rule.

```
origin.html -- course4-examples
origin.html x external.css x
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Cascade of CSS</title>
6 <link rel="stylesheet" href="external.css">
7 <style>
8
9 p {
10   color: maroon;
11 }
12
13 </style>
14 </head>
15 <body>
16 <h1>Origin Example</h1>
17 <p>The rule is simple: last declaration wins.</p>
18 <p style="color: black;">If there is no conflict, declarations merge into one rule.</p>
19 </body>
20 </html>
```

Cascade of CSS

file:///Users/yaakov/workspace/coursera/fullstack-course4/...

## Origin Example

The rule is simple: last declaration wins.

If there is no conflict, declarations merge into one rule.

```
external.css — course4-examples
origin.html      external.css
1 p {
2   font-size: 130%;
3   background-color: gray;
4   color: white;
5 }
6
```

# Origin Example

The rule is simple: last declaration wins.

If there is no conflict, declarations merge into one rule.

The screenshot shows the Chrome DevTools interface. The top bar has tabs for 'Elements', 'Network', 'Sources', 'Timeline', 'Profiles', 'Resources', and 'Audits'. The 'Elements' tab is active. The DOM tree on the left shows a <body> element containing an <h1> element with the text 'Origin Example' and two <p> elements. The first <p> element contains the text 'The rule is simple: last declaration wins.' and has a style attribute. The second <p> element contains the text 'If there is no conflict, declarations merge into one rule.' and also has a style attribute. The 'Styles' tab in the bottom-left of the DevTools panel is selected. It lists several CSS rules for the p element, including ones from 'element.style', 'origin.html:9', 'external.css:1', and the 'user agent stylesheet'. The 'Properties' tab is also visible. On the right side, there is a detailed view of the element's bounding box with dimensions 632 x 24 and a total height of 20.800. A sidebar on the far right shows filters and checkboxes for 'Show' and 'drag'.

```
<body>
  <h1>Origin Example</h1>
  <p>The rule is simple: last declaration wins.</p>
  <p style="color: black;">If there is no conflict, declarations merge into one rule.</p>
</body>
```

html body p

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}

p {  
 color: maroon;  
}  
origin.html:9

p {  
 font-size: 130%;  
 background-color: gray;  
 color: white;  
}  
external.css:1

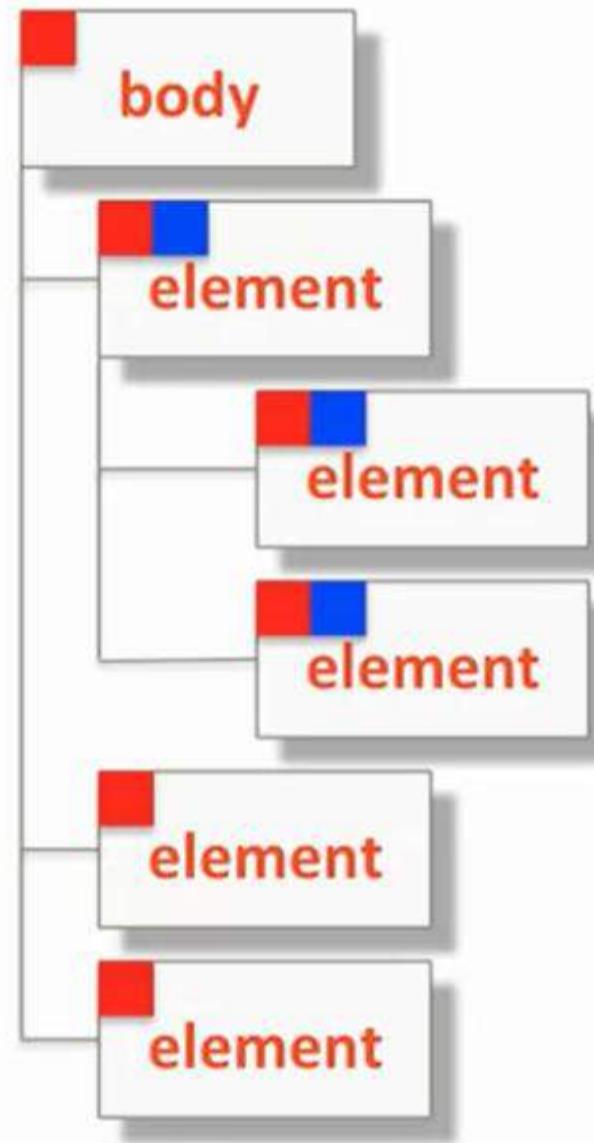
p {  
 display: block;  
 -webkit-margin-before: 1em;  
 -webkit-margin-after: 1em;  
 -webkit-margin-start: 0px;  
 -webkit-margin-end: 0px;  
}  
user agent stylesheet

margin 20.800  
border -  
padding -  
632 x 24  
-  
-  
-  
-  
20.800

Filter Show  
-webkit-app-region drag  
-webkit-appearance

# Inheritance

**DOM  
Tree**



```
inheriance.html — course4-examples
inheriance.html

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Inheritance in CSS</title>
6 <style>
7 body {
8   color: red;
9   text-align: center;
10  font-family: Helvetica;
11 }
12 p {
13   color: blue;
14 }
15 </style>
16 </head>
17 <body>
18 <h1>Cascade of CSS Example</h1>
19 <h2>Subheading 1</h2>
20 <p>Inheritance allows us to write more
global styles on parent elements and
then "fine-tune" the styles for some of
the child elements as needed. Such
approach makes writing CSS very
```

Inheritance in CSS

file:///Users/yaakov/workspace/coursera/fullstack-course4/...

# Cascade of CSS Example

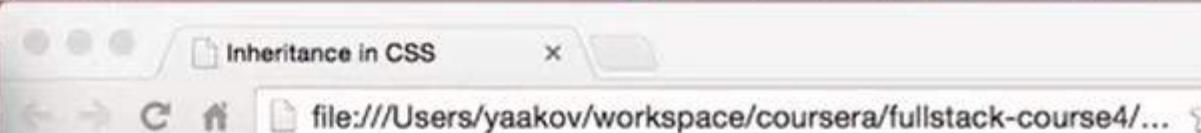
## Subheading 1

Inheritance allows us to write more global styles on parent elements and then "fine-tune" the styles for some of the child elements as needed. Such approach makes writing CSS very efficient.

## Subheading 2

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Architecto ad excepturi odio, fuga nam quidem reprehenderit placeat commodi? In laudantium cum nam vitae at eligendi consequatur sequi cumque.

```
inheritance.html — course4-examples
inheritance.html x
13   color: blue;
14 }
15 </style>
16 </head>
17 <body>
18 <h1>Cascade of CSS Example</h1>
19 <h2>Subheading 1</h2>
20 <p>Inheritance allows us to write more
global styles on parent elements and
then "fine-tune" the styles for some of
the child elements as needed. Such
approach makes writing CSS very
efficient.</p>
21 <h2 style="color: green;">Subheading 2</
h2>
22 <p>Lorem ipsum dolor sit amet,
consectetur adipisicing elit.
Architecto ad excepturi eveniet odio,
fuga nam quidem reprehenderit placeat
commodi? In laudantium cum nam quod
vitae at eligendi consequatur sequi
cumque.</p>
23 </body>
```



## Cascade of CSS Example

### Subheading 1

Inheritance allows us to write more global styles on parent elements and then "fine-tune" the styles for some of the child elements as needed. Such approach makes writing CSS very efficient.

### Subheading 2

Placeholder text: Lorem ipsum dolor sit amet, consectetur adipisicing elit. Architecto ad excepturi eveniet odio, fuga nam quidem reprehenderit placeat commodi? In laudantium cum nam quod vitae at eligendi consequatur sequi cumque.

# Specificity

simple rule

**Most Specific  
Selector Combination Wins**

# Specificity (score)

style="..."	ID	Class, pseudo-class, attribute	# of Elements

```
<h2 style="color: green;">
```

visualization  
borrowed  
[css-tricks](#)

# Specificity (score)

style="..."	ID	Class, pseudo-class, attribute	# of Elements
1	0	0	0

```
<h2 style="color: green;">
```

# Specificity (score)

style="..."	ID	Class, pseudo-class, attribute	# of Elements
0	0	0	2

```
div p { color: green; }
```

## Specificity (score)

```
div #myParag {  
    color: blue;  
}
```

?

0  1  0  1



```
div.big p {  
    color: green;  
}
```

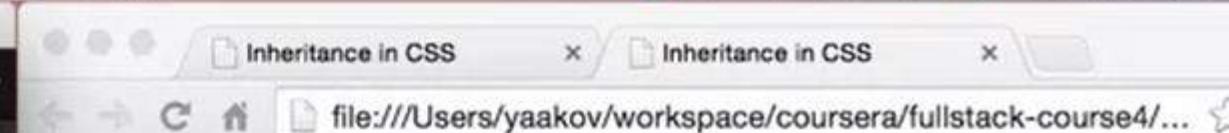
?

0  0  1  2

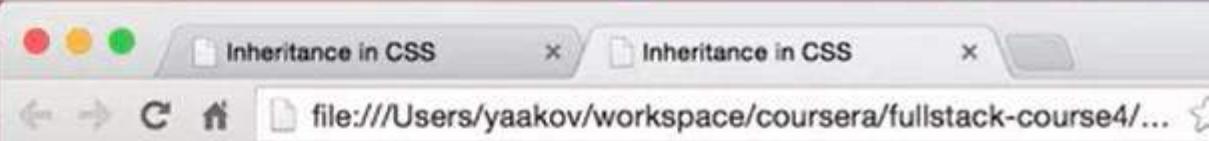


specificity.html — course4-examples

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Inheritance in CSS</title>
6 <style>
7 header.navigation p {
8   color: blue;
9 }
10 p.blurb {
11   color: red;
12 }
13 /*p {
14   color: green !important;
15 }*/
16 </style>
17 </head>
18 <body>
19 <header class="navigation">
20   <p class="blurb">Lorem ipsum dolor
sit amet, consectetur adipisicing
elit. Vero soluta enim aut! Nihil nam
obcaecati, fugiat sint sit libero
voluptate eos incidunt odio neque cum, dignissimos aper-
magnam nisi debitis.
```



```
specification.html — course4-examples  
specification.html  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>Inheritance in CSS</title>  
6 <style>  
7 header.navigation p {  
8   color: blue;  
9 }  
10 p.blurb {  
11   color: red;  
12 }  
13 p {  
14   color: green !important;  
15 }  
16 </style>  
17 </head>  
18 <body>  
19 <header class="navigation">  
20   <p class="blurb">Lorem ipsum dolor  
sit amet, consectetur adipisicing  
elit. Vero soluta enim aut! Nihil nam  
obcaecati, fugiat sint sit libero  
voluptate eos incidunt odio neque cum, dignissimos aper  
magnam nisi debitis.
```



## Summary

- ❖ Cascade: origin, merge; Inheritance, & Specificity
- ❖ Provide precise control over targeting content while allowing maximum re-use of styles across your website

# TEXT Styling

```
styling-text-before.html — course4-examples
styling-text-before.html ×
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-serif;
9 }
10 </style>
11 </head>
12 <body>
13 <p>You can get commonly used font
combinations from <a href="http://www.
w3schools.com/cssref/css_websafe_fonts.
asp">http://www.w3schools.com/cssref/
css_websafe_fonts.asp</a>. Lorem ipsum
dolor sit amet, consectetur adipisicing
elit. Quisquam quod necessitatibus a
ullam dolorum amet reprehenderit sit
laudantium reiciendis aperiam. </p>
15 <p class="style">Lorem ipsum dolor sit
amet, consectetur adipisicing elit.
Laboriosam fugiat repudiandae fugit
```

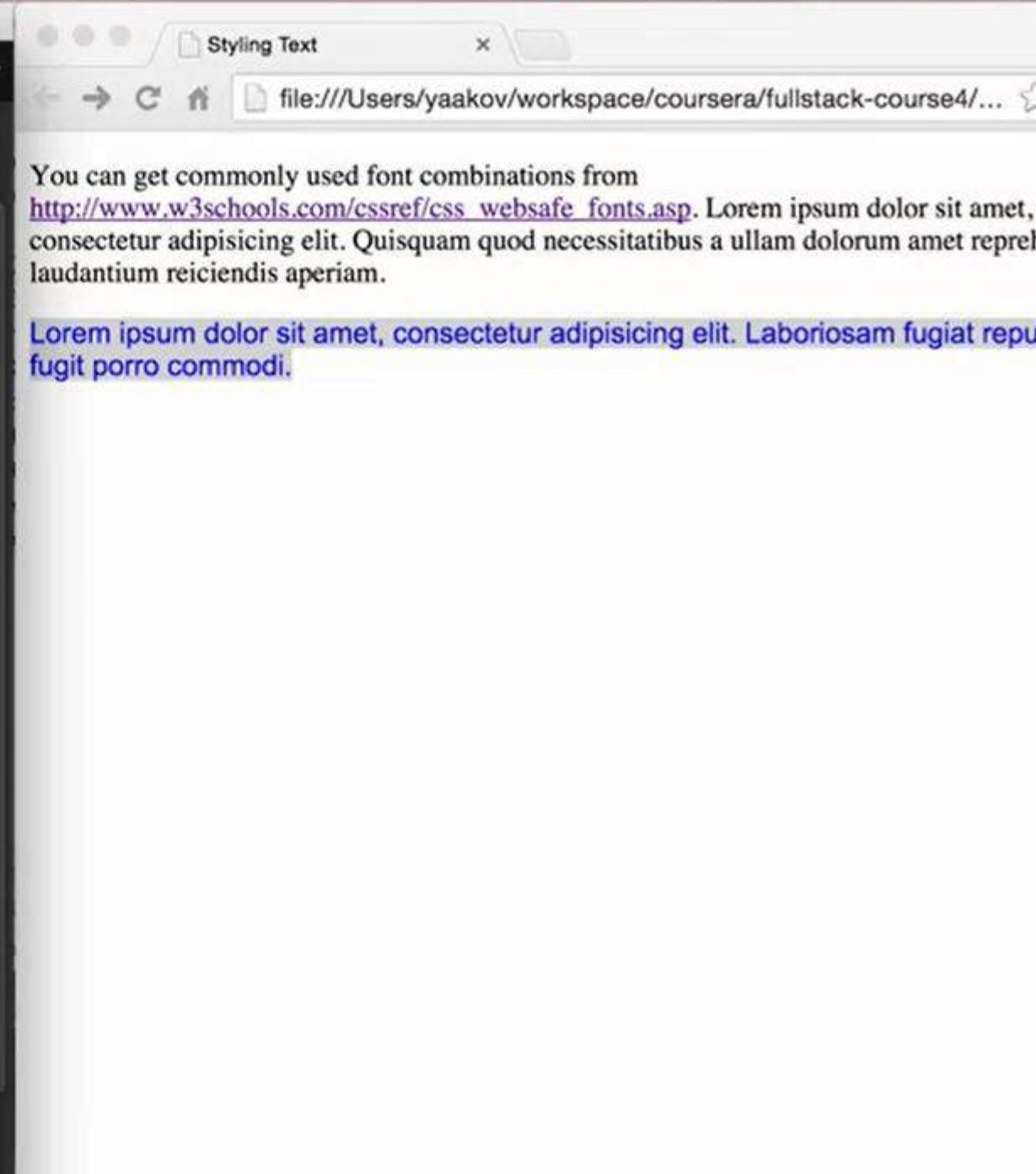
Styling Text

file:///Users/yaakov/workspace/coursera/fullstack-course4/...

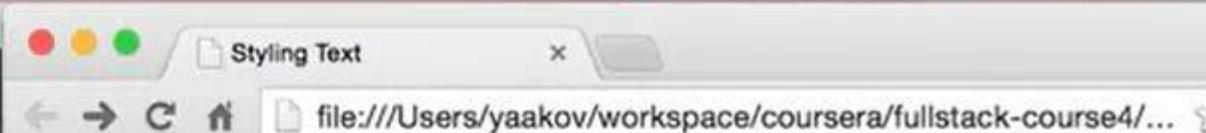
You can get commonly used font combinations from [http://www.w3schools.com/cssref/css\\_websafe\\_fonts.asp](http://www.w3schools.com/cssref/css_websafe_fonts.asp). Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit sit laudantium reiciendis aperiam.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Laboriosam fugiat repudiandae fugit porro commodi.

