

# Web Engineering

# Lect 7 (CSS BootStrap)

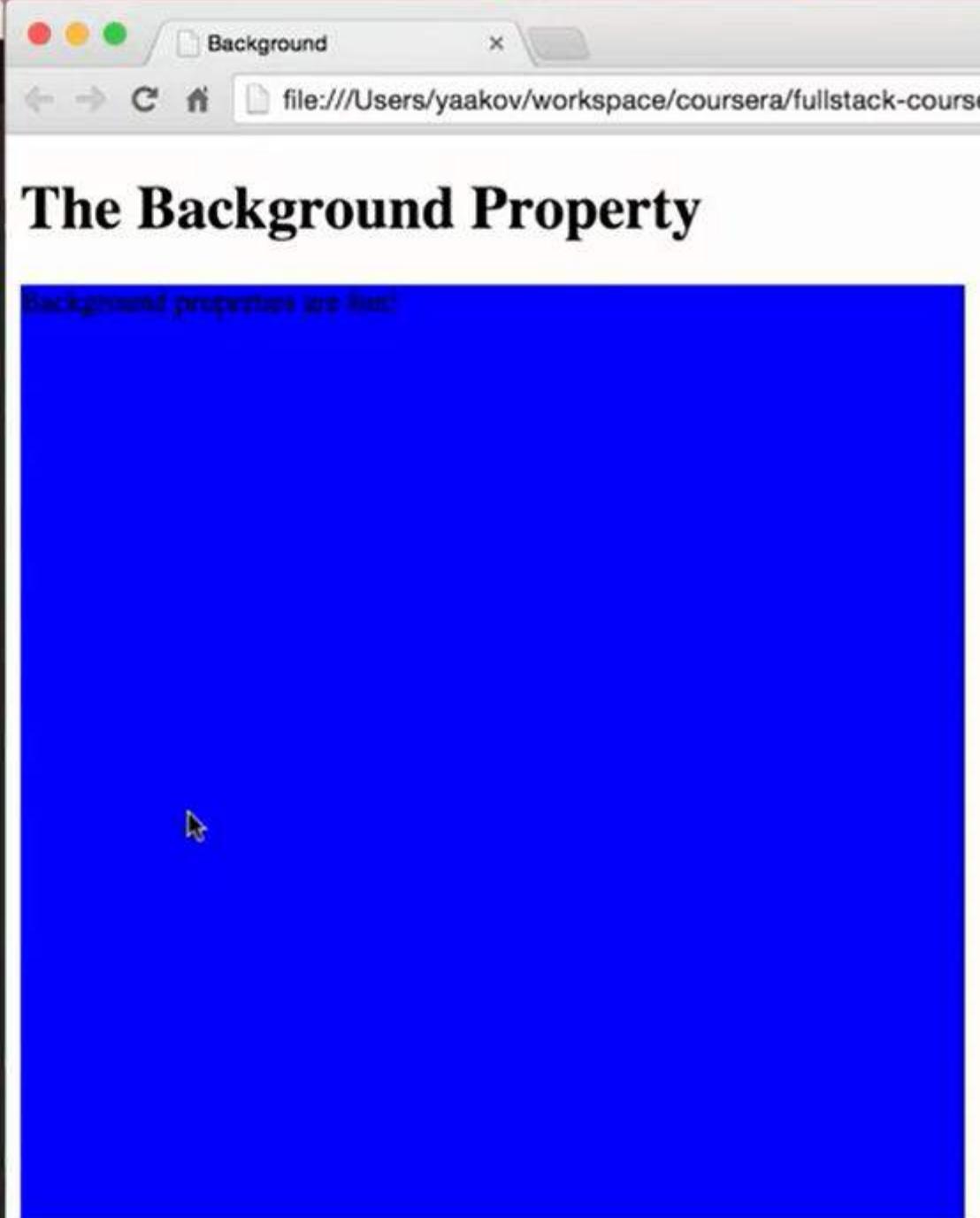
Instructor: Faheem Shaukat

Meeting Hours

Wednesday and Thursday

12PM to 02PM

```
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  
fun!</div>  
20 </body>  
21 </html>
```

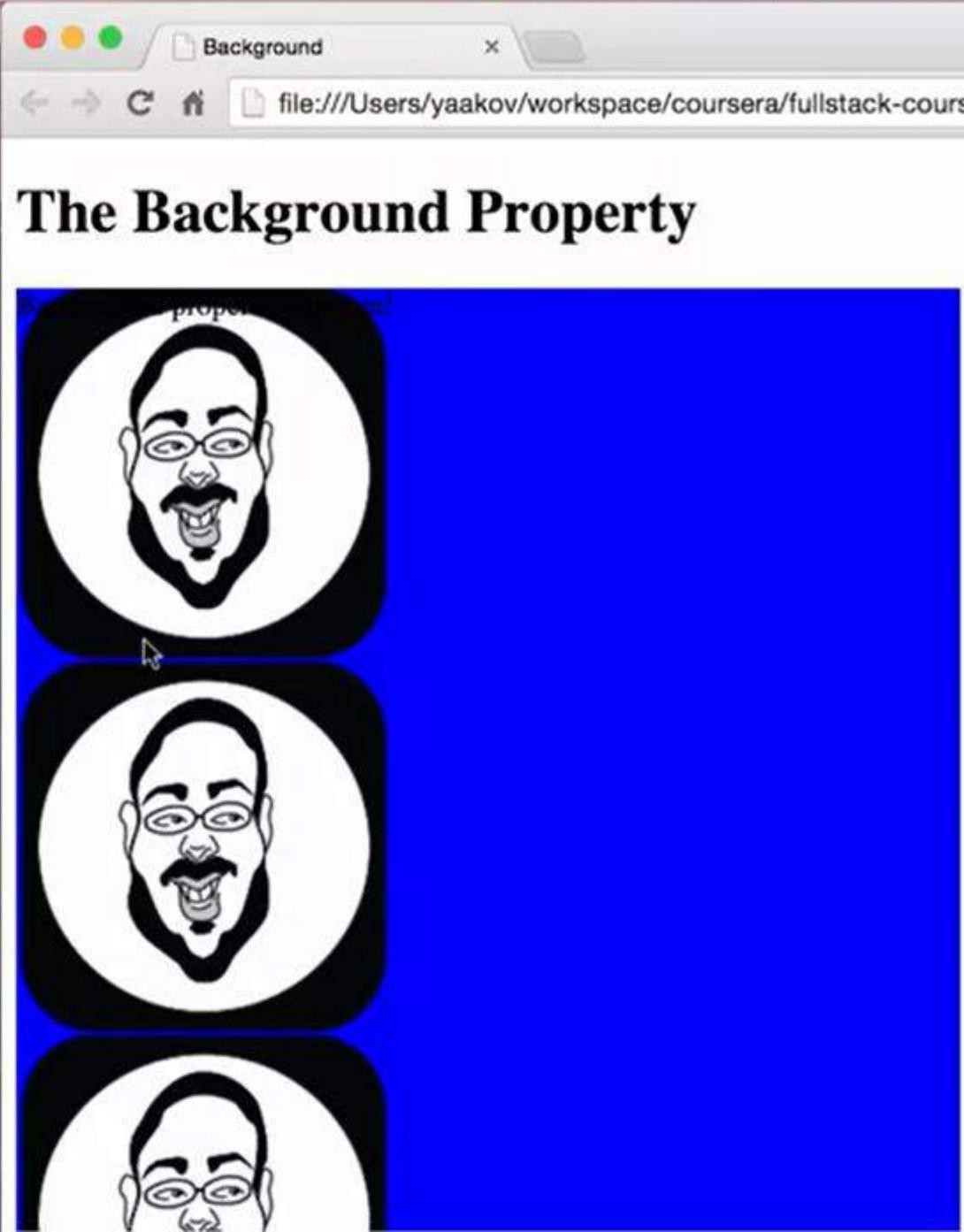


```
background-before.html <pre>
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <meta charset="utf-8">
5  <title>Background</title>
6  <style>
7  #bg {
8    width: 500px;
9    height: 500px;
10   background-color: blue;
11   background-image: url("yaakov.png")
12 }
13 
14 
15 </style>
16 </head>
17 <body>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

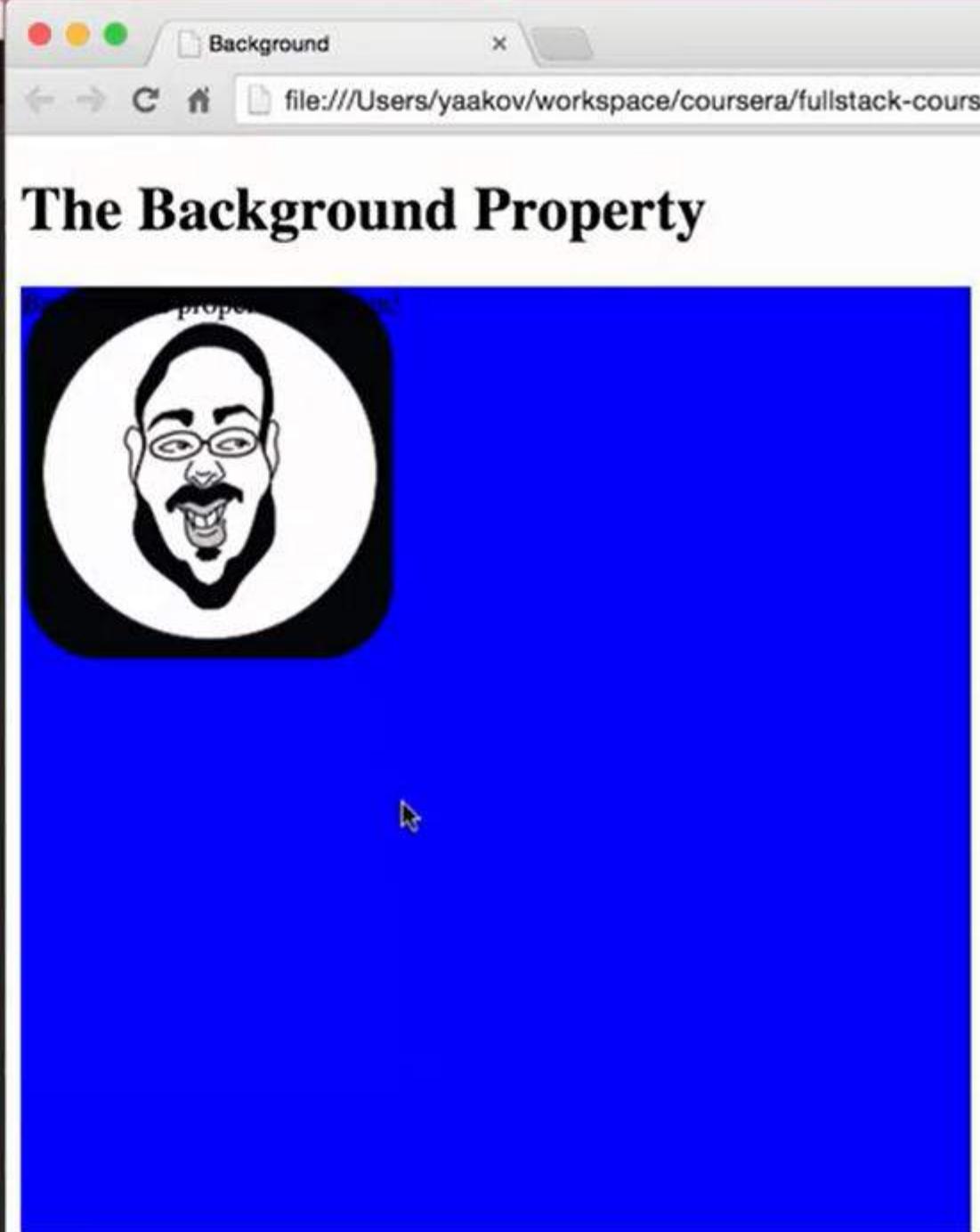
## The Background Property