```
styling-text-before.html — course4-examples
styling-text-before.html ×
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-serif;
9   color: #0000ff;
10 }
11 </style>
12 </head>
13 <body>
14 <p>You can get commonly used font
15 combinations from <a href="http://www.
w3schools.com/cssref/css_websafe_fonts.
asp">http://www.w3schools.com/cssref/
css_websafe_fonts.asp</a>. Lorem ipsum
dolor sit amet, consectetur adipisicing
elit. Quisquam quod necessitatibus a
ullam dolorum amet reprehenderit sit
laudantium reiciendis aperiam. </p>
16 <p class="style">Lorem ipsum dolor sit
amet, consectetur adipisicing elit.
```



```
styling-text-before.html - course4-examples
styling-text-before.html ×
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-serif;
9   color: #0000ff;
10  font-style: italic;
11  font-weight: 900;
12 }
13 </style>
14 </head>
15 <body>
16 <p>You can get commonly used font
17 combinations from <a href="http://www.
w3schools.com/cssref/css_websafe_fonts.
asp">http://www.w3schools.com/cssref/
css_websafe_fonts.asp</a>. Lorem ipsum
dolor sit amet, consectetur adipisicing
elit. Quisquam quod necessitatibus a
ullam dolorum amet reprehenderit sit
laudantium reiciendis aperiam. </p>
```



You can get commonly used font combinations from [http://www.w3schools.com/cssref/css\\_websafe\\_fonts.asp](http://www.w3schools.com/cssref/css_websafe_fonts.asp). Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit sit laudantium reiciendis aperiam.

*Lo&lt;span style="color:blue; font-style:italic;">rem ipsum dolor sit amet, consectetur adipisicing elit. Laboriosam fugi&lt;/span> repudiandae fugit porro commodi.*

styling-text-before.html – course4-examples

```
styling-text-before.html x
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-serif;
9   color: #0000ff;
10  font-style: italic;
11  font-weight: bold;
12  font-size: 24px;
13 }
14 </style>
15 </head>
16 <body>
17 <p>You can get commonly used font
18 combinations from <a href="http://www.w3schools.com/cssref/css_websafe_fonts.asp">http://www.w3schools.com/cssref/css_websafe_fonts.asp</a>. Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit sit
```

Styling Text

file:///Users/yaakov/workspace/coursera/fullstack-course4/...

You can get commonly used font combinations from [http://www.w3schools.com/cssref/css\\_websafe\\_fonts.asp](http://www.w3schools.com/cssref/css_websafe_fonts.asp). Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet reprehenderit sit

***Lore ipsum dolor sit amet, consectetur adipisicing elit. Laboriosam fugiat repudiandae fugit porro commodi.***

```
styling-text-before.html
4 <meta charset="utf-8">
5 <title>Styling Text</title>
6 <style>
7 .style {
8   font-family: Arial, Helvetica, sans-
9   serif;
10  color: #0000ff;
11  font-style: italic;
12  font-weight: bold;
13  font-size: 24px;
14  text-transform: uppercase;
15 }
16 </style>
17 </head>
18 <body>
19 <p>You can get commonly used font
combinations from <a href="http://www.
w3schools.com/cssref/css_websafe_fonts.
asp">http://www.w3schools.com/cssref/
css_websafe_fonts.asp</a>. Lorem ipsum
dolor sit amet, consectetur adipisicing
elit. Quisquam quod necessitatibus a
```

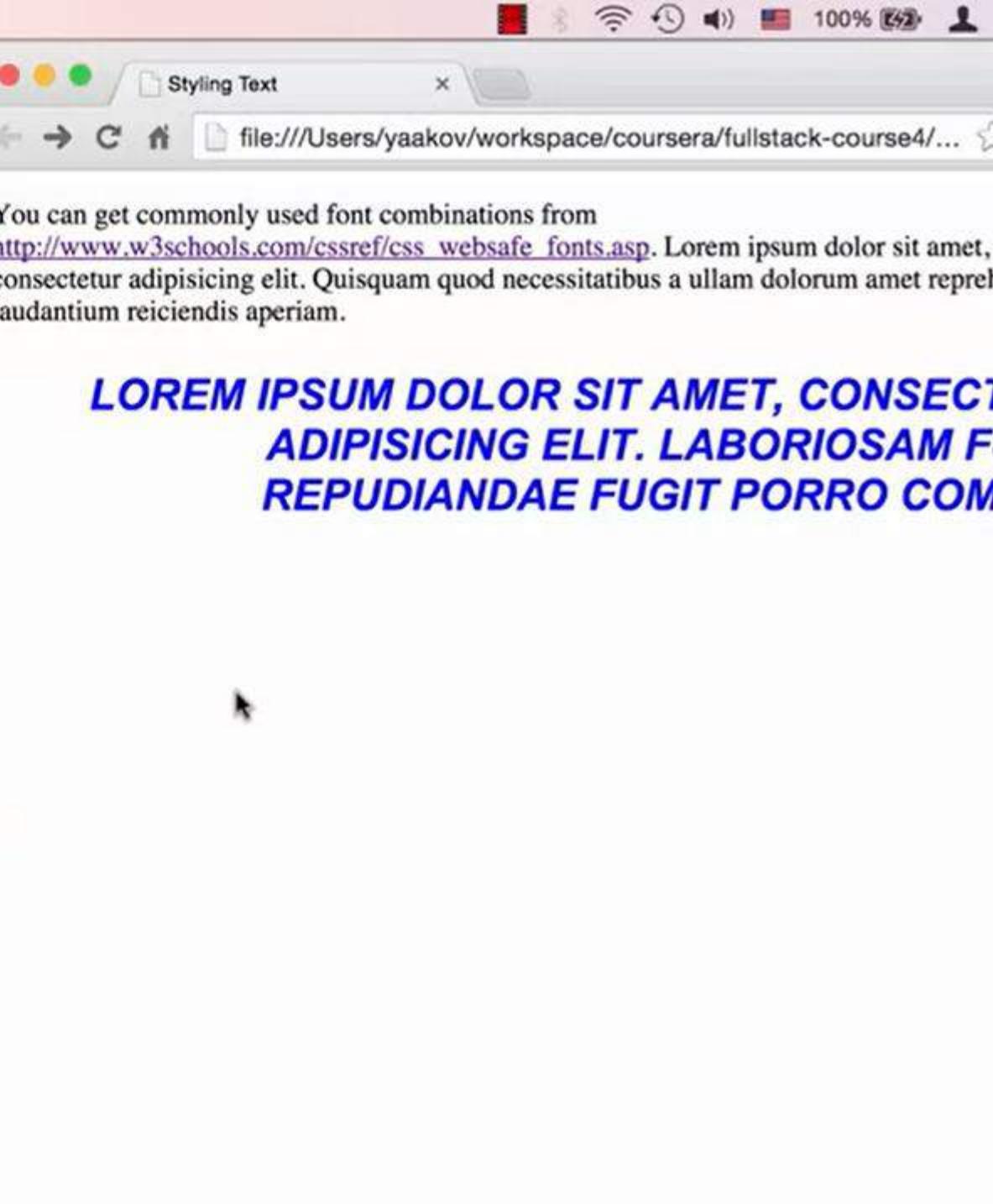
Styling Text

file:///Users/yaakov/workspace/coursera/fullstack-course4/...

You can get commonly used font combinations from  
[http://www.w3schools.com/cssref/css\\_websafe\\_fonts.asp](http://www.w3schools.com/cssref/css_websafe_fonts.asp). Lorem ipsum dolor sit amet,  
consectetur adipisicing elit. Quisquam quod necessitatibus a ullam dolorum amet repre-  
laudantium reiciendis aperiam.

**LOREM IPSUM DOLOR SIT AMET, CONSECTETU  
ADIPISICING ELIT. LABORIOSAM FUGIAT  
REPUDIANDAE FUGIT PORRO COMMIDI.**

```
styling-text-before.html — course4-examples  
styling-text-before.html ×  
4 <meta charset="utf-8">  
5 <title>Styling Text</title>  
6 <style>  
7 .style {  
8   font-family: Arial, Helvetica, sans-  
     serif;  
9   color: #0000ff;  
10  font-style: italic;  
11  font-weight: bold;  
12  font-size: 24px;  
13  text-transform: uppercase;  
14  text-align: right;  
15  
16 }  
17 </style>  
18 </head>  
19 <body>  
20 <p>You can get commonly used font  
combinations from <a href="http://www.  
w3schools.com/cssref/css_websafe_fonts.  
asp">http://www.w3schools.com/cssref/  
css_websafe_fonts.asp</a>. Lorem ipsum  
dolor sit amet, consectetur adipisicing
```



```
font-size-before.html — course4-examples  
font-size-before.html x  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>Setting Font Size</title>  
6 <style>  
7 body {  
8   font-size: 120%;  
9 }  
10 </style>  
11 </head>  
12 <body>  
13 <div>Regular text</div>  
14 <div style="font-size: 2em;">2em text  
15   <div style="font-size: 2em;">4em text  
16     <div style="font-size: .5em;">2em  
again!</div>  
17   </div>  
18 </div>  
19 </body>  
20 </html>
```



# The Box Model

# The Box Model



```
box-model-before.html — course4-examples  
box-model-before.html  
15 #content {  
16   background-color: #90EE90; //green  
17 }  
18  
19 h1 {  
20   margin-bottom: 30px;  
21 }  
22  
23 </style>  
24 </head>  
25 <body>  
26  
27 <h1>Box Model</h1>  
28  
29 <div id="box">  
30   <div id="content">Lorem ipsum dolor  
      sit amet, consectetur adipisicing  
      elit.  
31   </div>  
32 </div>  
33  
34 </body>  
35 </html>  
36
```



```
box-model-before.html — course4-examples  
box-model-before.html  
15 #content {  
16   background-color: #90EE90; //green  
17 }  
18  
19 h1 {  
20   margin-bottom: 30px;  
21 }  
22  
23 </style>  
24 </head>  
25 <body>  
26  
27 <h1>Box Model</h1>  
28  
29 <div id="box">  
30   <div id="content">Lorem ipsum dolor  
sit amet, consectetur adipisicing elit.  
31   </div>  
32 </div>  
33  
34 </body>  
35 </html>
```

The Box Model

Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

body 641px x 85px

Elements Network Sources Timeline Profiles Resources Audits Console

<!DOCTYPE HTML>  
<html>  
 <head>...</head>  
 <body>  
 <h1>Box Model</h1>  
 <div id="box">  
 <div id="content">Lorem ipsum dolor  
 sit amet, consectetur adipisicing elit.  
 </div>  
 </div>  
</body>  
</html>

html body div#box div#content

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}  
body {  
 background-color: gray;  
}  
body {  
 display: block;  
}

margin 8  
border -  
padding -  
641 x 85  
8 - - -

```
box-model-before.html — course4-examples  
box-model-before.html  
5 <title>The Box Model</title>  
6 <style>  
7  
8 body {  
9   margin: 0;  
10  padding: 0;  
11  background-color: gray;  
12 }  
13  
14 #box {  
15  background-color: blue;  
16  padding: 10px 10px 10px 10px;  
17 }  
18 #content {  
19  background-color: #90EE90; //green  
20 }  
21  
22 h1 {  
23  margin-bottom: 30px;  
24 }  
25  
26 </style>  
27 </head>  
28 <body>
```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

# Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head>...</head>
  <body>
    <h1>Box Model</h1>
    <div id="box">...</div>
  </body>
</html>
```

html body

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}  
body {  
 margin: 0;  
 padding: 0;  
 background-color: gray;  
}

margin border padding - 657 x 85

box-model-before.html x

```

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

#box {
  background-color: blue;
  padding: 10px 10px 10px 10px;
  border: 3px solid black;
}

#content {
  background-color: #90EE90; //green
}

h1 {
  margin-bottom: 30px;
}

</style>
</head>
<body>

<h1>Box Model</h1>

```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

<!DOCTYPE html>
<html>
 <head>...</head>
 <body>
 <h1>Box Model</h1>
 <div id="box">...</div>
 </body>
</html>

html body

Styles Event Listeners DOM Breakpoints Properties

Filter +, - ◆

element.style { } body { box-model-before.html:8 margin: 0; padding: 0; background-color: gray; }

body { user agent stylesheet display: block; }

```
8 body {  
9   margin: 0;  
10  padding: 0;  
11  background-color: gray;  
12 }  
13  
{14 #box {  
15   background-color: blue;  
16   padding: 10px 10px 10px 10px;  
17   border: 5px solid black;  
18   margin: 40px;  
19 }  
20 #content {  
21   background-color: #90EE90; //green  
22 }  
23  
24 h1 {  
25   margin-bottom: 30px;  
26 }  
27  
28 </style>  
29 </head>  
30 <body>
```

The Box Model

Box Model

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>  
<html>  
  <head>...</head>  
  <body>  
    <h1>Box Model</h1>  
    <div id="box">...</div>  
  </body>  
</html>
```

html body

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {

body { box-model-before.html:8

margin: 0;  
padding: 0;  
background-color: gray;

margin border padding - 657 x 125