```
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>      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
fun!</div>
<22> </body>
<23> </html></pre>
```

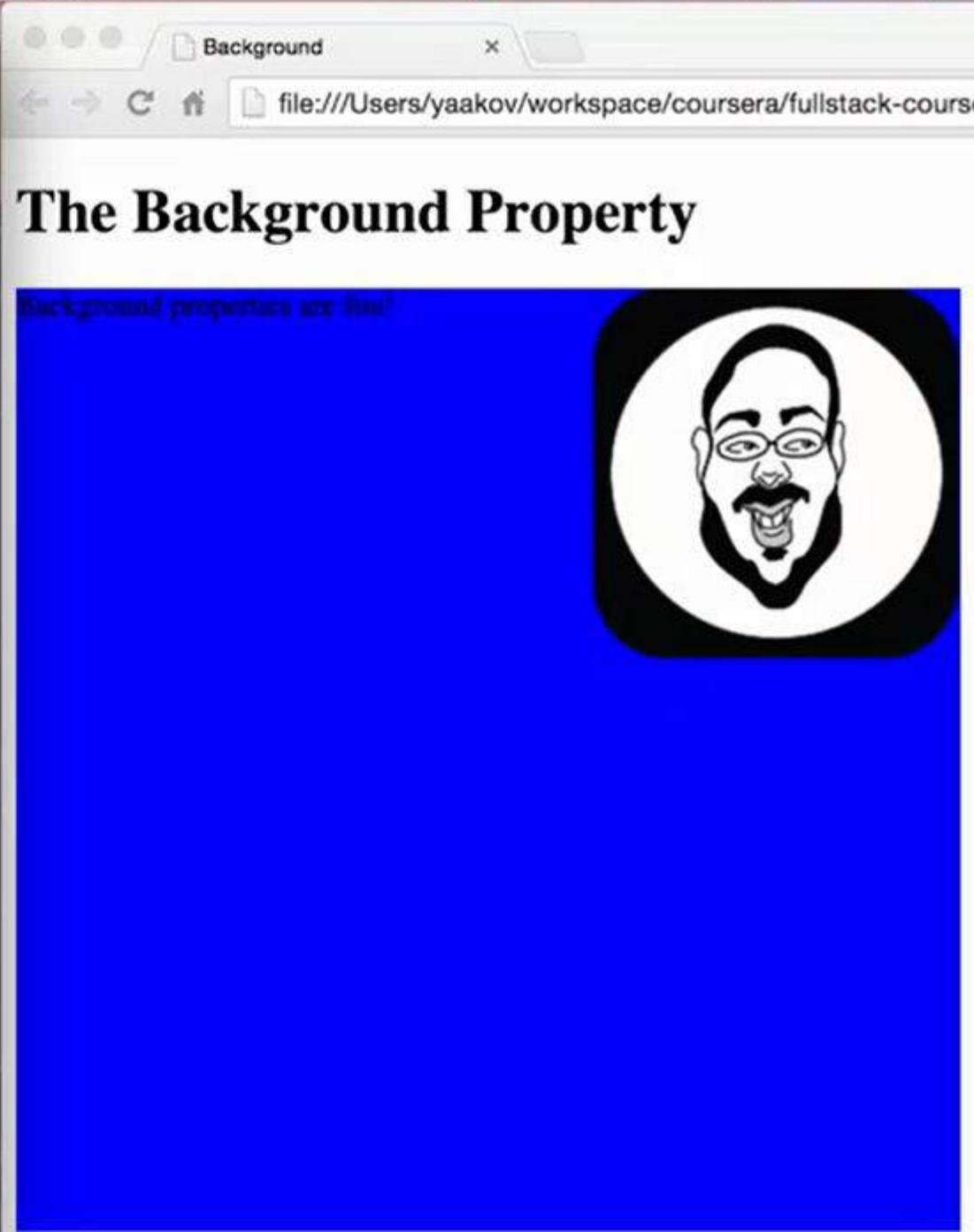


```
background-before.html — course4-examples  
background-before.html  
1 <!DOCTYPE html>  
2 <html>  
3 <head>  
4 <meta charset="utf-8">  
5 <title>Background</title>  
6 <style>  
7 #bg {  
8   width: 500px;  
9   height: 500px;  
10  background-color: blue;  
11  background-image: url("yaakov.png");  
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>
```

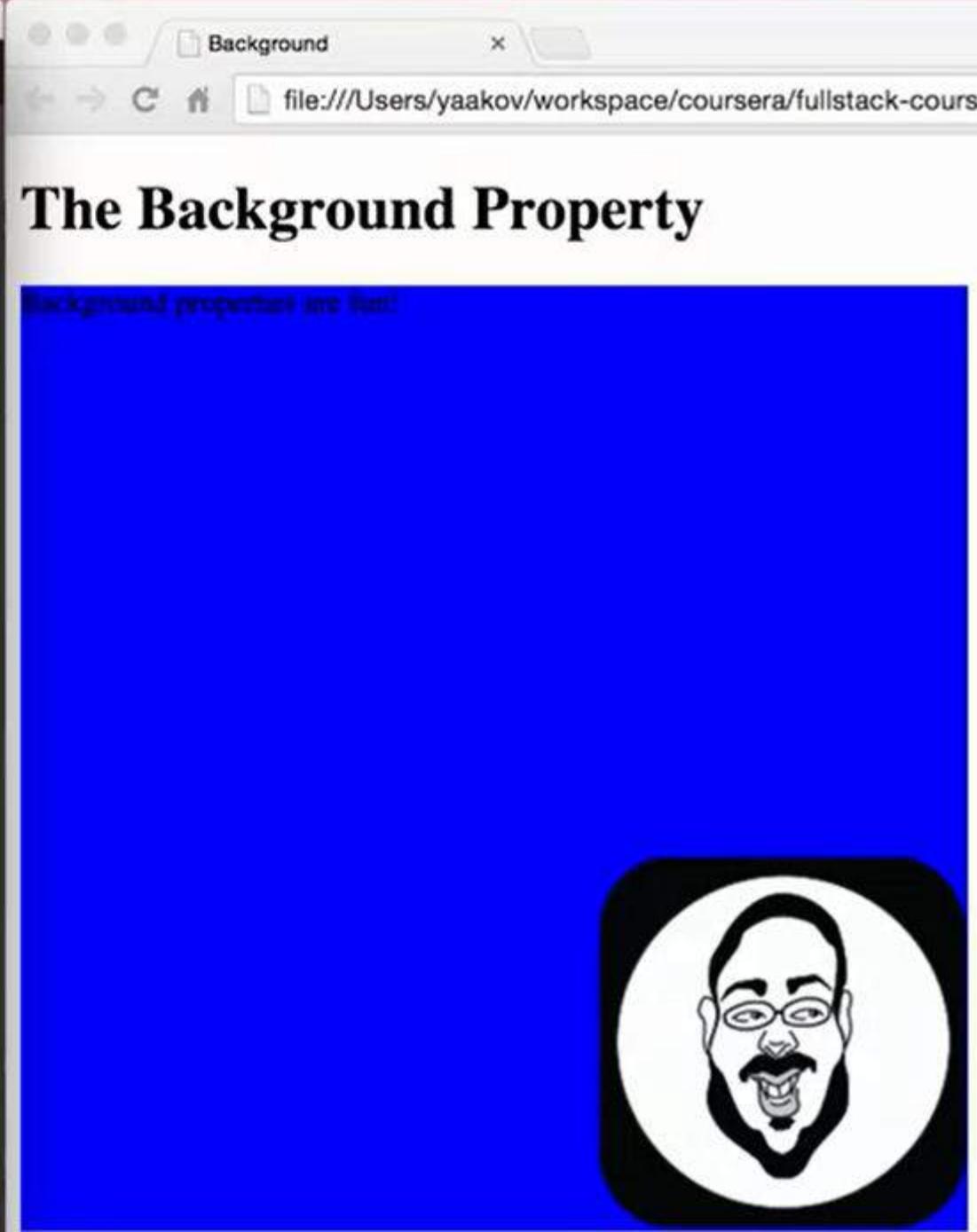


background-before.html – course4-examples