```
box-model-before.html — course4-examples  
box-model-before.html ×  
  
8 body {  
9   margin: 0;  
10  padding: 0;  
11  background-color: gray;  
12 }  
13  
{14 #box {  
15   background-color: blue;  
16   padding: 10px 10px 10px 10px;  
17   border: 5px solid black;  
18   margin: 40px;  
19   width: 300px;  
20 }  
21 #content {  
22   background-color: #90EE90; //green  
23 }  
24  
25 h1 {  
26   margin-bottom: 30px;  
27 }  
28  
29 </style>  
30 </head>  
31 <body>
```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

# Box Model

Lorem ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head></head>
  <body>
    <h1>Box Model</h1>
    <div id="box"></div>
  </body>
</html>
```

html body

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}  
body {  
 margin: 0;  
 padding: 0;  
 background-color: gray;  
}

margin  
border  
padding -  
657 x 143

```

8 body {
9   margin: 0;
10  padding: 0;
11  background-color: gray;
12 }
13
14 #box {
15   background-color: blue;
16   padding: 10px 30px 10px 30px;
17   border: 20px solid black;
18   margin: 40px;
19   width: 300px;
20 }
21 #content {
22   background-color: #90EE90; //green
23 }
24
25 h1 {
26   margin-bottom: 30px;
27 }
28
29 </style>
30 </head>
31 <body>

```

The Box Model

Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

<!DOCTYPE html>
<html>
 <head></head>
 <body>
 <h1>Box Model</h1>
 <div id="box">
 <div id="content">Lorem ipsum dolor sit amet, consectetur adipisicing elit.</div>
 </div>
 </body>
</html>

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style { }

#box { box-model-before.html:14 }

background-color: blue;
padding: 10px 30px 10px 30px;
border: 20px solid black;
margin: 40px;
width: 300px;

margin	40
border	20
padding	10
width	300
height	36
total	20

```
box-model-before.html — course4-examples  
box-model-before.html  
  
8 body {  
9   margin: 0;  
10  padding: 0;  
11  background-color: gray;  
12 }  
13  
{14 #box {  
15   background-color: blue;  
16   padding: 10px 30px 10px 30px;  
17   border: 20px solid black;  
18   margin: 40px;  
19   width: 300px;  
20   box-sizing: border-box;  
21 }  
22 #content {  
23   background-color: #90EE90; //green  
24 }  
25  
26 h1 {  
27   margin-bottom: 30px;  
28 }  
29  
30 </style>  
31 </head>
```

# The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

## Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head></head>
  <body>
    <h1>Box Model</h1>
    <div id="box">
      <div id="content">Lore ipsum dolor sit amet, consectetur adipisicing elit.</div>
    </div>
  </body>
</html>
```

html body div#box

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}  
#box {  
 box-model-before.html:14  
 background-color: blue;  
 padding: 10px 30px 10px 30px;  
 border: 20px solid black;  
 margin: 40px;  
 width: 300px;  
}

margin	40				
border	20				
padding	10				
40	20	30	200 x 36	30	20
			10		
				20	

```
box-model-before.html — course4-examples  
box-model-before.html ×  
8 body {  
9   margin: 0;  
10  padding: 0;  
11  background-color: gray;  
12  box-sizing: border-box;  
13 }  
14  
15 #box {  
16   background-color: blue;  
17   padding: 10px 30px 10px 30px;  
18   border: 20px solid black;  
19   margin: 40px;  
20   width: 300px;  
21 }  
22 #content {  
23   background-color: #90EE90; //green  
24 }  
25  
26 h1 {  
27   margin-bottom: 30px;  
28 }  
29  
30 </style>  
31 </head>
```

# The Box Model

Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

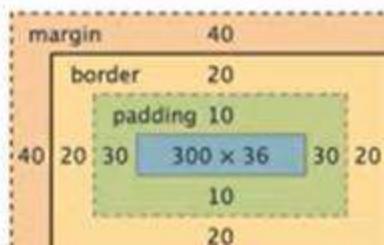
Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head>...</head>
  <body>
    <h1>Box Model</h1>
    <div id="box">
      <div id="content">Lore ipsum dolor sit amet, consectetur adipisicing elit.</div>
    </div>
  </body>
</html>
```

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}  
  
#box {  
 box-model-before.html:15  
 background-color: blue;  
 padding: 10px 30px 10px 30px;  
 border: 20px solid black;  
 margin: 40px;  
 width: 300px;



```
box-model-before.html — course4-examples  
box-model-before.html  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>The Box Model</title>  
6 <style>  
7 * {  
8   box-sizing: border-box;  
9 }  
10  
11 body {  
12   margin: 0;  
13   padding: 0;  
14   background-color: gray;  
15 }  
16  
17 #box {  
18   background-color: blue;  
19   padding: 10px 30px 10px 30px;  
20   border: 20px solid black;  
21   margin: 40px;  
22   width: 300px;  
23 }  
24 #content {
```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

# Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head>...</head>
  <body>
    <h1>Box Model</h1>
    <div id="box">
      <div id="content">Lore ipsum dolor sit amet, consectetur adipisicing elit.
    </div>
  </div>
```

html body div#box

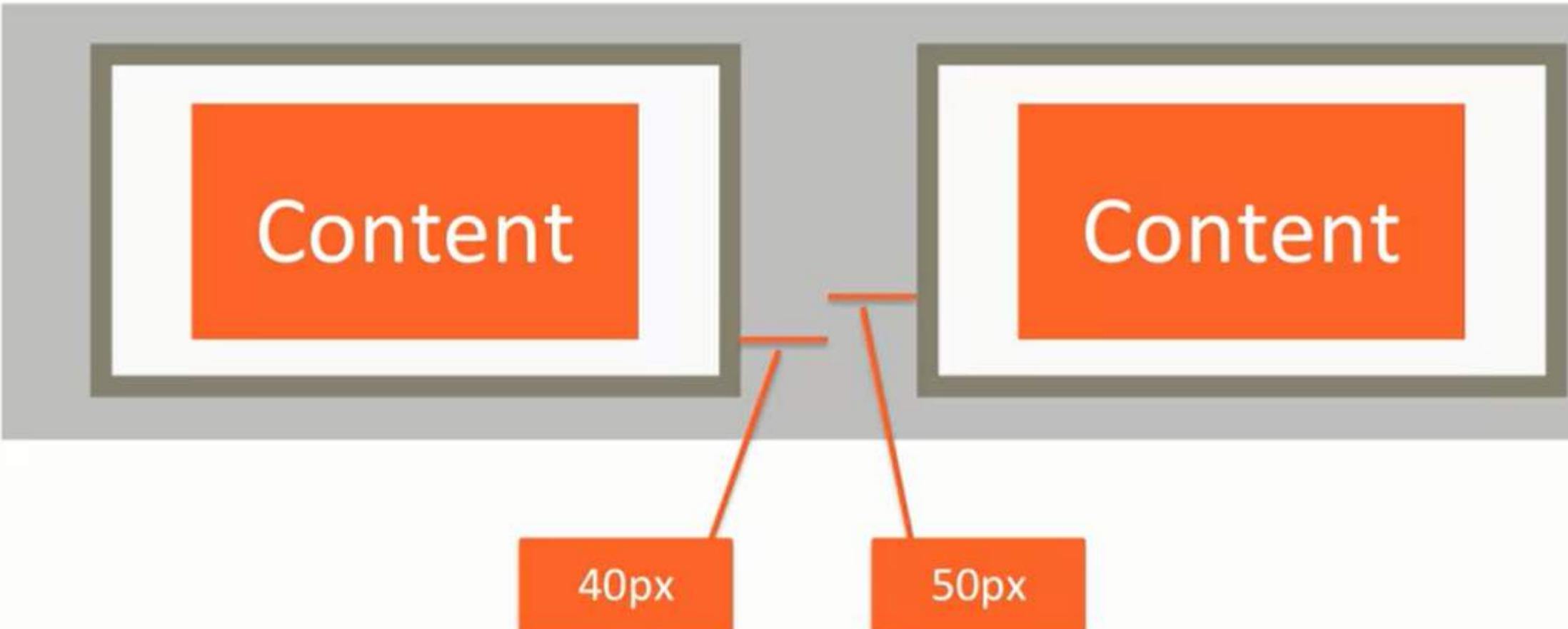
Styles Event Listeners DOM Breakpoints Properties

Filter

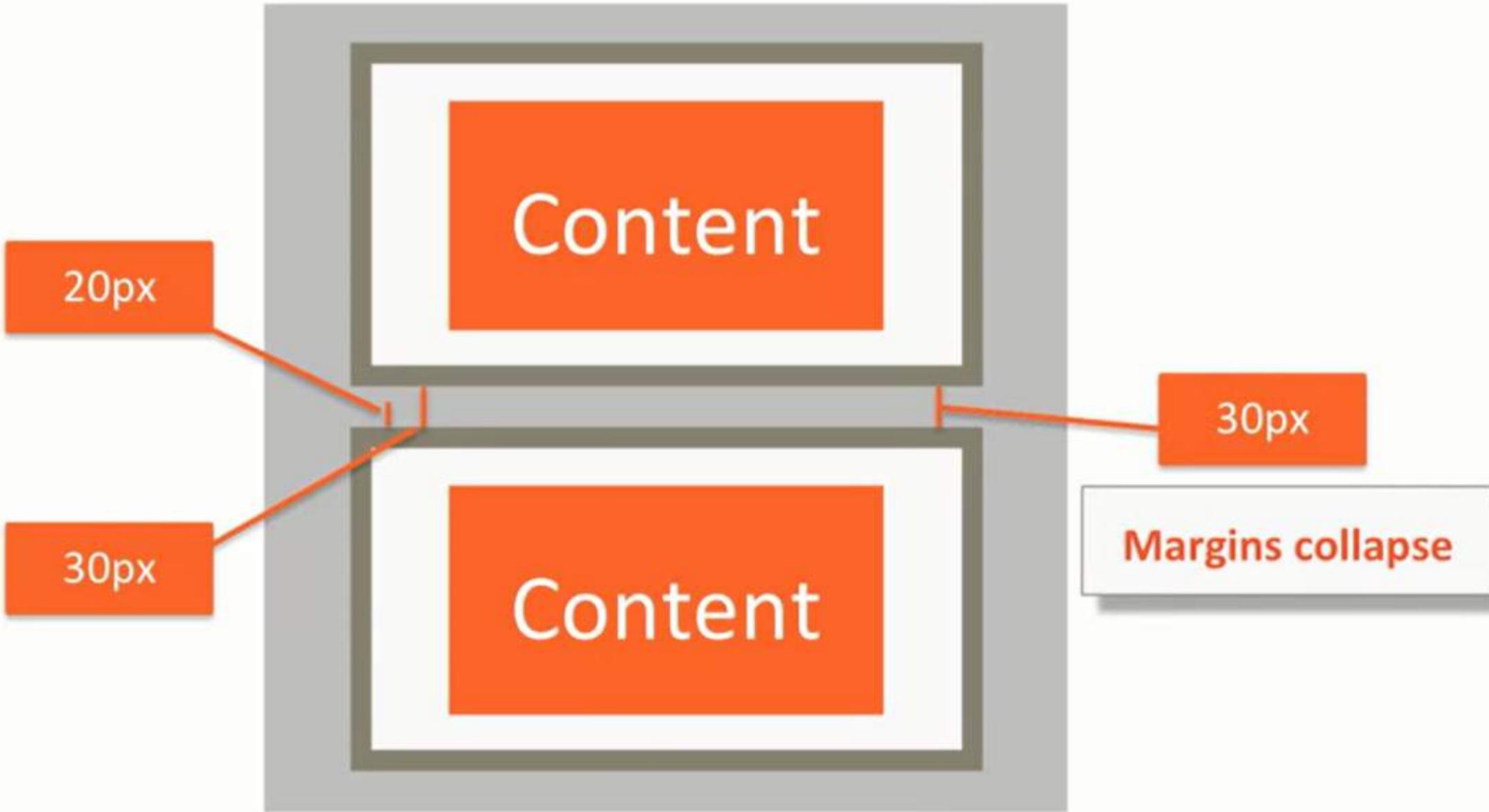
element.style {  
}  
  
#box {  
 background-color: blue;  
 padding: 10px 30px 10px 30px;  
 border: 20px solid black;  
 margin: 40px;  
 width: 300px;  
}

margin 40  
border 20  
padding 10  
40 20 30 20 200 x 36 30 20  
10  
20

# Cumulative Margins



# Cumulative Margins



```
box-model-before.html — course4-examples  
box-model-before.html x  
  
12 margin: 0;  
13 padding: 0;  
14 background-color: gray;  
15 }  
16  
17 #box {  
18   background-color: blue;  
19   padding: 10px 30px 10px 30px;  
20   border: 20px solid black;  
21   width: 300px;  
22   margin-top: 50px;  
23 }  
24 #content {  
25   background-color: #90EE90; //green  
26 }  
27  
28 h1 {  
29   margin-bottom: 30px;  
30 }  
31  
32 </style>  
33 </head>  
34 <body>  
35
```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

# Box Model

Lore ipsum dolor sit amet,  
consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head></head>
  <body>
    <h1>Box Model</h1>
    <div id="box"></div>
  </body>
</html>
```

html body h1

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}  
h1 { margin-bottom: 30px; }  
\* { box-sizing: border-box; }

margin 21.440  
border -  
padding -  
657 x 37

```
box-model-before.html — course4-examples
box-model-before.html <pre>
12 margin: 0;
13 padding: 0;
14 background-color: gray;
15 }
16
17 #box {
18   background-color: blue;
19   padding: 10px 30px 10px 30px;
20   border: 20px solid black;
21   width: 300px;
22   margin-top: 20px;
23 }
24 #content {
25   background-color: #90EE90; //green
26 }
27
28 h1 {
29   margin-bottom: 30px;
30 }
31
32 </style>
33 </head>
34 <body>
35
```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

# Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head>...</head>
  <body>
    <h1>Box Model</h1>
    <div id="box">...</div>
  </body>
</html>
```

html body h1

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {

h1 { margin-bottom: 30px; }

\* { box-sizing: border-box; }

margin 21.440  
border -  
padding -  
657 x 37

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>The Box Model</title>
6 <style>
7 * {
8   box-sizing: border-box;
9 }
10
11 body {
12   margin: 0;
13   padding: 0;
14   background-color: gray;
15 }
16
17 #box {
18   background-color: blue;
19   padding: 10px 30px 10px 30px;
20   border: 20px solid black;
21   width: 300px;
22   margin-top: 50px;
23 }
24 #content {
```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

<!DOCTYPE html>

html

body

h1

#box

#content

Styles Event Listeners DOM Breakpoints Properties

\* { box-sizing: border-box; }

h1 { user agent stylesheet display: block; font-size: 2em; -webkit-margin-before: 0.67em; -webkit-margin-after: 0.67em; -webkit-margin-start: 0px; }

margin 21.440

border -

padding -

657 x 37

```
box-model-before.html — course4-examples  
box-model-before.html ×  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>The Box Model</title>  
6 <style>  
7 * {  
8   box-sizing: border-box;  
9   margin: 0;  
10  padding: 0;  
11 }  
12  
13 body {  
14   background-color: gray;  
15 }  
16  
17 #box {  
18   background-color: blue;  
19   padding: 10px 30px 10px 30px;  
20   border: 20px solid black;  
21   width: 300px;  
22   margin-top: 50px;  
23 }  
24 #content {
```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

Lore ipsum dolor sit amet, consectetur adipisicing elit.

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head>...</head>
  <body>
    <h1>Box Model</h1>
    <div id="box">...</div>
  </body>
</html>
```

html body h1

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}

h1 {  
 margin-bottom: 30px;  
}  
\* {  
 box-sizing: border-box;

margin  
border  
padding - 657 x 37

```

15 }
16
17 #box {
18   background-color: blue;
19   padding: 10px;
20   border: 5px solid black;
21   width: 300px;
22   margin-top: 50px;
23 }
24 #content {
25   background-color: #90EE90; //green
26 }
27
28 h1 {
29   margin-bottom: 30px;
30 }
31
32 </style>
33 </head>
34 <body>
35
36 <h1>Box Model</h1>
37 <div id="box">

```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

# Box Model

Box Model Example Content

Elements Network Sources Timeline Profiles Resources Audits Console

html body div#box

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {

#box { box-model-before.html:17

- background-color: blue;
- padding: 10px;
- border: 5px solid black;
- width: 300px;

margin 50

border 5

padding 10

270 x 108 10 5

```
box-model-before.html — course4-examples  
box-model-before.html <...>  
15 }  
16  
17 #box {  
18     background-color: blue;  
19     padding: 10px;  
20     border: 5px solid black;  
21     width: 300px;  
22     height: 50px;  
23     margin-top: 50px;  
24 }  
25 #content {  
26     background-color: #90EE90; //green  
27 }  
28  
29 h1 {  
30     margin-bottom: 30px;  
31 }  
32  
33 </style>  
34 </head>  
35 <body>  
36 <h1>Box Model</h1>  
37
```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

Box Model Reload this page

Box Model

Elements Network Sources Timeline Profiles Resources Audits Console

<html><head><body><h1>Box Model</h1><div id="box"><div id="content">...</div></div>

html body div#box

Styles Event Listeners DOM Breakpoints Properties

Filter element.style { }

#box { box-model-before.html:17  
background-color: blue;  
padding: 10px;  
border: 5px solid black;  
width: 300px;  
height: 50px;  
margin-top: 50px; }

margin 50  
border 5  
padding 10  
width 300px  
height 50px  
margin-top 50px

```
box-model-before.html — course4-examples
box-model-before.html <pre>
  34
  35
  36
  37 <h1>Box Model</h1>
  38
  39 <div id="box">
  40   <div id="content">Lorem ipsum dolor
    sit amet, consectetur adipisicing
    elit. Suscipit error quis ab
    perspiciatis eos inventore
    recusandae iste itaque numquam
    facilis, tenetur. Doloribus officiis
    quae facilis, nisi, ex similique.
    Animi, preferendis.
  41 </div>
  42 </div>
  43 <div>Lorem ipsum dolor sit amet,
    consectetur adipisicing elit. Tenetur
    magnam suscipit illum, sapiente
    quisquam, iusto atque eveniet
    quibusdam dicta cumque, ipsum iure.
    Reprehenderit nemo omnis veniam illum,
    suscipit accusantium molestias.</div>
</pre>
```

# The Box Model

Box Model

Lorem ipsum dolor sit amet, consectetur  
adipisicing elit. Suscipit error quis ab  
perspiciatis doloremque reconsuetudin  
adipisicing elit. Tenetur magnam suscipit illum,  
quisquam iusto atque eveniet quibusdam dicta cumque, ipsum iure. Reprehenderit nemo  
veniam illum, suscipit accusantium molestias.  
similique. Animi, preferendis.

Elements Network Sources Timeline Profiles Resources Audits Console

html body div#box

Styles Event Listeners DOM Breakpoints Properties

Filter +, -, ◆

element.style {  
}

#box { box-model-before.html:17

background-color: blue;  
padding: 10px;  
border: 5px solid black;  
width: 300px;

margin 50  
border 5  
padding 10  
5 10 270 x 20 10 5  
10

```
box-model-before.html <
```

```
14    background-color: gray;
```

```
15 }
```

```
16
```

```
{17 #box {
18   background-color: blue;
19   padding: 10px;
20   border: 5px solid black;
21   width: 300px;
22   height: 50px;
23   margin-top: 50px;
24   overflow: visible;
25 }
```

```
26 #content {
27   background-color: #90EE90; //green
28 }
```

```
29
```

```
30 h1 {
31   margin-bottom: 30px;
32 }
```

```
33
```

```
34 </style>
```

```
35 </head>
```

```
36 <body>
```

```
37
```

The Box Model



file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

# Box Model

```
Lore ipsum dolor sit amet, consectetur
adipisicing elit. Suscipit error quis ab
perspiciatis eos inventore recusandae iste
itaque numquam facilis, tenetur.
Doloribus officiis quae facilis, nisi, ex
similique. Animi, perferendis.
```

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head>
    <title>The Box Model</title>
  </head>
  <body>
    <h1>Box Model</h1>
    <div id="box">
      <div id="content"><pre>Lorem ipsum dolor sit amet, consectetur
adipisicing elit. Suscipit error quis ab
perspiciatis eos inventore recusandae iste
itaque numquam facilis, tenetur.
Doloribus officiis quae facilis, nisi, ex
similique. Animi, perferendis.</pre>
      </div>
    </div>
  </body>
</html>
```

Styles Event Listeners DOM Breakpoints Properties

Filter

```
element.style {
}
#box { box-model-before.html:17
  background-color: blue;
  padding: 10px;
  border: 5px solid black;
  width: 300px;
}
```

margin	50
border	5
padding	10
width	300px
height	50px
top	10px
bottom	10px

```
box-model-before.html — course4-examples  
box-model-before.html  
  
14  background-color: gray;  
15 }  
16  
17 #box {  
18  background-color: blue;  
19  padding: 10px;  
20  border: 5px solid black;  
21  width: 300px;  
22  height: 50px;  
23  margin-top: 50px;  
24  overflow: hidden;  
25 }  
26 #content {  
27  background-color: #90EE90; //green  
28 }  
29  
30 h1 {  
31  margin-bottom: 30px;  
32 }  
33  
34 </style>  
35 </head>  
36 <body>
```

# The Box Model

Box Model

Box Model

Elements Network Sources Timeline Profiles Resources Audits Console

~00uy>  
  <h1>Box Model</h1>  
  <div id="box">  
    <div id="content">...</div>  
  </div>

html body div#box

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}  
  
#box {  
 background-color: blue;  
 padding: 10px;  
 border: 5px solid black;  
 width: 300px;  
}

margin 50  
border 5  
padding 10  
- 5 10 270 x 20 10 5  
10

```

box-model-before.html — course4-examples
box-model-before.html

14    background-color: gray;
15 }
16
17 #box {
18     background-color: blue;
19     padding: 10px;
20     border: 5px solid black;
21     width: 300px;
22     height: 50px;
23     margin-top: 50px;
24     overflow: auto;
25 }
26 #content {
27     background-color: #90EE90; //green
28 }
29
30 h1 {
31     margin-bottom: 30px;
32 }
33
34 </style>
35 </head>
36 <body>
37

```

The Box Model

file:///Users/yaakov/workspace/coursera/fullstack-course4/e...

# Box Model

Lore ipsum dolor sit amet, consectetur adipisicing elit. Suscipit.

Elements Network Sources Timeline Profiles Resources Audits Console

- <body>
- <h1>Box Model</h1>
- <div id="box">
- <div id="content"><...></div>
- </div>

html body div#box

Styles Event Listeners DOM Breakpoints Properties

Filter

```

element.style {
}
#box {
    box-model-before.html:17
    background-color: blue;
    padding: 10px;
    border: 5px solid black;
    width: 300px;
}

```

margin 50  
border 5  
padding 10  
5 10 270 x 20 10 5  
10

```
box-model-before.html — course4-examples  
box-model-before.html  
14  background-color: gray;  
15 }  
16  
17 #box {  
18  background-color: blue;  
19  padding: 10px;  
20  border: 5px solid black;  
21  width: 300px;  
22  height: 50px;  
23  margin-top: 50px;  
24  overflow: scroll;  
25 }  
26 #content {  
27  background-color: #90EE90; //green  
28 }  
29  
30 h1 {  
31  margin-bottom: 30px;  
32 }  
33  
34 </style>  
35 </head>  
36 <body>  
37
```

# The Box Model

Box Model

Box Model

Elements Network Sources Timeline Profiles Resources Audits Console

html body div#box

Styles Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}  
  
#box {  
background-color: blue;  
padding: 10px;  
border: 5px solid black;  
width: 300px;

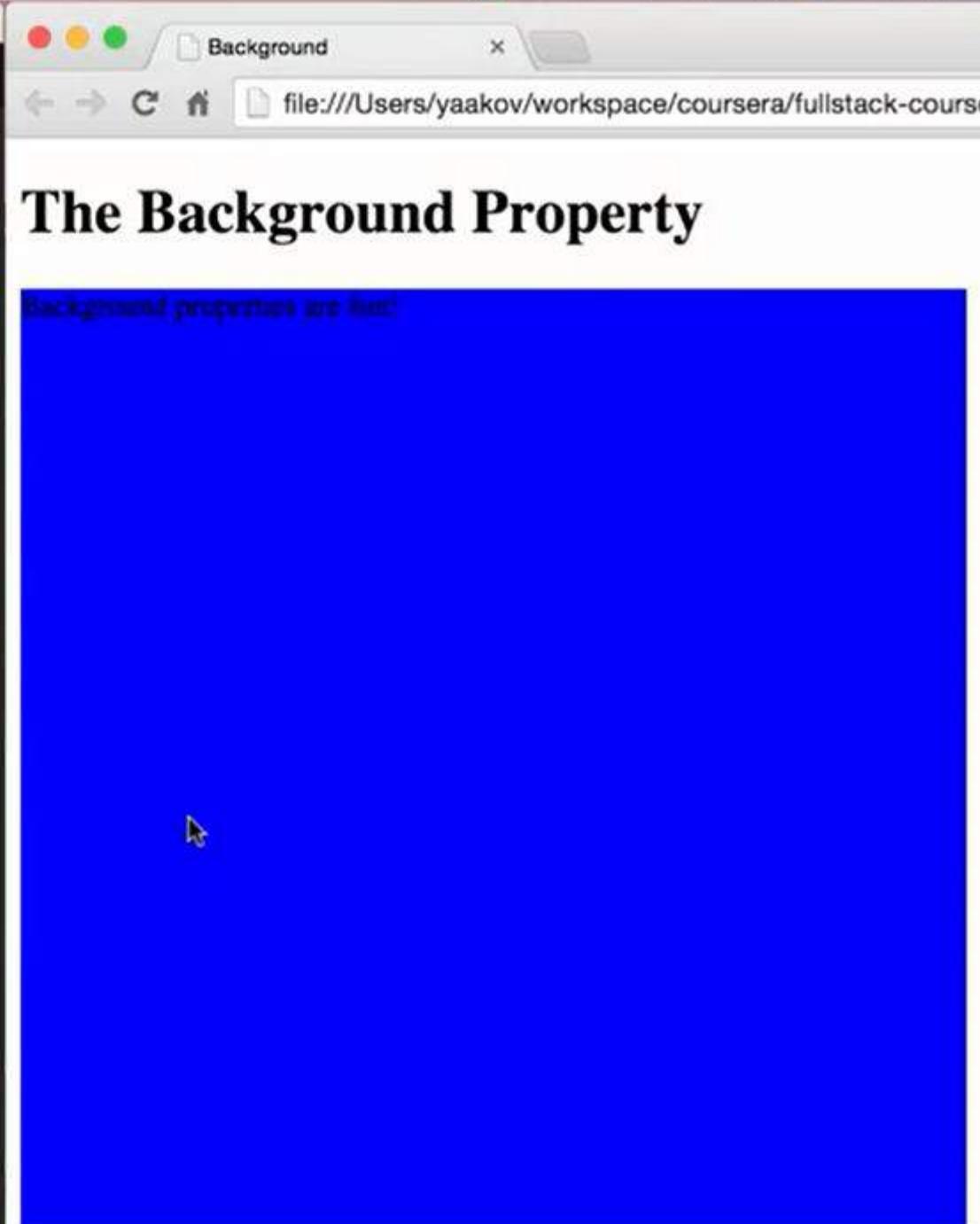
margin 50  
border 5  
padding 10  
- 5 10 270 x 20 10 5  
10

# Summary

- ✧ Box model – essential to understand
  - Prefer **box-sizing: border-box**
- ✧ The \* (universal) selector
- ✧ Cumulative and collapsing margins
- ✧ Content overflow

```
background-before.html — course4-examples
background-before.html ×

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Background</title>
6 <style>
7 #bg {
8   width: 500px;
9   height: 500px;
10  background-color: blue;
11 }
12
13
14 </style>
15 </head>
16 <body>
17 <h1>The Background Property</h1>
18
19 <div id="bg">Background properties are
20 fun!</div>
21 </body>
22 </html>
```



background-before.html — course4-examples

```
background-before.html <pre>
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <meta charset="utf-8">
5  <title>Background</title>
6  <style>
7  #bg {
8    width: 500px;
9    height: 500px;
10   background-color: blue;
11   background-image: url("yaakov.png")
12 }
13 
14 </style>
15 </head>
16 <body>
17 <h1>The Background Property</h1>
18 <div id="bg">Background properties are
19   fun!</div>
20 </body>
21 </html>
```

2:47

Background &lt;pre&gt;
C file:///Users/yaakov/workspace/coursera/fullstack-course...&lt;/pre&gt;