```
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>
```

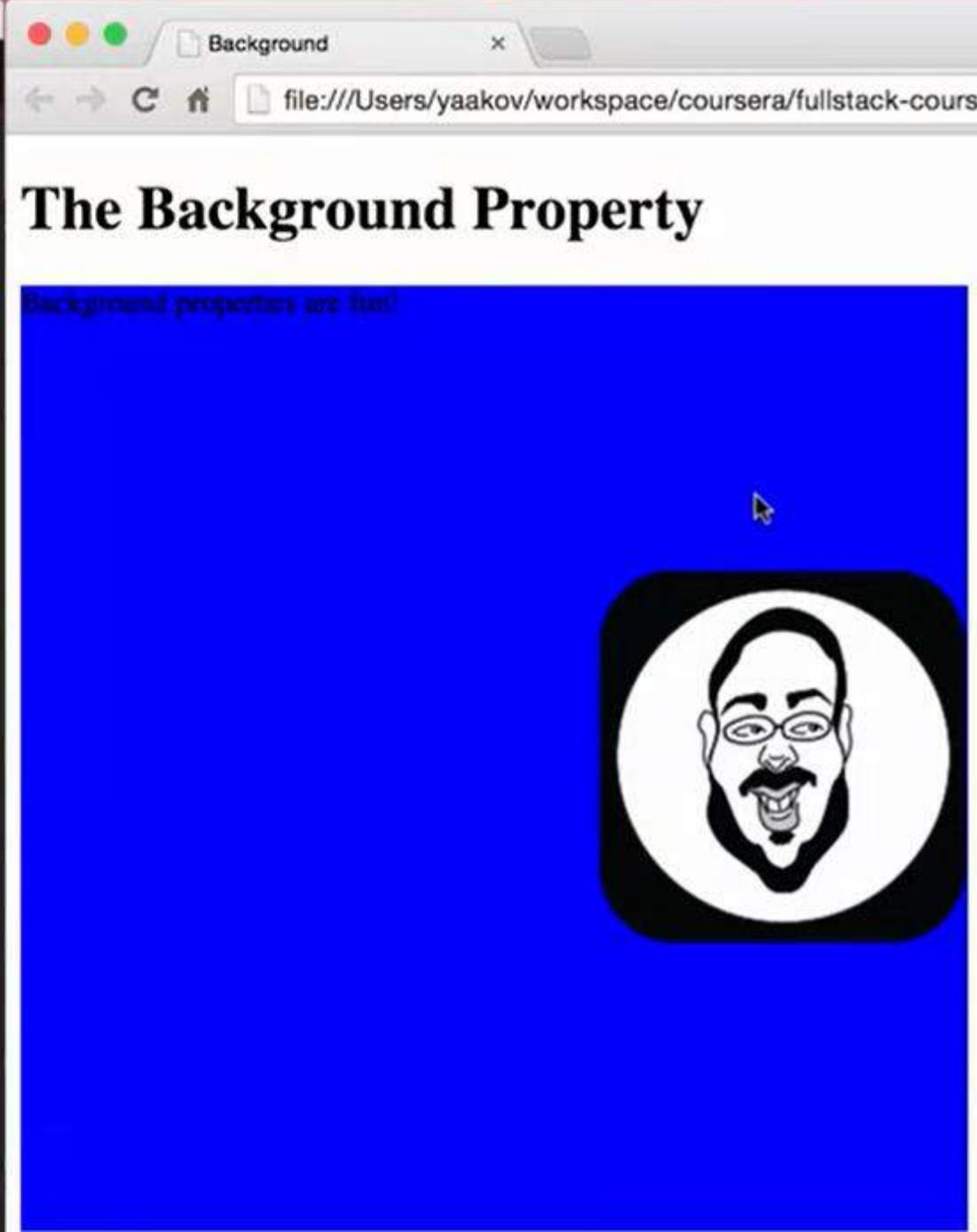


```
background-before.html – course4-examples
background-before.html ×
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Background</title>
6 <style>
7 #bg {
8   width: 500px;
9   height: 500px;
10  background-color: blue;
11  background-image: url("yaakov.png");
12  background-repeat: 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>
```



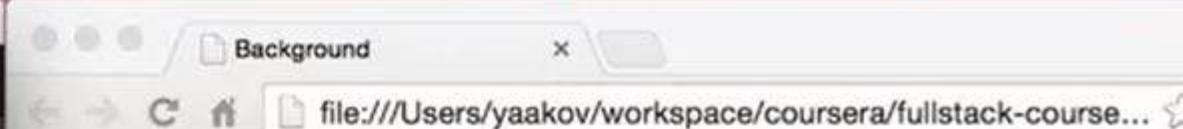
```
background-before.html
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Background</title>
6 <style>
7 #bg {
8   width: 500px;
9   height: 500px;
10  background-color: blue;
11  background: url('yaakov.png') no-repeat
12    right center blue;
13 }
14 </style>
15 </head>
16 <body>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

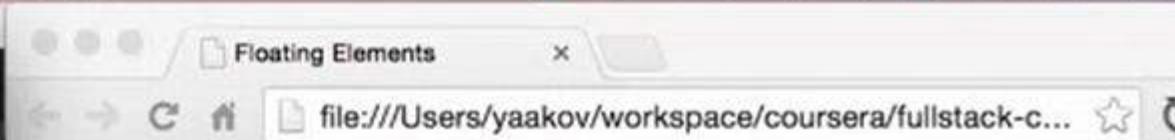
Background properties are fun!



# 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>
```



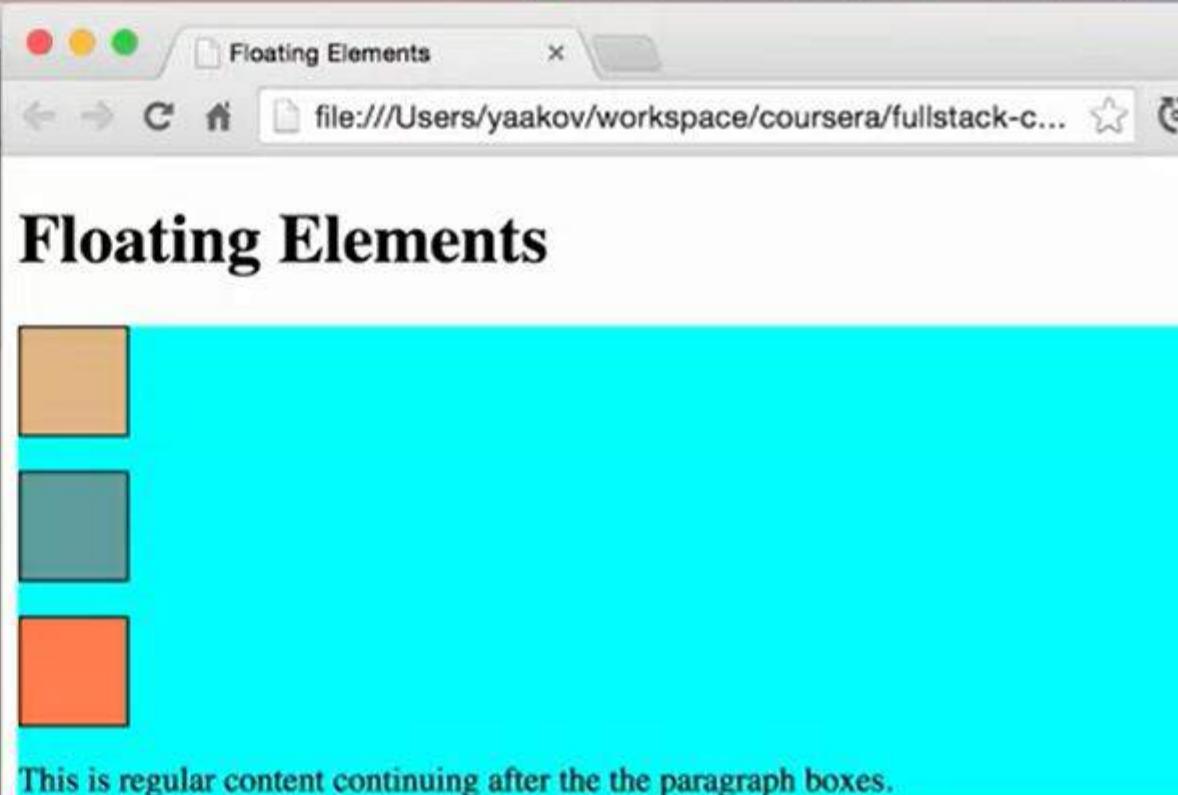
## Floating Elements



This is regular content continuing after the the paragraph boxes.

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

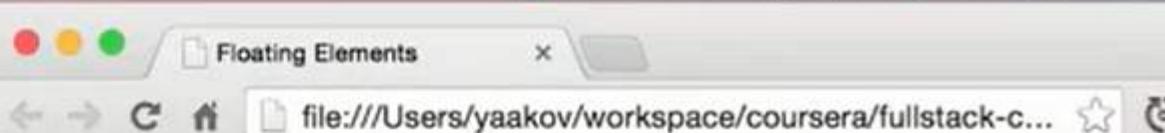
8 div {
9   background-color: #00FFFF;
10 }
11 p {
12   width: 50px;
13   height: 50px;
14   border: 1px solid black;
15 }
16
17 #p1 {
18   background-color: #A52A2A;
19   float: right;
20 }
21 #p2 {
22   background-color: #DEB887;
23 }
24 #p3 {
25   background-color: #5F9EA0;
26 }
27 #p4 {
28   background-color: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



This is regular content continuing after the the paragraph boxes.

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

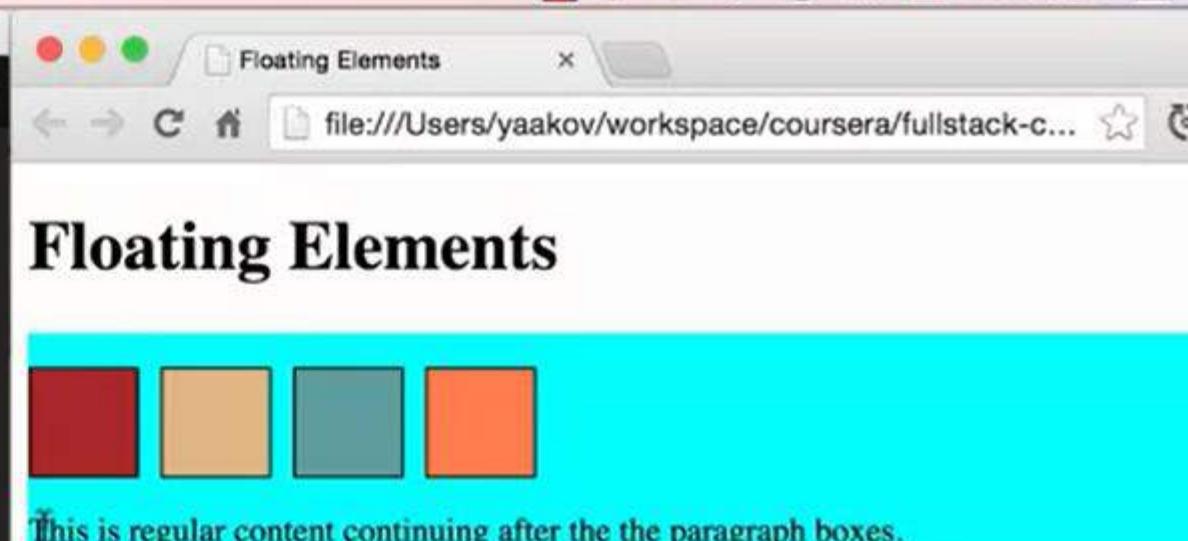
8 div {
9   background-color: #00FFFF;
10 }
11 p {
12   width: 50px;
13   height: 50px;
14   border: 1px solid black;
15   float: left;
16   margin-right: 10px;
17 }
18
19 #p1 {
20   background-color: #A52A2A;
21 }
22 #p2 {
23   background-color: #DEB887;
24 }
25 #p3 {
26   background-color: #5F9EA0;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



## Floating Elements

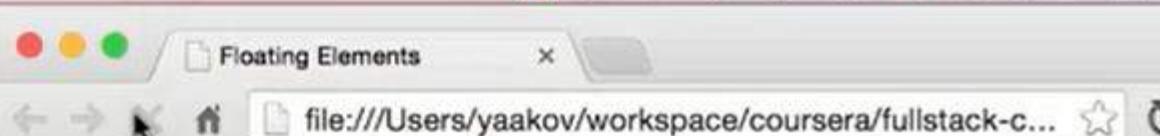
This is regular content continuing after the the boxes.