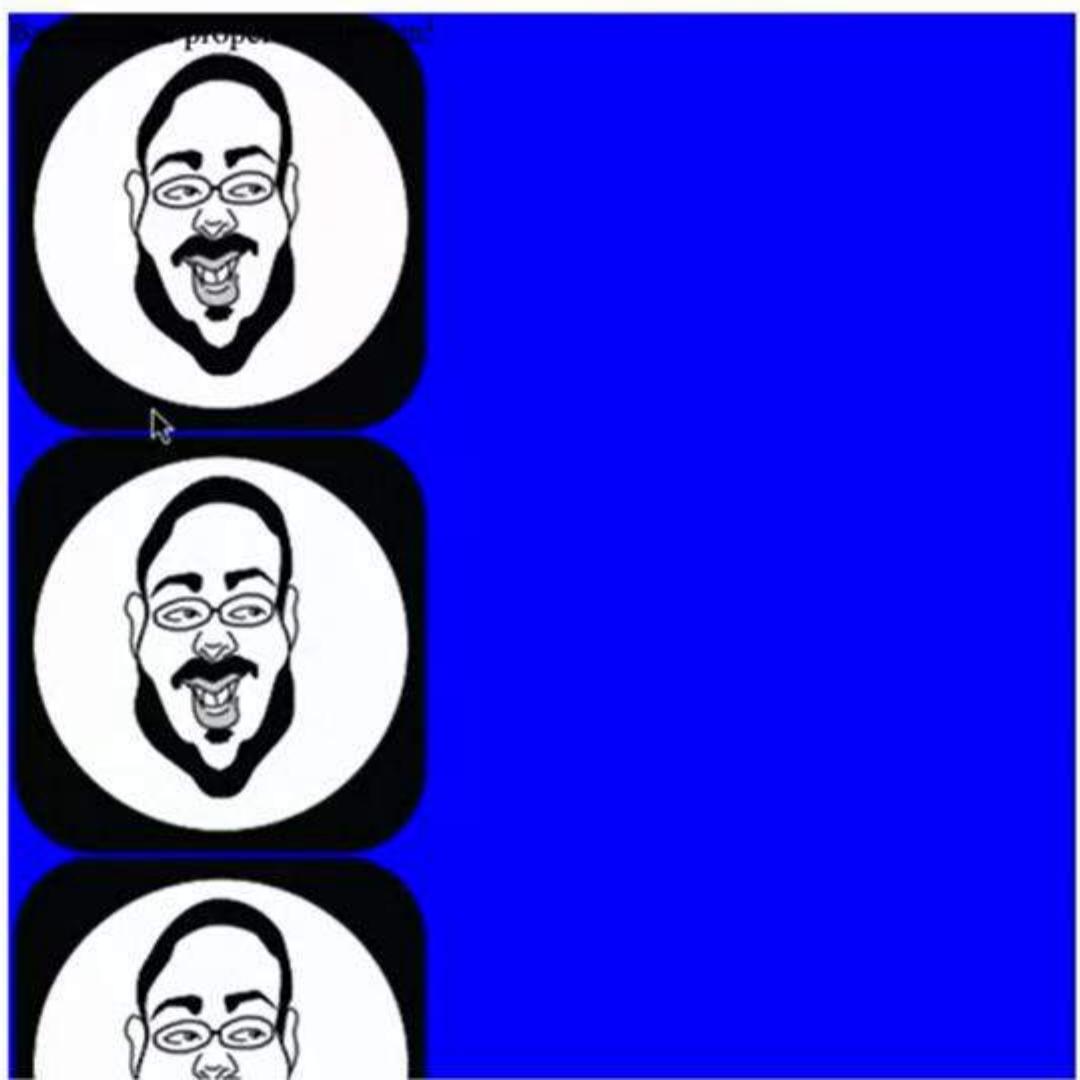
## The Background Property



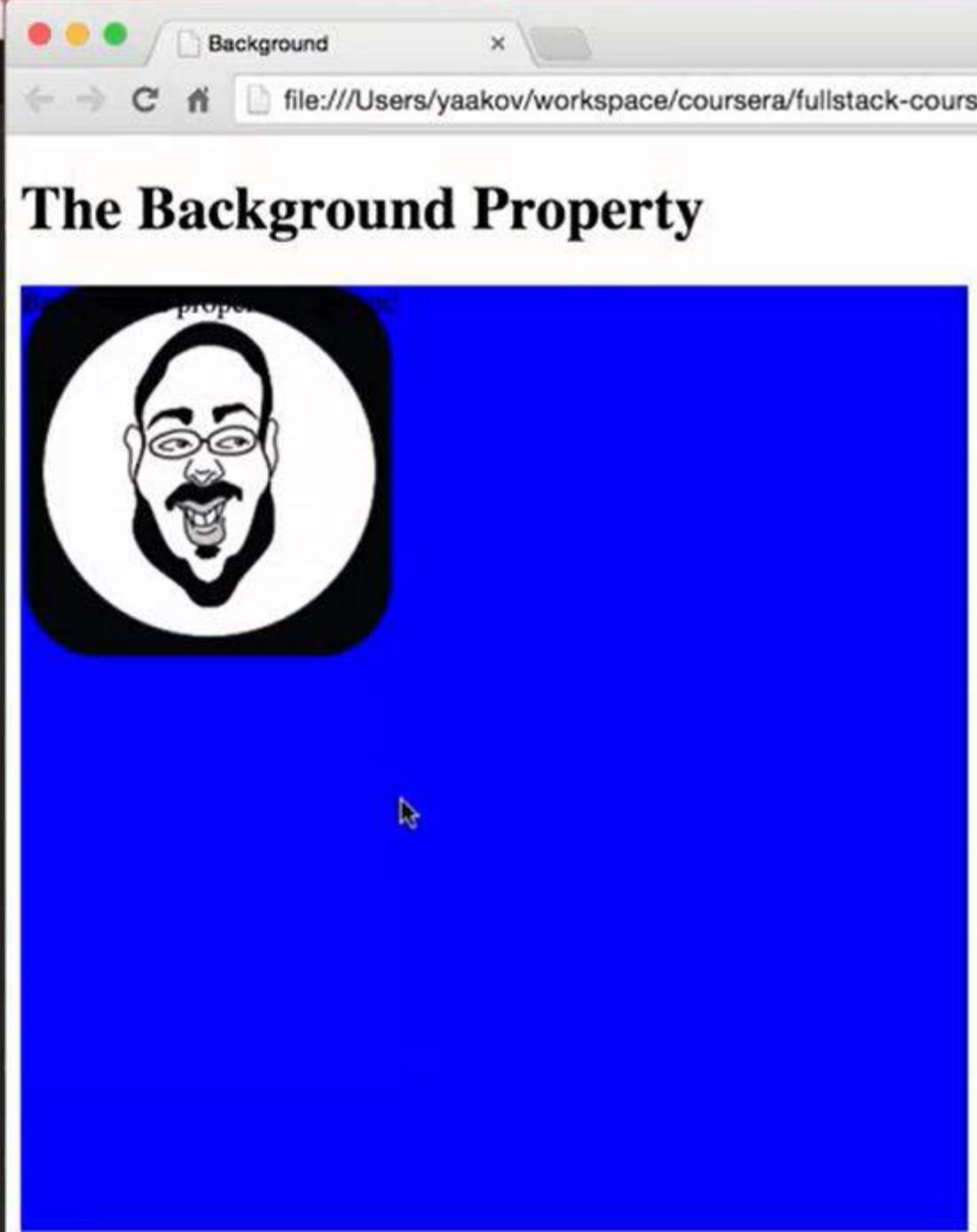
```
background-before.html
```

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Background</title>
6 <style>
{ 7 #bg {
8   width: 500px;
9   height: 500px;
10  background-color: blue;
11  background-image: url("yaakov.png");
12  background-repeat: repeat-y;
13 }
14 }
15
16 </style>
17 </head>
18 <body>
19 <h1>The Background Property</h1>
20
21 <div id="bg">Background properties are
22 fun!</div>
23 </body>
24 </html>
```

## The Background Property



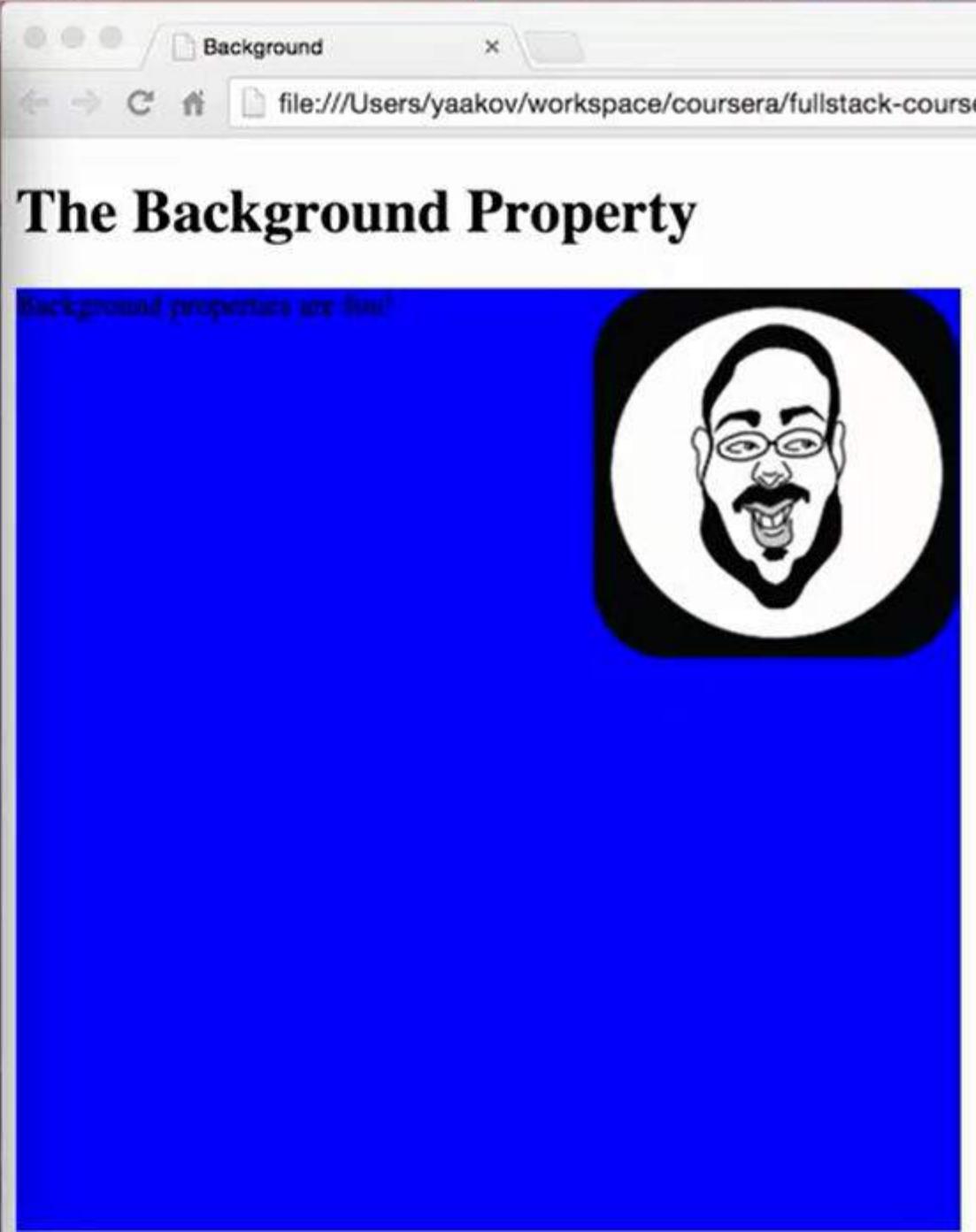
```
background-before.html — course4-examples  
background-before.html  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>Background</title>  
6 <style>  
7 #bg {  
8   width: 500px;  
9   height: 500px;  
10  background-color: blue;  
11  background-image: url("yaakov.png");  
12  background-repeat: no-repeat;  
13 }  
14  
15 </style>  
16 </head>  
17 <body>  
18 <h1>The Background Property</h1>  
20  
21 <div id="bg">Background properties are  
fun!</div>  
22 </body>  
23 </html>
```



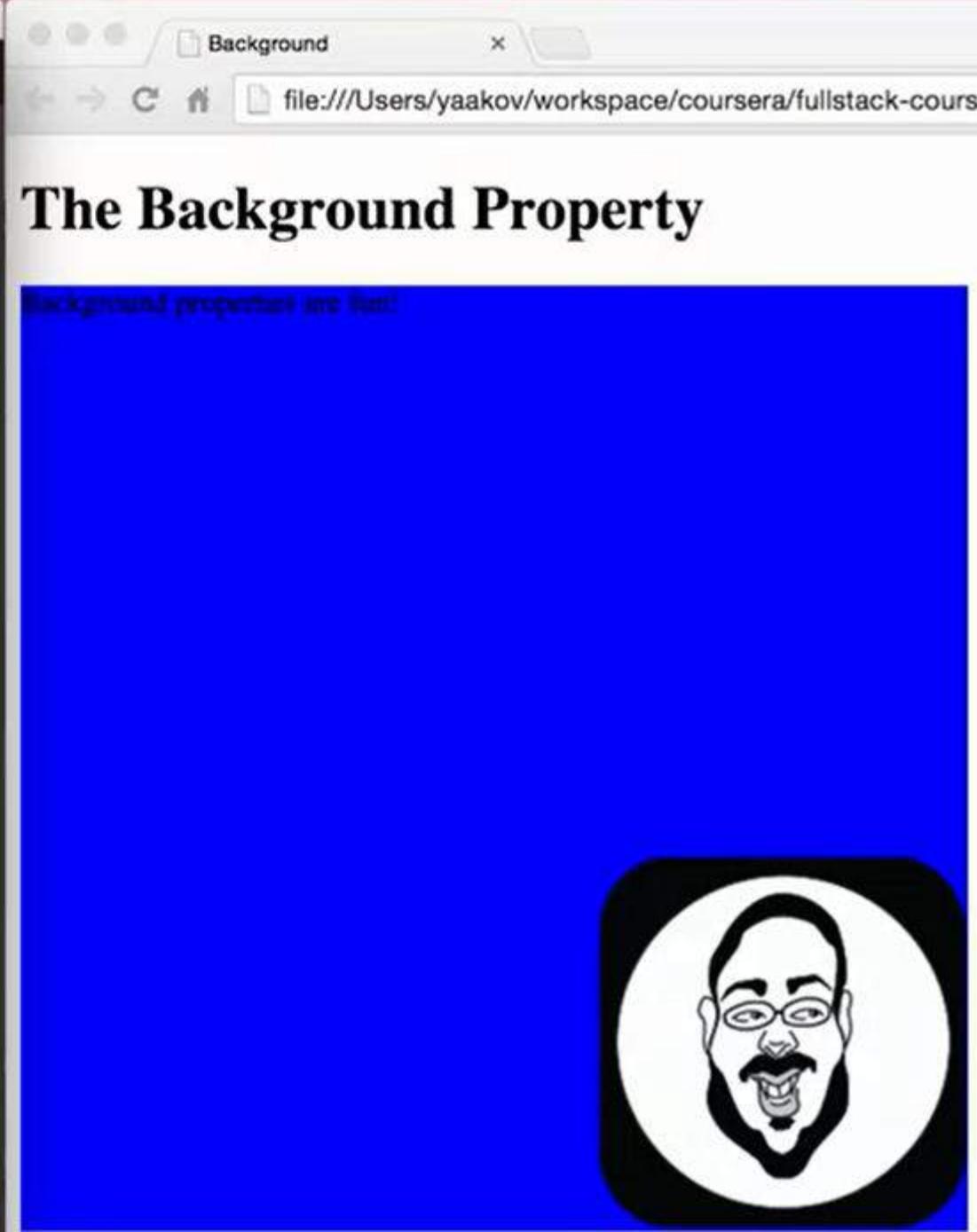
background-before.html – course4-examples

```
background-before.html x

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Background</title>
6 <style>
7 #bg {
8   width: 500px;
9   height: 500px;
10  background-color: blue;
11  background-image: url("yaakov.png");
12  background-repeat: no-repeat;
13  background-position: top right;
14 }
15
16 </style>
17 </head>
18 <body>
19 <h1>The Background Property</h1>
20
21 <div id="bg">Background properties are
fun!</div>
22 </body>
23 </html>
```

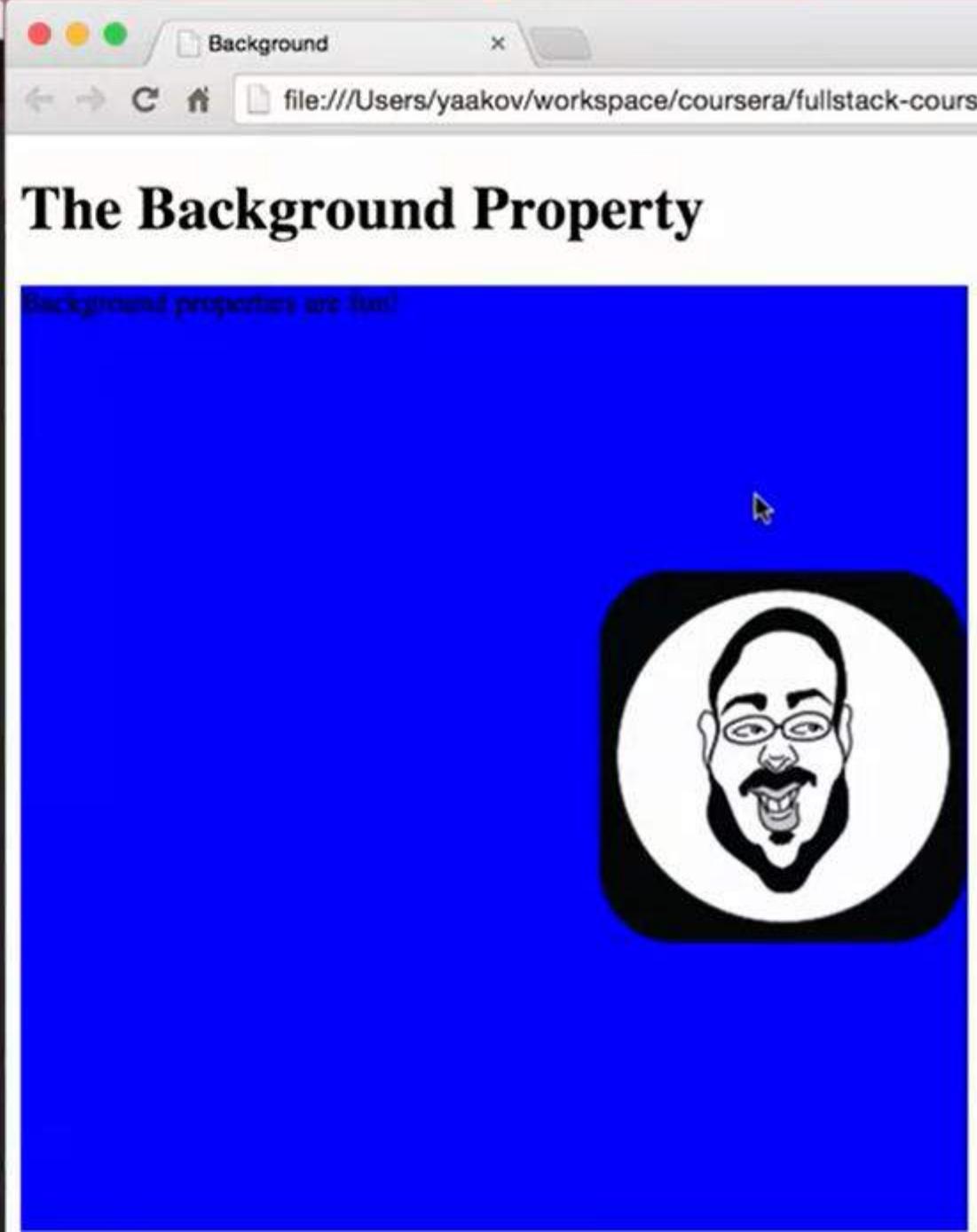


```
background-before.html – course4-examples
background-before.html ×
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Background</title>
6 <style>
7 #bg {
8   width: 500px;
9   height: 500px;
10  background-color: blue;
11  background-image: url("yaakov.png");
12  background-repeat: no-repeat;
13  background-position: bottom right;
14 }
15
16 </style>
17 </head>
18 <body>
19 <h1>The Background Property</h1>
20
21 <div id="bg">Background properties are
fun!</div>
22 </body>
23 </html>
```



```
background-before.html — course4-examples
background-before.html ×

1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Background</title>
6 <style>
7 #bg {
8   width: 500px;
9   height: 500px;
10  background-color: blue;
11  background-image: url("yaakov.png");
12  background-repeat: no-repeat;
13  background-position: right;
14 }
15
16 </style>
17 </head>
18 <body>
19 <h1>The Background Property</h1>
20
21 <div id="bg">Background properties are
fun!</div>
22 </body>
23 </html>
```



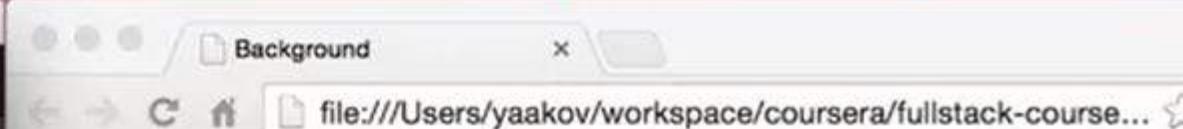
```
background-before.html
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Background</title>
6 <style>
7 #bg {
8   width: 500px;
9   height: 500px;
10  background-color: blue;
11  background: url('yaakov.png') no-repeat
12    right center blue;
13 }
14 </style>
15 </head>
16 <body>
17 <h1>The Background Property</h1>
18
19 <div id="bg">Background properties are
20   fun!</div>
21 </body>
22 </html>
```

# The Background Property

Background properties are fun!



```
background-before.html — course4-examples  
background-before.html  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>Background</title>  
6 <style>  
7 #bg {  
8   width: 500px;  
9   height: 500px;  
10  background-color: blue;  
11  background: url('yaakov.png') no-repeat  
     right center;  
12 }  
13  
14 </style>  
15 </head>  
16 <body>  
17 <h1>The Background Property</h1>  
18  
19 <div id="bg">Background properties are  
fun!</div>  
20 </body>  
21 </html>
```



## The Background Property

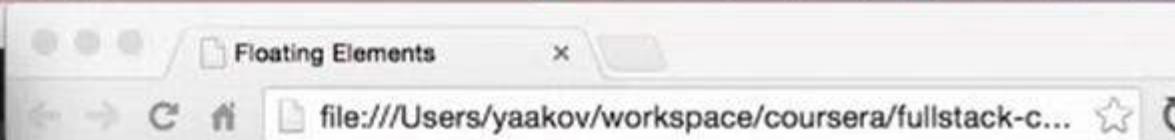
Background properties are fun!



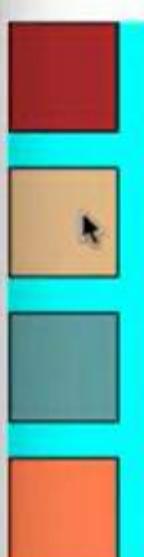
# Summary

- ❖ Background property and its sub properties
  - **-image**
  - **-color**
  - **-position**
  - etc.
- ❖ Can get pretty complex and is used for adjusting image size/resolution based on screen size

```
8 div {  
9   background-color: #00FFFF;  
10 }  
11 p {  
12   width: 50px;  
13   height: 50px;  
14   border: 1px solid black;  
15 }  
16 |  
17 #p1 {  
18   background-color: #A52A2A;  
19 }  
20 #p2 {  
21   background-color: #DEB887;  
22 }  
23 #p3 {  
24   background-color: #5F9EA0;  
25 }  
26 #p4 {  
27   background-color: #FF7F50;  
28 }  
29  
30 </style>  
31 </head>
```

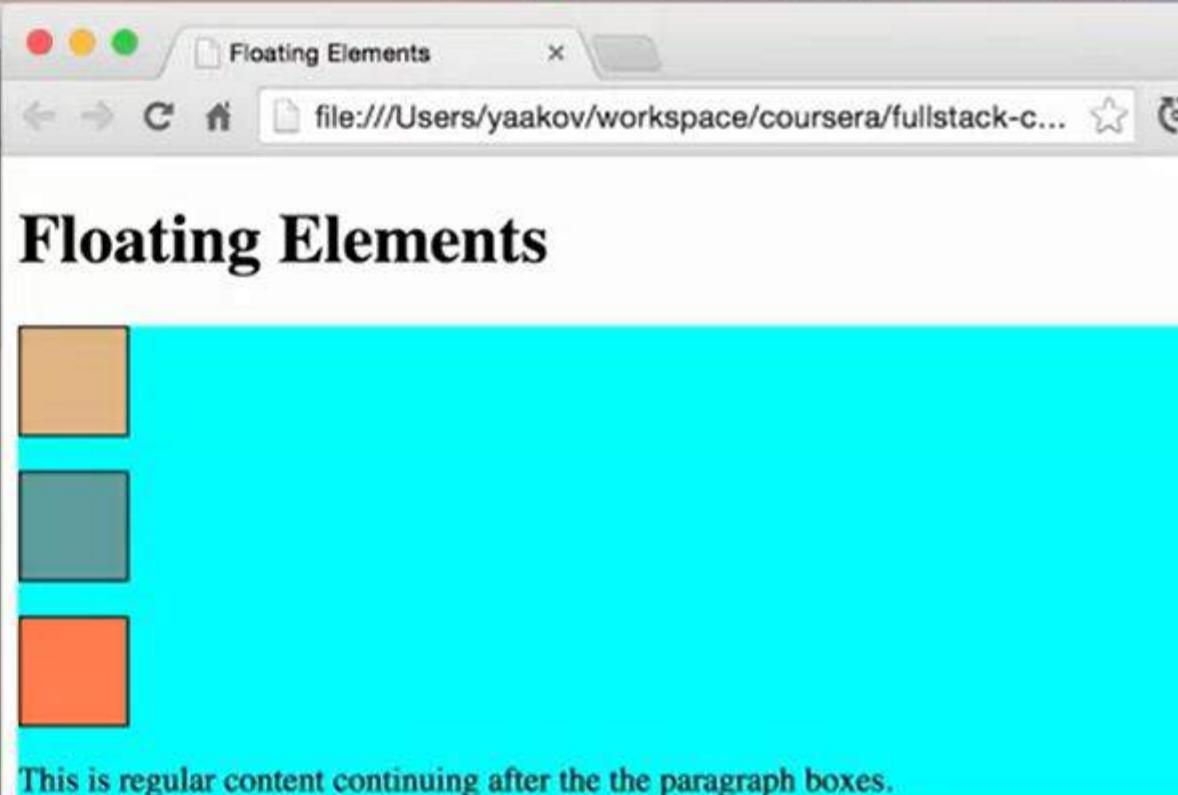


## Floating Elements



This is regular content continuing after the the paragraph boxes.

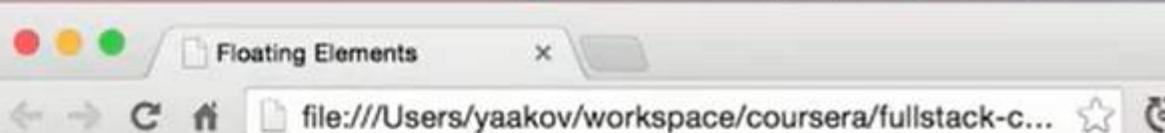
```
floating-before.html — course4-examples  
floating-before.html x  
8 div {  
9   background-color: #00FFFF;  
10 }  
11 p {  
12   width: 50px;  
13   height: 50px;  
14   border: 1px solid black;  
15 }  
16  
17 #p1 {  
18   background-color: #A52A2A;  
19   float: right;  
20 }  
21 #p2 {  
22   background-color: #DEB887;  
23 }  
24 #p3 {  
25   background-color: #5F9EA0;  
26 }  
27 #p4 {  
28   background-color: #FF7F50;  
29 }  
30  
31 
```



This is regular content continuing after the the paragraph boxes.

```
floating-before.html — course4-examples
floating-before.html x

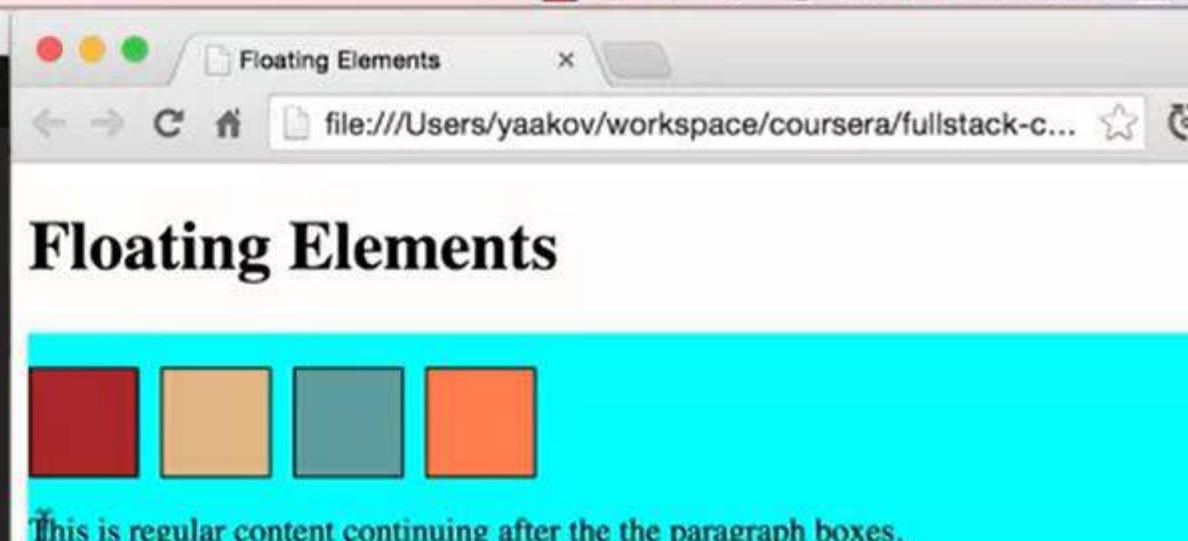
8 div {
9   background-color: #00FFFF;
10 }
11 p {
12   width: 50px;
13   height: 50px;
14   border: 1px solid black;
15   float: left;
16   margin-right: 10px;
17 }
18
19 #p1 {
20   background-color: #A52A2A;
21 }
22 #p2 {
23   background-color: #DEB887;
24 }
25 #p3 {
26   background-color: #5F9EA0;
27 }
28 #p4 {
29   background-color: #FF7F50;
30 }
```



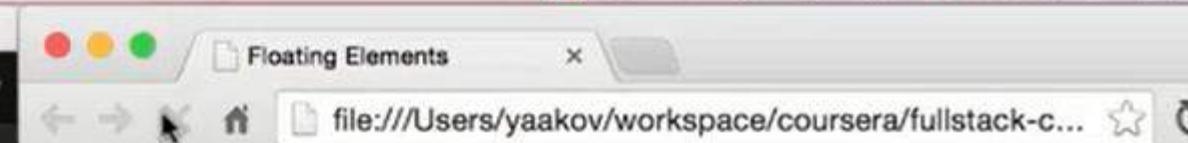
## Floating Elements

This is regular content continuing after the the boxes.

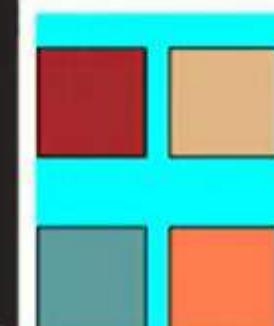
```
floating-before.html — course4-examples
floating-before.html ×
23  background-color: #DEB887;
24 }
25 #p3 {
26  background-color: #5F9EA0;
27 }
28 #p4 {
29  background-color: #FF7F50;
30 }
31
32 section {
33  clear: left;
34 }
35
36 </style>
37 </head>
38 <body>
39 <h1>Floating Elements</h1>
40
41 <div>
42  <p id="p1"></p>
43  <p id="p2"></p>
44  <p id="p3"></p>
45  <p id="p4"></p>
46 <section>This is regular content
```