```
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
```

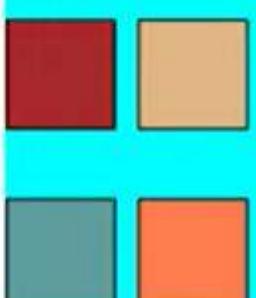


floating-before.html

```
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>
```

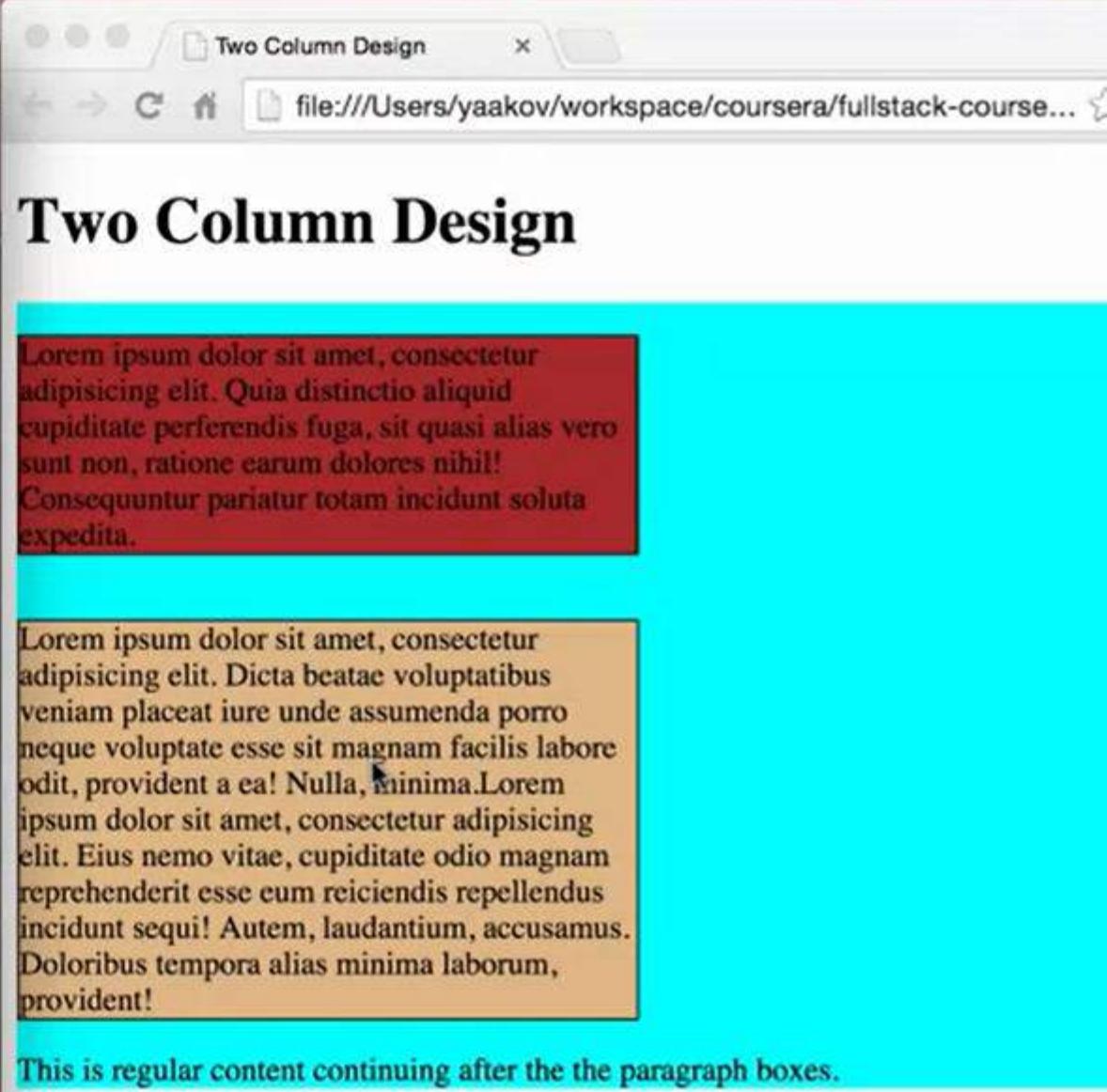


## Floating Elements



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  
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;
```

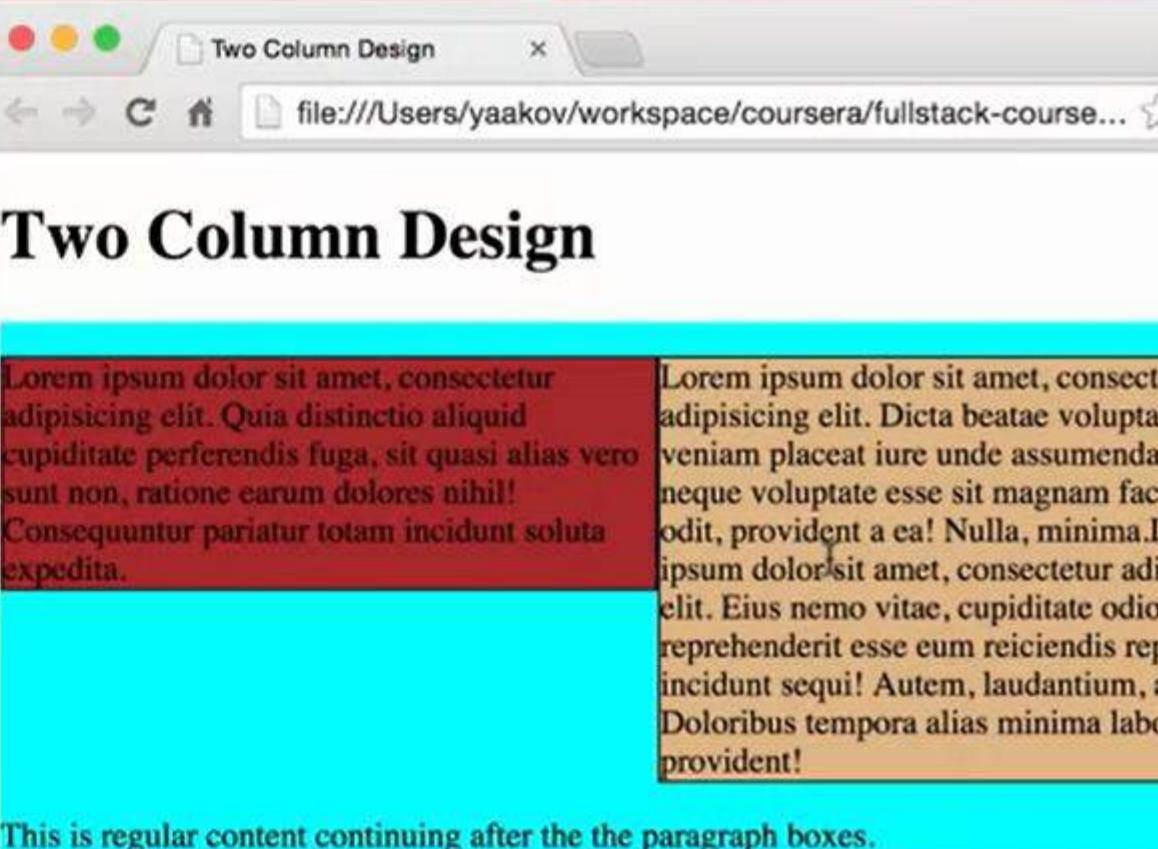
Two Column Design

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. I ipsum dolor sit amet, consectetur adipisicing elit. Eius nemo vitae, cupiditate odio reprehenderit esse eum reiciendis rep incidunt 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

file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture2/two-column-before.html

# Two Column Design

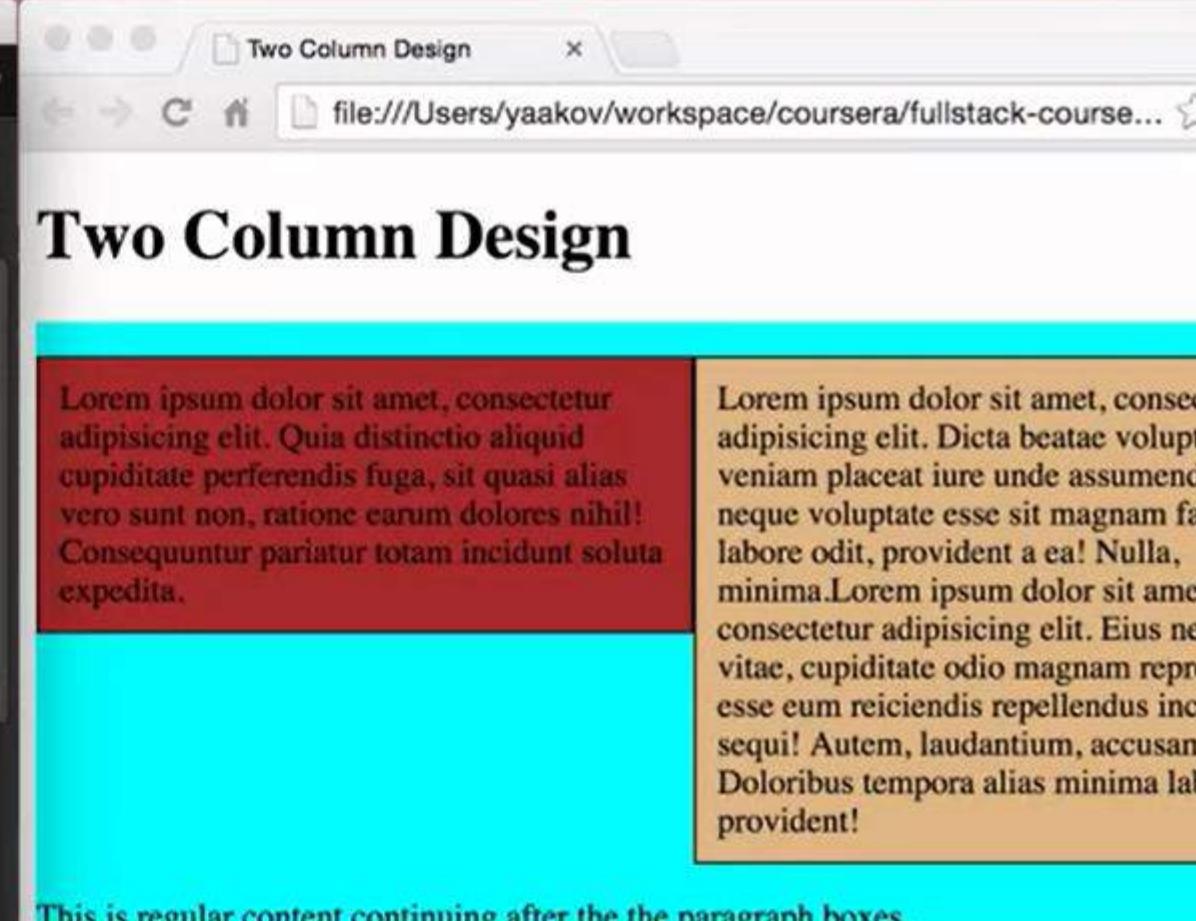
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Quia distinctio aliquid cupiditate perferendis fuga, sit quasi alias vero sunt non, ratione earum dolores nihil! Consequuntur pariatur totam incident soluta expedita.

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;  
}  
  
div {  
    /*background-color: #00FFFF;*/  
}  
  
p {  
    width: 50%;  
    /*border: 1px solid black;*/  
    float: left;  
    padding: 10px;  
}  
  
#p1 {  
    background-color: #A52A2A;  
}  
  
#p2 {  
    background-color: #DEB887;  
}  
  
section {  
    clear: left;  
}
```



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

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

# Two Column Design

Two columns are created by floating two `p` elements. The first `p` has a white background color and the second has a light brown background color. Both have a `width: 50%` and `float: left`. The first `p` has a `padding: 10px`.

The first `p` contains the text:

  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.

The second `p` contains the text:

  Lorem ipsum dolor sit amet, consectetur  
  adipisicing elit. Dicta beatae voluptate  
  veniam placeat iure unde assumenda  
  neque voluptate esse sit magnam facili  
  labore odit, provident a ea! Nulla,  
  minima.Lorem ipsum dolor sit amet,  
  consectetur adipisicing elit. Eius ne  
  cupiditate odio magnam reprehende  
  eum reiciendis repellendus incident  
  Autem, laudantium, accusamus. Do  
  tempora alias minima laborum, pro

This is regular content continuing after the the paragraph boxes.

## 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) {...}
```

...

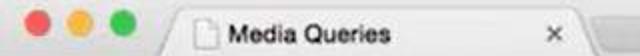
# Media Query Common Approach

```
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

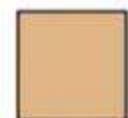
```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Media Queries</title>
6 <style>
7
8 /***** Base styles *****/
9 h1 {
10   margin-bottom: 15px;
11 }
12
13 p {
14   border: 1px solid black;
15   margin-bottom: 15px;
16 }
17 #p1 {
18   background-color: #A52A2A;
19   width: 300px;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



Media Queries

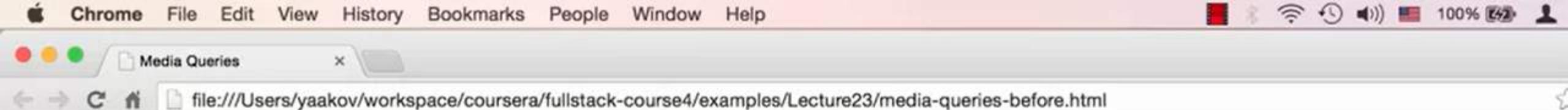
file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture23/media-queries-before.html

# 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>
```



# Media Queries

## media-queries-before.html — course4-examples

```
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

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

Styles Computed Event Listeners DOM Breakpoints Properties

Filter

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

user agent stylesheet

margin 8



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

1221px x 475px

# Media Queries



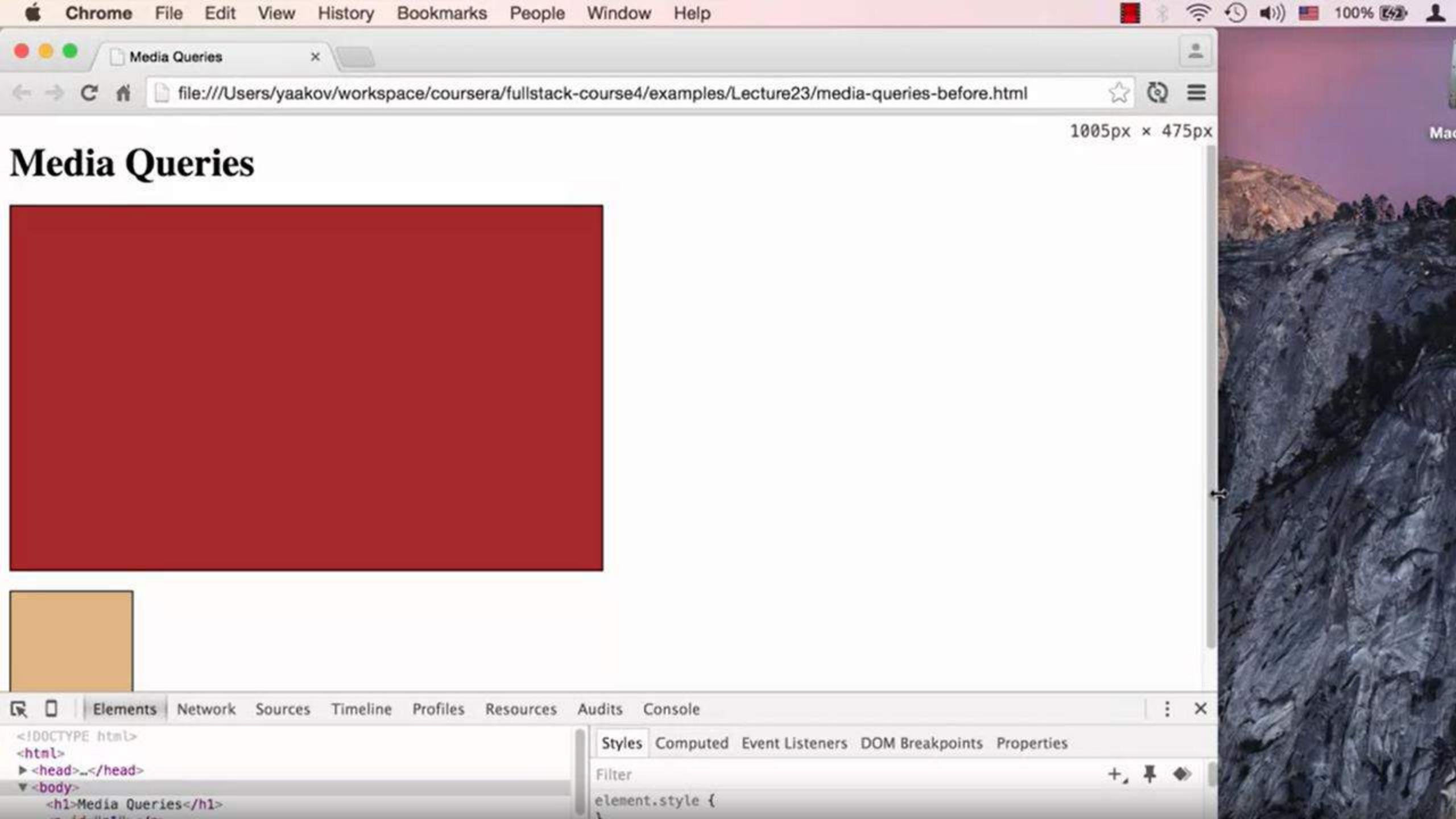
Elements Network Sources Timeline Profiles Resources Audits Console

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

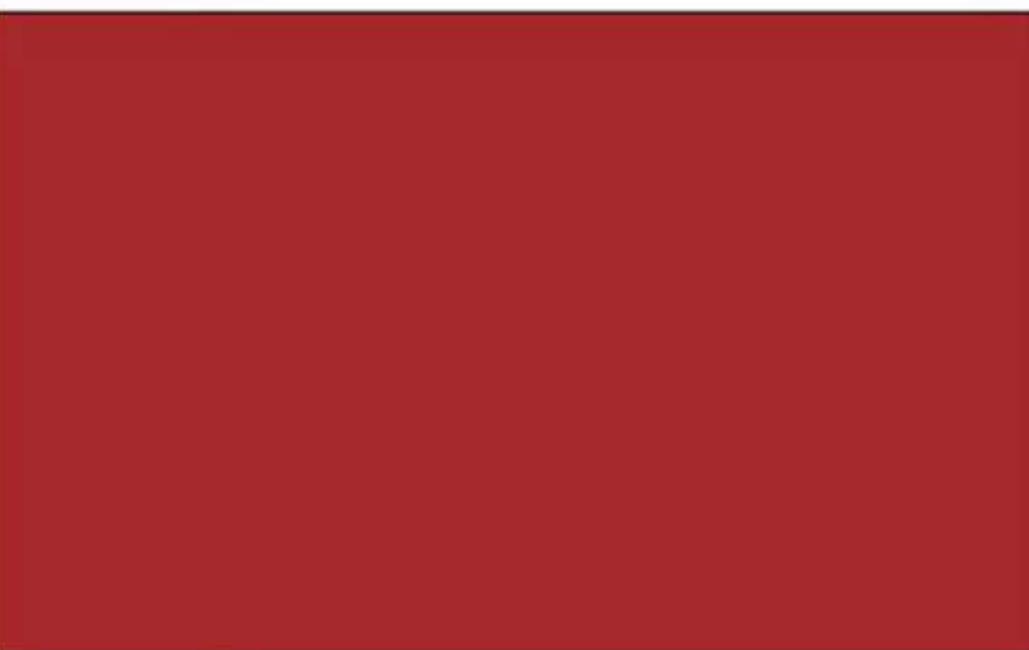
Styles Computed Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}