```
floating-before.html <pre>22 #p2 {  
23   background-color: #DEB887;  
24 }  
25 #p3 {  
26   background-color: #5F9EA0;  
27   clear: left;  
28 }  
29 #p4 {  
30   background-color: #FF7F50;  
31 }  
32  
33 section {  
34   clear: left;  
35 }  
36  
37 </style>  
38 </head>  
39 <body>  
40 <h1>Floating Elements</h1>  
41  
42 <div>  
43   <p id="p1"></p>  
44   <p id="p2"></p>  
45   <p id="p3"></p>
```

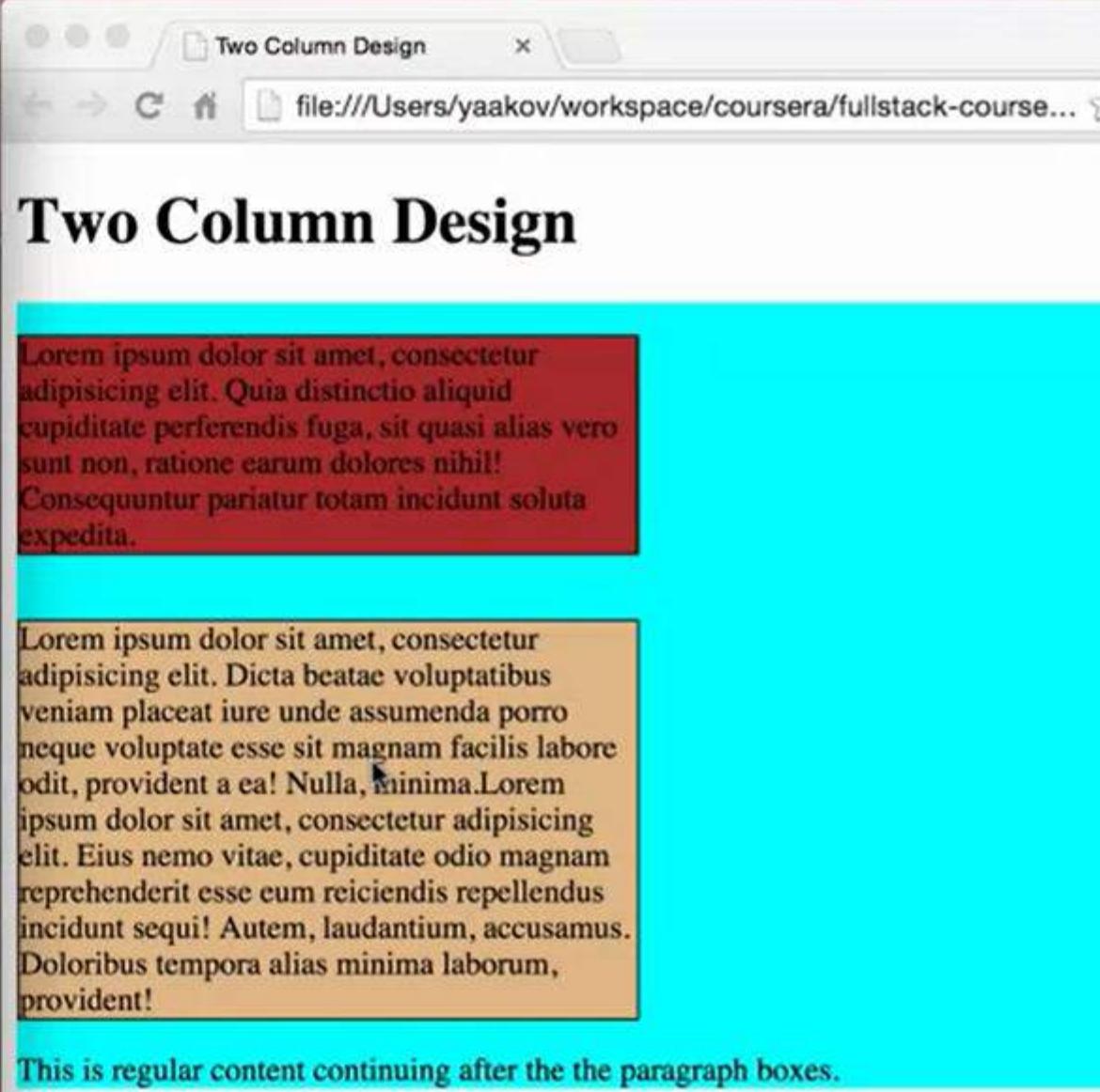


## Floating Elements



This is regular content continuing after the the paragraph boxes.

```
two-column-before.html – course4-examples  
two-column-before.html  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>Two Column Design</title>  
6 <style>  
7  
8 div {  
9   background-color: #00FFFF;  
10 }  
11 p {  
12   width: 50%;  
13   border: 1px solid black;  
14   float: left;  
15 }  
16  
17 #p1 {  
18   background-color: #A52A2A;  
19 }  
20 #p2 {  
21   background-color: #DEB887;  
22 }  
23  
24 section {  
25   clear: left;
```



This is regular content continuing after the the paragraph boxes.

```
two-column-before.html - course4-examples
```

```
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Two Column Design</title>
6 <style>
7
8 div {
9   background-color: #00FFFF;
10 }
11 p {
12   width: 50%;
13   /*border: 1px solid black;*/
14   float: left;
15 }
16
17 #p1 {
18   background-color: #A52A2A;
19 }
20 #p2 {
21   background-color: #DEB887;
22 }
23
24 section {
25   clear: left;
```

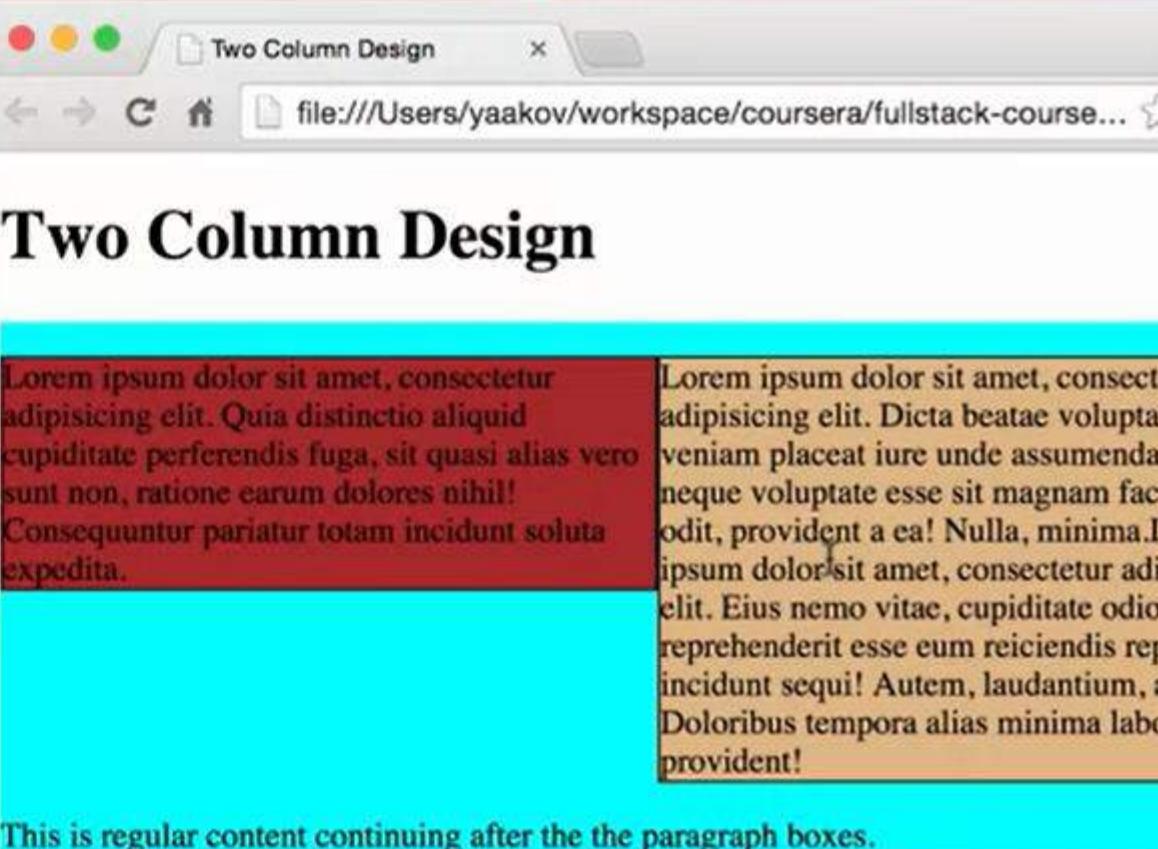
# Two Column Design

Lore ipsum dolor sit amet, consectetur  
adipisicing elit. Quia distinctio aliquid  
cupiditate preferendis fuga, sit quasi alias vero  
sunt non, ratione earum dolores nihil!  
Consequuntur pariatur totam incident soluta  
expedita.

Lore ipsum dolor sit amet, consectetur  
adipisicing elit. Dicta beatae volupta  
veniam placeat iure unde assumenda  
neque voluptate esse sit magnam fac  
odit, provident a ea! Nulla, minima.L  
ipsum dolor sit amet, consectetur adi  
elit. Eius nemo vitae, cupiditate odio  
rehenderit esse eum reiciendis rep  
incident sequi! Autem, laudantium, a  
Doloribus tempora alias minima labo  
provident!

This is regular content continuing after the the paragraph boxes.

```
two-column-before.html — course4-examples  
two-column-before.html  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>Two Column Design</title>  
6 <style>  
7 * {  
8   box-sizing: border-box;  
9 }  
10  
11 div {  
12   background-color: #00FFFF;  
13 }  
14  
15 p {  
16   width: 50%;  
17   border: 1px solid black;  
18   float: left;  
19 }  
20  
21 #p1 {  
22   background-color: #A52A2A;  
23 }  
24 #p2 {  
25   background-color: #DEB887;
```



```
two-column-before.html - course4-examples  
two-column-before.html  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>Two Column Design</title>  
6 <style>  
7 * {  
8   box-sizing: border-box;  
9 }  
10  
11 div {  
12   background-color: #00FFFF;  
13 }  
14  
15 p {  
16   width: 50%;  
17   border: 1px solid black;  
18   float: left;  
19   padding: 10px;  
20 }  
21  
22 #p1 {  
23   background-color: #A52A2A;  
24 }  
25 #p2 {
```

# Two Column Design

Lore ipsum dolor sit amet, consectetur adipisicing elit. Quia distinctio aliquid cupiditate perferendis fuga, sit quasi alias vero sunt non, ratione earum dolores nihil! Consequuntur pariatur totam incident soluta expedita.

Lore ipsum dolor sit amet, consectetur adipisicing elit. Dicta beatae voluptatem placeat iure unde assumenda neque voluptate esse sit magnam facilis labore odit, provident a ea! Nulla, minima.Lorem ipsum dolor sit amet, consectetur adipisicing elit. Eius neque vitae, cupiditate odio magnam reprehenderit esse eum reiciendis repellendus incidunt sequi! Autem, laudantium, accusamus Doloribus tempora alias minima laboriosam provident!

This is regular content continuing after the the paragraph boxes.

## Two Column Design

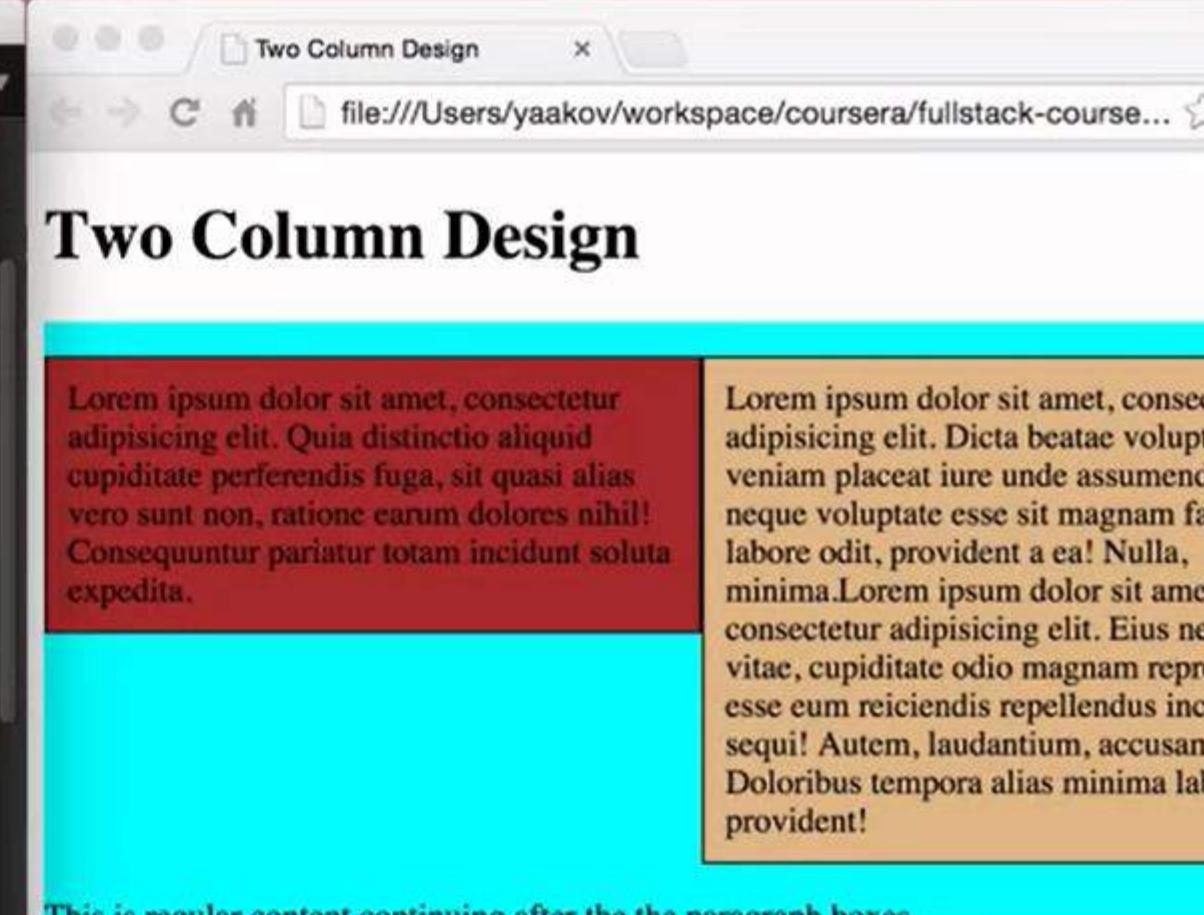
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quia distinctio aliquid cupiditate perferendis fuga, sit quasi alias vero sunt non, ratione earum dolores nihil! Consequuntur pariatur totam incident soluta expedita.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Dicta beatae voluptatibus ve placeat iure unde assumenda porro neque voluptate esse sit magnam facilis labore od provident a ea! Nulla, minima.Lorem ipsum dolor sit amet, consectetur adipisicing el nemo vitae, cupiditate odio magnam reprehenderit esse eum reiciendis repellendus in sequi! Autem, laudantium, accusamus. Doloribus tempora alias minima laborum, pro

This is regular content continuing after the the paragraph boxes.