# Media Queries



1005px x 475px



Elements Network Sources Timeline Profiles Resources Audits Console

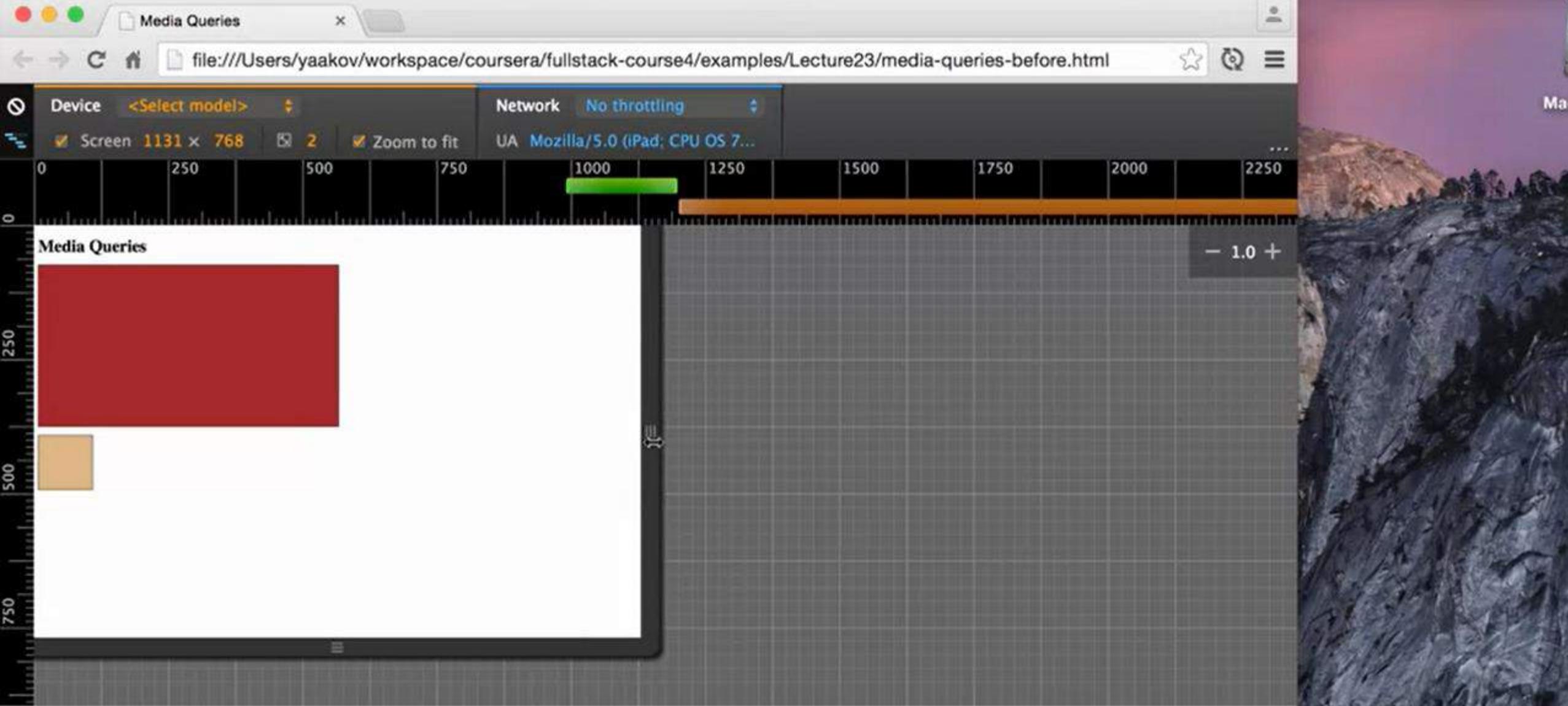
Styles Computed Event Listeners DOM Breakpoints Properties

Filter

element.style {



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



```
<!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

In this lecture, we will discuss...

# Introduction to Twitter Bootstrap

# What is Bootstrap?

Bootstrap is the **most popular** HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.

GitHub



# What is Bootstrap?

Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.



Mostly CSS classes

# What is Bootstrap?

Bootstrap is the most popular HTML, CSS, and JS framework for developing responsive, mobile first projects on the web.



Which  
to code  
first?



# What is Bootstrap?



**Mobile First == PLAN mobile from the start**



**CSS Framework is mobile ready**

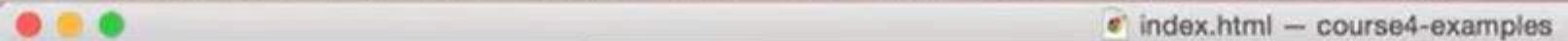


# Disadvantages of Bootstrap (vs. Writing Your Own)

#1 complaint

## Too big, too bloated

- ✧ A lot of features you will probably never use
  - Use selective download
- ✧ You can write your own that's more targeted/smaller
  - But it will take you a LOT longer to write it as well



```
1 <!doctype html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-
scale=1">
7
8   <!-- HTML5 shim and Respond.js for IE8 support of HTML5
elements and media queries -->
9   <!-- WARNING: Respond.js doesn't work if you view the page via
file:// -->
10  <!--[if lt IE 9]>
11    <script src="https://oss.maxcdn.com/html5shiv/3.7.2/html5shiv
.min.js"></script>
12    <script src="https://oss.maxcdn.com/respond/1.4.2/respond.min
.js"></script>
13  <![endif]-->
14
15  <title>Bootstrap Starter Page</title>
16  <link rel="stylesheet" href="css/bootstrap.min.css">
17  <link rel="stylesheet" href="css/styles.css">
18  </head>
19  <body>
```

Bootstrap (currently v3.3.6) has a few easy ways to quickly get started, each one appealing to a different skill level and use case. Read through to see what suits your particular needs.

## Bootstrap

Compiled and minified CSS, JavaScript, and fonts. No docs or original source files are included.

[Download Bootstrap](#)

## Source code

Source Less, JavaScript, and font files, along with our docs. **Requires a Less compiler and some setup.**

[Download source](#)

## Sass

Bootstrap ported from Less to Sass for easy inclusion in Rails, Compass, or Sass-only projects.

[Download Sass](#)

## Bootstrap CDN

The folks over at [MaxCDN](#) graciously provide CDN support for Bootstrap's CSS and JavaScript. Just use these [Bootstrap CDN](#) links.

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet"
      href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap.min.css" integrity="sha384-1q8mTj0ASx8j1Au+a5WDVnPi2lkFfwwEAa8hDDdjZlpLegxhjVME1fgjWPGmkzs7" crossorigin="anonymous">
```

[Copy](#)[Back to top](#)

```
<!-- Optional theme -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.6/css/bootstrap-theme.min.css" integrity="sha384-fLW2N01lMqjakBkx3l/M9EahuwpSfeNvV63J5ezen3uZZapT0u7EYsXMjQV+0En5r" crossorigin="anonymous">
```

## Download

[What's included](#)  
[Compiling CSS and JavaScript](#)

[Basic template](#)

[Examples](#)

[Tools](#)

[Community](#)

[Disabling responsiveness](#)

[Migrating from 2.x to 3.0](#)

[Browser and device support](#)

[Third party support](#)

[Accessibility](#)

[License FAQs](#)

[Translations](#)



FOLDERS

fullstack-course4

examples

Lecture01

Lecture04

Lecture05

Lecture06

Lecture07

Lecture08

Lecture09

Lecture10

Lecture12

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Lecture14

Lecture15

Lecture16

Lecture17

Lecture18

Lecture19

Lecture20

Lecture21

Lecture22

Lecture23

Lecture24

Lecture25

css

fonts

js

index.html

.gitignore

course4-examples.sublime-project

README.md

```
1<!doctype html>
2<html lang="en">
3  <head>
4    <meta charset="utf-8">
5    <meta http-equiv="X-UA-Compatible" content="IE=edge">
6    <meta name="viewport" content="width=device-width, initial-
scale=1">
7
8    <!-- HTML5 shim and Respond.js for IE8 support of HTML5
elements and media queries --&gt;
9    &lt;!-- WARNING: Respond.js doesn't work if you view the page via
file:// --&gt;
10   &lt;!--[if lt IE 9]&gt;
11     &lt;script src="https://oss.maxcdn.com/html5shiv/3.7.2/html5shiv
.min.js"&gt;&lt;/script&gt;
12     &lt;script src="https://oss.maxcdn.com/respond/1.4.2/respond.min
.js"&gt;&lt;/script&gt;
13   &lt;![endif]--&gt;
14
15  &lt;title&gt;Bootstrap Starter Page&lt;/title&gt;
16  &lt;link rel="stylesheet" href="css/bootstrap.min.css"&gt;
17  &lt;link rel="stylesheet" href="css/styles.css"&gt;
18  &lt;/head&gt;
19  &lt;body&gt;</pre>
```

course4-examples

- ▶ Lecture09
- ▶ Lecture10
- ▶ Lecture12
- ▶ Lecture13
- ▶ Lecture14
- ▶ Lecture15
- ▶ Lecture16
- ▶ Lecture17
- ▶ Lecture18
- ▶ Lecture19
- ▶ Lecture20
- ▶ Lecture21
- ▶ Lecture22
- ▶ Lecture23
- ▶ Lecture24
- ▶ Lecture25

▼ 

- css

- bootstrap-theme.css
- bootstrap-theme.css.map
- bootstrap-theme.min.css
- bootstrap-theme.min.css.map
- bootstrap.css
- bootstrap.css.map
- bootstrap.min.css
- bootstrap.min.css.map

- styles.css

▶ 

- fonts

▶ 

- js

- index.html

- .gitignore

- course4-examples.sublime-project

index.html — course4-examples

```
1 <!doctype html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-
scale=1">
7
8     <!-- HTML5 shim and Respond.js for IE8 support of HTML5
elements and media queries --&gt;
9     &lt;!-- WARNING: Respond.js doesn't work if you view the page via
file:// --&gt;
10    &lt;!--[if lt IE 9]&gt;
11      &lt;script src="https://oss.maxcdn.com/html5shiv/3.7.2/html5shiv.
min.js"&gt;&lt;/script&gt;
12      &lt;script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.
js"&gt;&lt;/script&gt;
13    &lt;![endif]--&gt;
14
15    &lt;title&gt;Bootstrap Starter Page&lt;/title&gt;
16    &lt;link rel="stylesheet" href="css/bootstrap.min.css"&gt;
17    &lt;link rel="stylesheet" href="css/styles.css"&gt;
18  &lt;/head&gt;
19  &lt;body&gt;</pre>
```

index.html — course4-examples

```
1 <!doctype html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-
scale=1">
7
8     <!-- HTML5 shim and Respond.js for IE8 support of HTML5
elements and media queries -->
9     <!-- WARNING: Respond.js doesn't work if you view the page via
file:// -->
10    <!--[if lt IE 9]>
11      <script src="https://oss.maxcdn.com/html5shiv/3.7.2/html5shiv.
min.js"></script>
12      <script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.
js"></script>
13    <![endif]-->
14
15    <title>Bootstrap Starter Page</title>
16    <link rel="stylesheet" href="css/bootstrap.min.css">
17    <link rel="stylesheet" href="css/styles.css">
18  </head>
19  <body>
```



Download API Documentation Blog Plugins Browser Support

Search

**Lightweight Footprint**

Only 32kB minified and zipped.  
Can also be included as an AMD module

**CSS3 Compliant**

Supports CSS3 selectors to find elements as well as in style property manipulation

**Cross-Browser**

IE, Firefox, Safari, Opera, Chrome, and more

**Download jQuery**

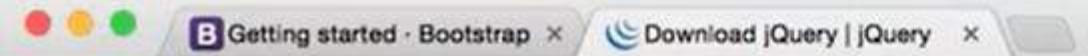
v1.11.3 or v2.1.4

[View Source on GitHub →](#)[How jQuery Works →](#)**What is jQuery?**

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a

**Resources**

- [jQuery Core API Documentation](#)
- [jQuery Learning Center](#)



jquery.com/download/

To locally download these files, right-click the link and select "Save as..." from the menu.

## jQuery 1.x

The jQuery 1.x line had major changes as of jQuery 1.9.0. We strongly recommend that you also use the jQuery Migrate plugin if you are upgrading from pre-1.9 versions of jQuery or need to use plugins that haven't yet been updated. Read the [jQuery 1.9 Upgrade Guide](#) and the [jQuery 1.9 release blog post](#) for more information.

[Download the compressed, production jQuery 1.11.3](#)

[Download the uncompressed, development jQuery 1.11.3](#)

[Download the map file for jQuery 1.11.3](#)

[jQuery 1.11.3 release notes](#)

## jQuery 2.x

jQuery 2.x has the same API as jQuery 1.x, but does not support Internet Explorer 6, 7, or 8. All the notes in the [jQuery 1.9 Upgrade Guide](#) apply here as well. Since IE 8 is still relatively common, we recommend using the 1.x version unless you are certain no IE 6/7/8 users are visiting the site. Please read the [2.0 release notes](#) carefully.

[Download the compressed, production jQuery 2.1.4](#)

[Download the uncompressed, development jQuery 2.1.4](#)

[Download the map file for jQuery 2.1.4](#)

[jQuery 2.1.4 release notes](#)

## Downloading jQuery using Bower

index.html — course4-examples

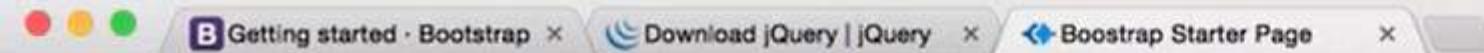
```
8     <!-- HTML5 shim and Respond.js for IE8 support of HTML5
9         elements and media queries -->
10        <!-- WARNING: Respond.js doesn't work if you view the page via
11            file:// -->
12        <!--[if lt IE 9]>
13            <script src="https://oss.maxcdn.com/html5shiv/3.7.2/html5shiv
14                .min.js"></script>
15            <script src="https://oss.maxcdn.com/respond/1.4.2/respond.min
16                .js"></script>
17        <! [endif]-->
18
19        <title>Bootstrap Starter Page</title>
20        <link rel="stylesheet" href="css/bootstrap.min.css">
21        <link rel="stylesheet" href="css/styles.css">
22    </head>
23
24    <body>
25
26        <!-- jQuery (Bootstrap JS plugins depend on it) -->
27        <script src="js/jquery-1.11.3.min.js"></script>
28        <script src="js/bootstrap.min.js"></script>
29        <script src="js/script.js"></script>
30
31    </body>
32
33</html>
```



LectureCAT  
▶ Lecture15  
▶ Lecture16  
▶ Lecture17  
▶ Lecture18  
▶ Lecture19  
▶ Lecture20  
▶ Lecture21  
▶ Lecture22  
▶ Lecture23  
▶ Lecture24  
▼ Lecture25  
  └ css  
    └ bootstrap-theme.css  
    └ bootstrap-theme.css.map  
    └ bootstrap-theme.min.css  
    └ bootstrap-theme.min.css.map  
    └ bootstrap.css  
    └ bootstrap.css.map  
    └ bootstrap.min.css  
    └ bootstrap.min.css.map  
    └ styles.css  
▶ fonts  
▼ js  
  └ bootstrap.js  
  └ bootstrap.min.js  
  └ jquery-1.11.3.min.js  
  └ npm.js  
  └ script.js  
└ index.html  
.gitignore  
course4-examples.sublime-project

index.html — course4-examples

```
8      <!-- HTML5 shim and Respond.js for IE8 support of HTML5  
9         elements and media queries -->  
10        <!-- WARNING: Respond.js doesn't work if you view the page via  
11           file:// -->  
12        <!--[if lt IE 9]>  
13          <script src="https://oss.maxcdn.com/html5shiv/3.7.2/html5shiv.  
14             min.js"></script>  
15          <script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.  
16             js"></script>  
17        <! [endif]-->  
18  
19        <title>Bootstrap Starter Page</title>  
20        <link rel="stylesheet" href="css/bootstrap.min.css">  
21        <link rel="stylesheet" href="css/styles.css">  
22        </head>  
23  
24        <body>  
25  
26        <h1>Hello Coursera!</h1>  
27  
28        <!-- jQuery (Bootstrap JS plugins depend on it) -->  
29        <script src="js/jquery-1.11.3.min.js"></script>  
30        <script src="js/bootstrap.min.js"></script>  
31        <script src="js/script.js"></script>
```



localhost:3000/index.html

# Hello Coursera!

# Hello Coursera!

Elements Console Sources Network Timeline Profiles Resources Audits

```
<!DOCTYPE html>
<html lang="en">
  > #shadow-root (open)
  > <head>..</head>
  > <body>
    > <script type="text/javascript" id="__bs_script__">..</script>
    > <script async src="/browser-sync/browser-sync-client.2.10.0.js"></script>
    ... > <h1>Hello Coursera!</h1>
    > <!-- jQuery (Bootstrap JS plugins depend on it) --&gt;
    &gt; &lt;script src="js/jquery-1.11.3.min.js"&gt;&lt;/script&gt;
    &gt; &lt;script src="js/bootstrap.min.js"&gt;&lt;/script&gt;
    &gt; &lt;script src="js/script.js"&gt;&lt;/script&gt;
    &gt; &lt;span id="buffer-extension-hover-button" style="display: none; position: absolute; z-index: 8675309; width: 100px; height: 25px; background-image: url(chrome-extension://nooqalkidnpfibincqijbaiedldjfbhh/data/shared/</pre>
```

html body h1

Console Emulation Rendering

✖  <top frame>▼  Preserve log

Styles Computed Event Listeners DOM Breakpoints Properties

Filter

```
element.style {
}
.h1, h1 {
  font-size: 36px;
}
.h1, .h2, .h3, h1, h2, h3 {
  margin-top: 20px;
  margin-bottom: 10px;
}
.h1, .h2, .h3, .h4, .h5, .h6, h1, h2, h3, h4, h5, h6 {
```



In this lecture, we will discuss...

# The Bootstrap Grid System

# Bootstrap Grid System Basics

Must be inside container (or container-fluid)

```
<div class="container">  
  <div class="row">  
    <div class="col-md-4">Col 1</div>  
    ...  
  </div>  
</div>
```

# Bootstrap Grid System Basics

```
<div class="container">  
  <div class="row">  
    <div class="col-md-4">Col 1</div>  
    ...  
  </div>  
</div>
```