```
two-column-before.html — course4-examples
```

```
* {  
    box-sizing: border-box;  
}  
  
. 8  
. 9  
. 10  
. 11  
. 12 div {  
. 13     /*background-color: #00FFFF;*/  
. 14 }  
. 15 p {  
. 16     width: 50%;  
. 17     /*border: 1px solid black;*/  
. 18     float: left;  
. 19     padding: 10px;  
. 20 }  
. 21  
. 22 #p1 {  
. 23     background-color: #A52A2A;  
. 24 }  
. 25 #p2 {  
. 26     background-color: #DEB887;  
. 27 }  
. 28  
. 29 section {  
. 30     clear: left;  
. 31 }
```



```
two-column-before.html — course4-examples
```

```
* {  
    box-sizing: border-box;  
}  
  
.12 div {  
    /*background-color: #00FFFF;*/  
}  
.13 }  
.14 p {  
    width: 50%;  
    /*border: 1px solid black;*/  
    float: left;  
    padding: 10px;  
}  
  
.21 #p1 {  
    /*background-color: #A52A2A;*/  
}  
.22 }  
.23 #p2 {  
    /*background-color: #DEB887;*/  
}  
.24 }  
.25  
.26 section {  
    clear: left;  
}  
.27 }
```

# Two Column Design

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quia distinctio aliquid cupiditate perferendis fuga, sit quasi alias vero sunt non, ratione earum dolores nihil! Consequuntur pariatur totam incident soluta expedita.

This is regular content continuing after the the paragraph boxes.

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Dicta beatae voluptatem placeat iure unde assumenda neque voluptate esse sit magnam facilis labore odit, provident a ea! Nulla, minima.Lorem ipsum dolor sit amet, consectetur adipisicing elit. Eius neque cupiditate odio magnam reprehenderit eum reiciendis repellendus incidentia. Autem, laudantium, accusamus. Dolorem tempora alias minima laborum, praesentium.

## Summary

- ❖ 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

# Media Query Syntax

Media Feature (resolves to true or false)

```
@media (max-width: 767px) {  
    p {  
        color: blue;  
    }  
}
```

If TRUE  
styles within  
curly braces  
apply

# Media Query Common Features

```
@media (max-width: 800px) { ... }
```

```
@media (min-width: 800px) { ... }
```

```
@media (orientation: portrait) { ... }
```

```
@media screen { ... }
```

```
@media print { ... }
```

...

# Media Query Common Logical Operators

Devices with width within a range

```
@media (min-width: 768px) and (max-width: 991px) {...}
```

I  
Comma is equivalent to OR:

```
@media (max-width: 767px) , (min-width: 992px) {...}
```

...

# Media Query Common Approach

```
p { color: blue; } /* base styles */  
...  
@media (min-width: 1200px) {  
...  
}  
  
@media (min-width: 992px) and (max-width: 1199px) {  
...  
}  
...
```

Careful not to overlap range boundaries!

media-queries-before.html

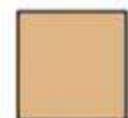
```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Media Queries</title>
6 <style>
7
8 /***** Base styles *****/
9 h1 {
10   margin-bottom: 15px;
11 }
12
13 p {
14   border: 1px solid black;
15   margin-bottom: 15px;
16 }
17 #p1 {
18   background-color: #A52A2A;
19   width: 300px;
20   height: 300px;
21 }
22 #p2 {
23   background-color: #DEB887;
24   width: 50px;
```



Media Queries

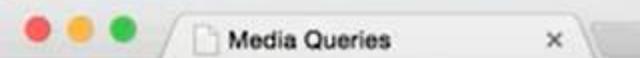
file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture23/media-queries-before.html

# Media Queries



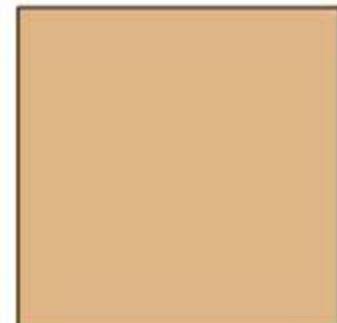
media-queries-before.html x

```
28  **** Large devices only ****
29  @media (min-width: 1200px) {
30    #p1 {
31      width: 80%;
32    }
33    #p2 {
34      width: 150px;
35      height: 150px;
36    }
37  }
38
39
40  **** Medium devices only ****
41
42
43 </style>
44 </head>
45 <body>
46 <h1>Media Queries</h1>
47
48 <p id="p1"></p>
49 <p id="p2"></p>
50
51 </body>
```

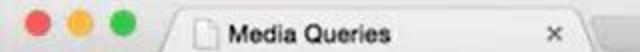


file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture23/media-queries-before.html

# Media Queries



```
media-queries-before.html <--> media-queries-before.html
1  / **** Large devices only ****/
2
3  @media (min-width: 1200px) {
4      #p1 {
5          width: 80%;
6      }
7      #p2 {
8          width: 150px;
9          height: 150px;
10     }
11 }
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40  /***** Medium devices only *****/
41  @media (min-width: 992px) and (max-width: 1199px) {
42      #p1 {
43          width: 50%;
44      }
45      #p2 {
46          width: 100px;
47          height: 100px;
48      }
49 }
50
51
```

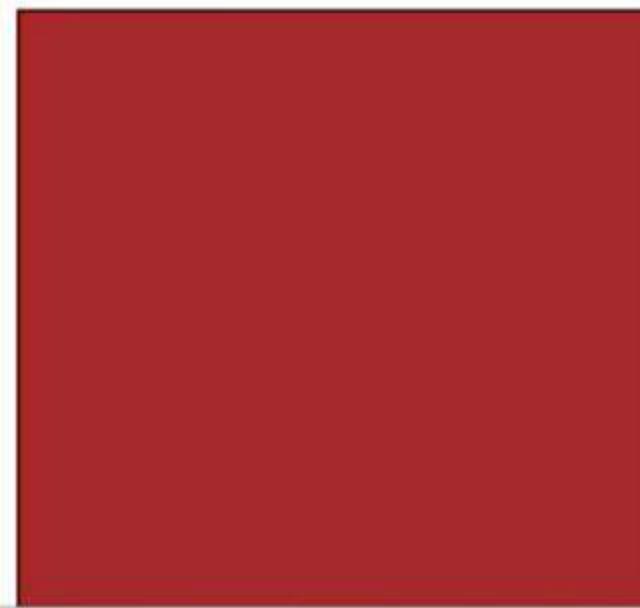


Media Queries

file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture23/media-queries-before.html

1195px x 354px

# Media Queries



Elements Network Sources Timeline Profiles Resources Audits Console

Styles Computed Event Listeners DOM Breakpoints Properties

Filter

```
element.style {  
}  
body {  
    display: block;  
    margin: 8px;  
}
```

user agent stylesheet

margin 8

```
<!DOCTYPE html>  
<html>  
  <head>..</head>  
  <body>  
    <h1>Media Queries</h1>  
    <p id="p1"></p>  
    <p id="p2"></p>  
  </body>  
</html>
```



file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture23/media-queries-before.html

1221px x 475px

# Media Queries



Elements Network Sources Timeline Profiles Resources Audits Console

<!DOCTYPE html>  
<html>  
 > <head>..</head>  
 > <body>  
 > <h1>Media Queries</h1>

Styles Computed Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}



# Media Queries



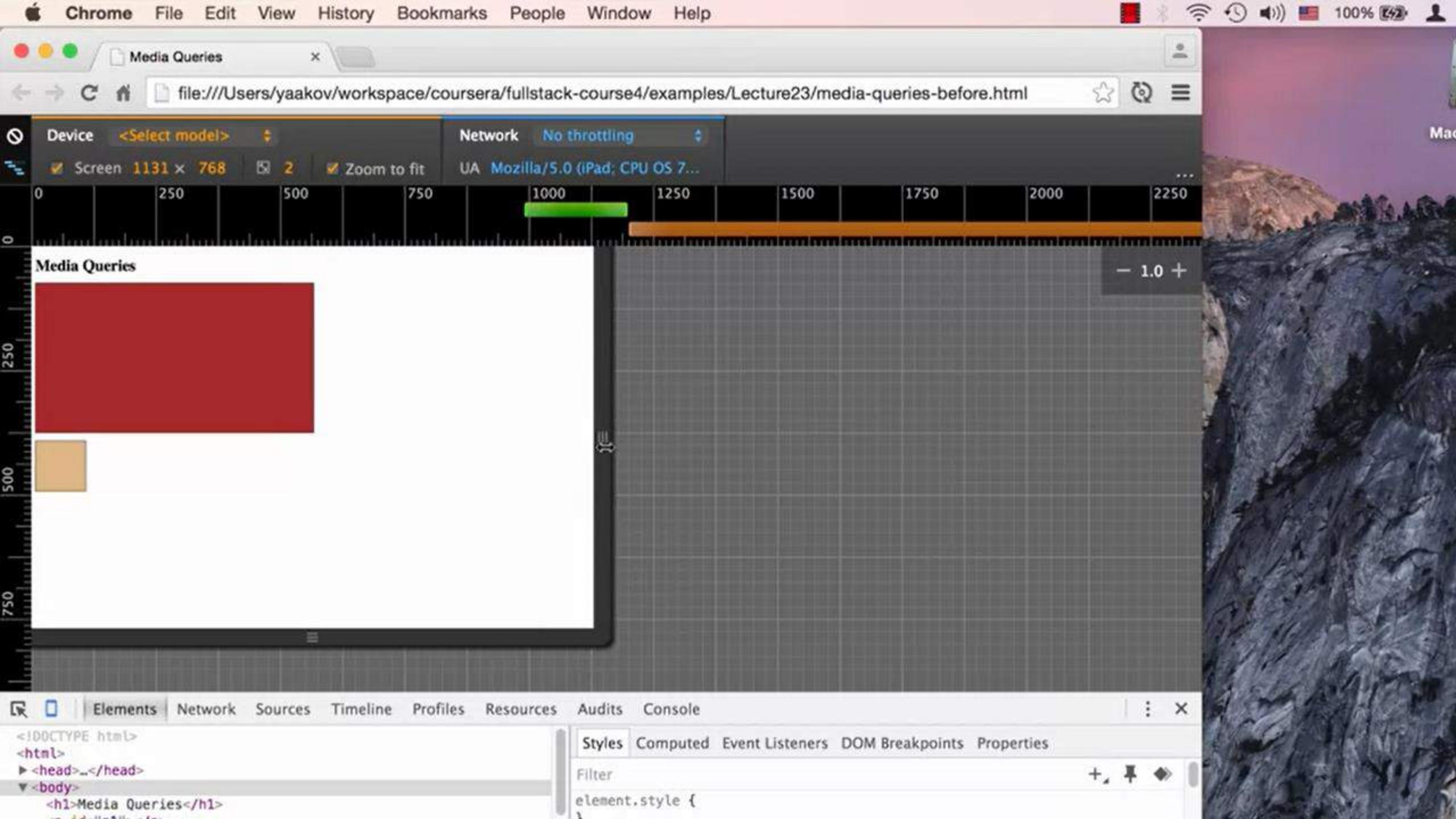
Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head>..</head>
  <body>
    <h1>Media Queries</h1>
```

Styles Computed Event Listeners DOM Breakpoints Properties

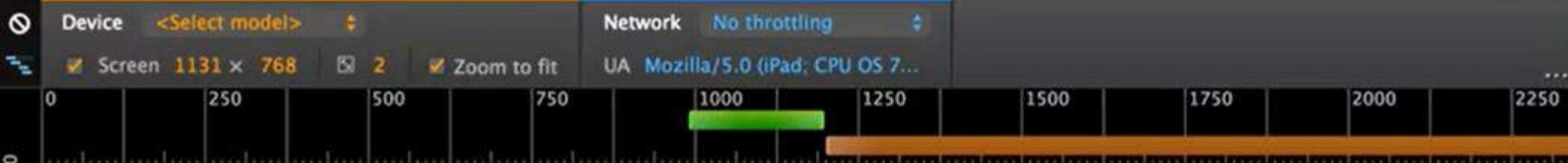
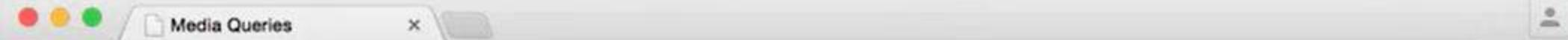
Filter

```
element.style {
```



Chrome File Edit View History Bookmarks People Window Help

100%



Media Queries



- 1.0 +

250  
500  
750

Elements Network Sources Timeline Profiles Resources Audits Console

```
<!DOCTYPE html>
<html>
  <head>..</head>
  <body>
    <h1>Media Queries</h1>
```

Styles Computed Event Listeners DOM Breakpoints Properties

Filter

```
element.style {
```

# Summary

- ✧ Basic syntax of a media query
  - @media (media feature)
  - @media (media feature) logical operator (media feature)
- ✧ Remember not to overlap breakpoints