Creates horizontal groups of columns

Applies negative left/right margins

# Why Negative Row Margin?

browser

.container

.row-no-negative-margin

Regular content

Regular content

Regular content

# Why Negative Row Margin?

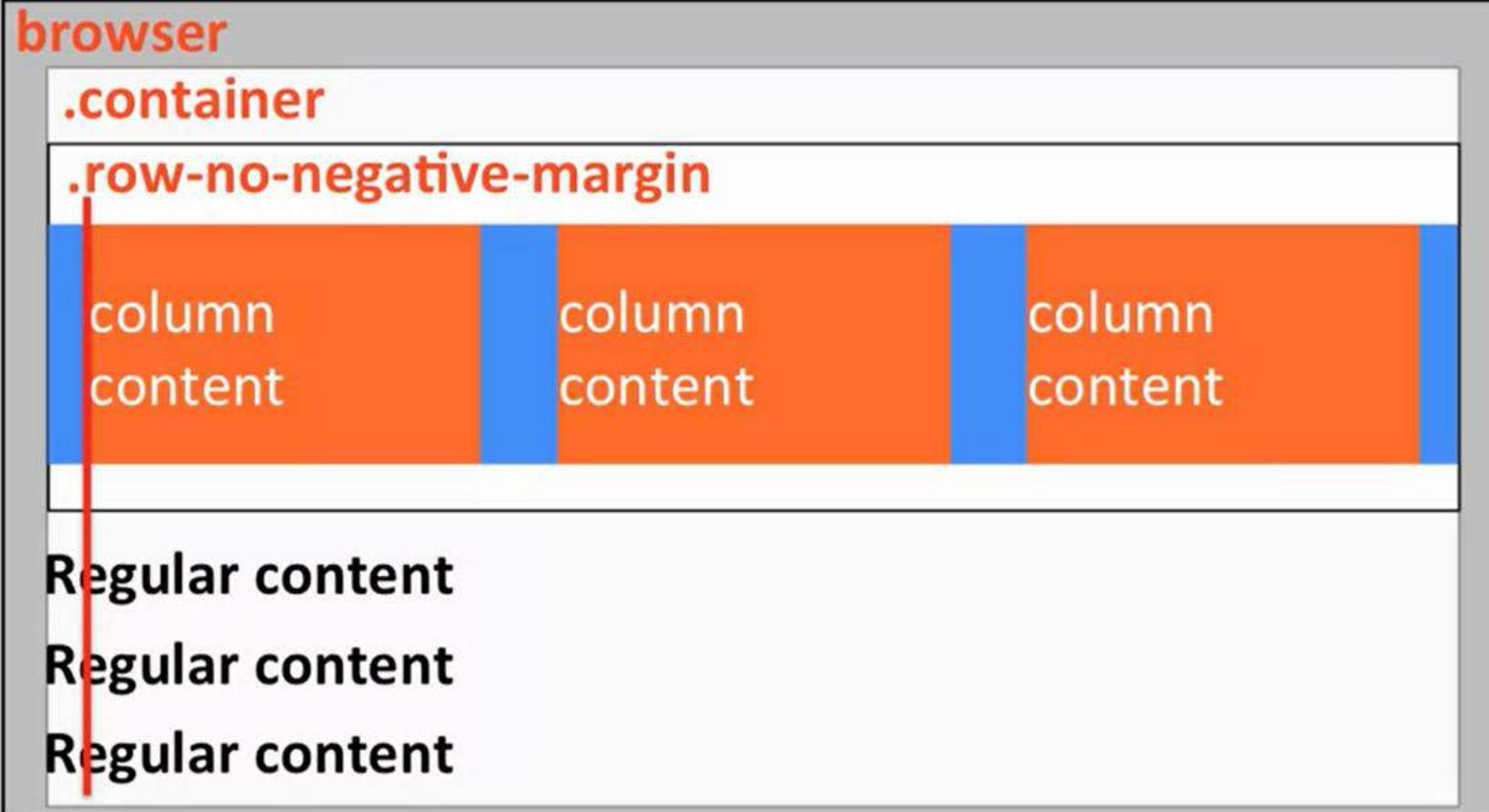


**Regular content**

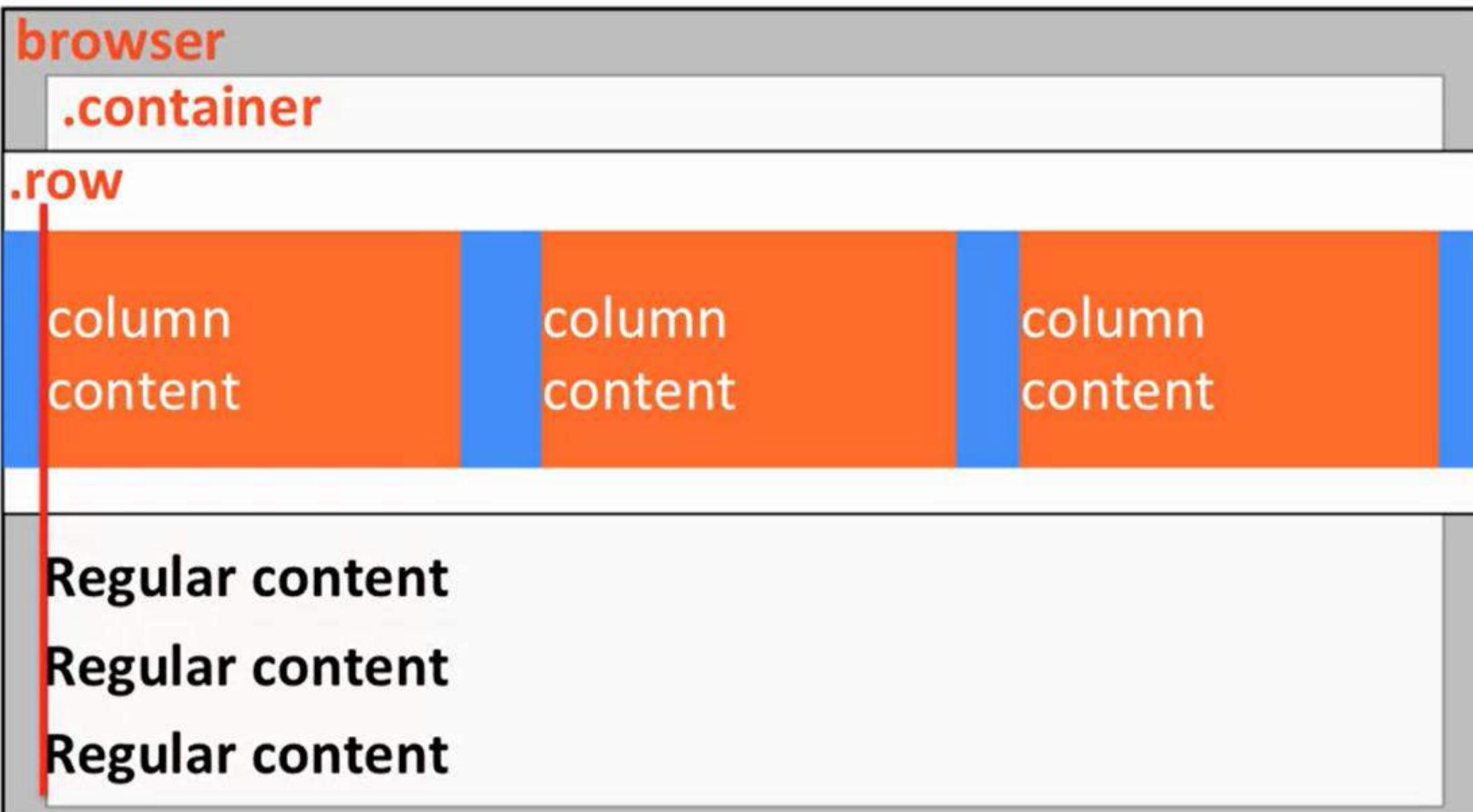
**Regular content**

**Regular content**

# Why Negative Row Margin?



# Why Negative Row Margin?



# Bootstrap Grid System Basics

```
<div class="container">
  <div class="row">
    <div class="col-md-4">Col 1</div>
    ...
  </div>
</div>
```

# Bootstrap Grid System Basics

**col-SIZE-SPAN**

- Screen width range identifier
- Columns will **collapse (i.e., stack)** below that width
  - Unless another rule applies

- How many columns element should span
- Values: 1 through 12

# Bootstrap Grid System Basics

```
<header class="container">
  <nav class="row">
    <div class="col-md-4">Col 1</div>
    ...
  </nav>
</header>
```



## FOLDERS

fullstack-course4

examples

Lecture01

Lecture04

Lecture05

Lecture06

Lecture07

Lecture08

Lecture09

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Lecture18

Lecture19

Lecture20

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Lecture22

Lecture23

Lecture24

Lecture25

Lecture26

css

fonts

js

grid-after.html

grid-before.html

Lecture22

```
1 <!doctype html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-
scale=1">
7     <title>Bootstrap Starter Page</title>
8     <link rel="stylesheet" href="css/bootstrap.min.css">
9     <link rel="stylesheet" href="css/styles.css">
10    </head>
11  <body>
12
13    <div>
14      <div>
15        <div>Col 1</div>
16        <div>Col 2</div>
17        <div>Col 3</div>
18      </div>
19    </div>
20
21    <!-- jQuery (Bootstrap JS plugins depend on it) -->
22    <script src="js/jquery-1.11.3.min.js"></script>
23    <script src="js/bootstrap.min.js"></script>
```

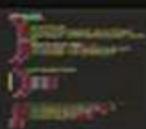


file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture26/grid-before.html

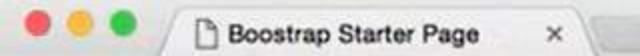
Col 1

Col 2

Col 3



```
grid-before.html < > x
1  <!doctype html>
2  <html lang="en">
3      <head>
4          <meta charset="utf-8">
5          <meta http-equiv="X-UA-Compatible" content="IE=edge">
6          <meta name="viewport" content="width=device-width, initial-
scale=1">
7          <title>Bootstrap Starter Page</title>
8          <link rel="stylesheet" href="css/bootstrap.min.css">
9          <link rel="stylesheet" href="css/styles.css">
10     </head>
11     <body>
12
13     <div class="container-fluid">
14         <div>
15             <div>Col 1</div>
16             <div>Col 2</div>
17             <div>Col 3</div>
18         </div>
19     </div>
20
21     <!-- jQuery (Bootstrap JS plugins depend on it) -->
22     <script src="js/jquery-1.11.3.min.js"></script>
23     <script src="js/bootstrap.min.js"></script>
```



file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture26/grid-before.html

Col 1

Col 2

Col 3



## FOLDERS

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Lecture20  
Lecture21  
Lecture22  
Lecture23  
Lecture24  
Lecture25  
Lecture26  
css  
fonts  
js  
grid-after.html  
grid-before.html  
Lecture22

```
grid-before.html
1 <!doctype html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-
scale=1">
7     <title>Bootstrap Starter Page</title>
8     <link rel="stylesheet" href="css/bootstrap.min.css">
9     <link rel="stylesheet" href="css/styles.css">
10    </head>
11  <body>
12
13    <div class="container-fluid">
14      <div class="row">
15        <div>Col 1</div>
16        <div>Col 2</div>
17        <div>Col 3</div>
18      </div>
19    </div>
20
21    <!-- jQuery (Bootstrap JS plugins depend on it) -->
22    <script src="js/jquery-1.11.3.min.js"></script>
23    <script src="js/bootstrap.min.js"></script>
```



## FOLDERS

fullstack-course4

examples

Lecture01

Lecture04

Lecture05

Lecture06

Lecture07

Lecture08

Lecture09

Lecture10

Lecture12

Lecture13

Lecture14

Lecture15

Lecture16

Lecture17

Lecture18

Lecture19

Lecture20

Lecture21

Lecture22

Lecture23

Lecture24

Lecture25

Lecture26

css

fonts

js

grid-after.html

grid-before.html

```
1 <!doctype html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-
scale=1">
7     <title>Bootstrap Starter Page</title>
8     <link rel="stylesheet" href="css/bootstrap.min.css">
9     <link rel="stylesheet" href="css/styles.css">
10    </head>
11  <body>
12
13    <div class="container-fluid">
14      <div class="row">
15        <div class="col-md-4">Col 1</div>
16        <div class="col-md-4">Col 2</div>
17        <div class="col-md-4">Col 3</div>
18      </div>
19    </div>
20
21    <!-- jQuery (Bootstrap JS plugins depend on it) -->
22    <script src="js/jquery-1.11.3.min.js"></script>
23    <script src="js/bootstrap.min.js"></script>
```



Bootstrap Starter Page

file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture26/grid-before.html

Col 1

Col 2

Col 3



The screenshot shows a Sublime Text interface with the following details:

- Sidebar (Project Structure):** On the left, there's a tree view of the project structure:
  - Lectures:** Lecture08, Lecture09, Lecture10, Lecture12, Lecture13, Lecture14, Lecture15, Lecture16, Lecture17, Lecture18, Lecture19, Lecture20, Lecture21, Lecture22, Lecture23, Lecture24, Lecture25, Lecture26.
  - css:** bootstrap-theme.css, bootstrap-theme.css.map, bootstrap-theme.min.css, bootstrap-theme.min.css.map, bootstrap.css, bootstrap.css.map, bootstrap.min.css, bootstrap.min.css.map, styles.css.
  - fonts**
  - js**
  - grid-after.html**
- Top Bar:** The title bar shows "styles.css — fullstack-course4".
- Central Area:** Two tabs are open: "grid-before.html" and "styles.css". The "styles.css" tab contains the following CSS code:

```
{ 1 | .row {  
 2   margin-bottom: 15px;  
 } 3 }  
 4 .row > div {  
 5   border: 2px solid red;  
 6   background-color: gray;  
 7 }
```

See how aspects of the Bootstrap grid system work across multiple devices with a handy table.

	Extra small devices Phones (<768px)	Small devices Tablets (≥768px)	Medium devices Desktops (≥992px)	Large devices Desktops (≥1200px)
<b>Grid behavior</b>	Horizontal at all times	Collapsed to start, horizontal above breakpoints		
<b>Container width</b>	None (auto)	750px	970px	1170px
<b>Class prefix</b>	.col-xs-	.col-sm-	.col-md-	.col-lg-
<b># of columns</b>	12			
<b>Column width</b>	Auto	~62px	~81px	~97px
<b>Gutter width</b>	30px (15px on each side of a column)			
<b>Nestable</b>	Yes			
<b>Offsets</b>	Yes			
<b>Column ordering</b>	Yes			

## Example: Stacked-to-horizontal

Using a single set of `.col-md-*` grid classes, you can create a basic grid system that starts out stacked on mobile devices and tablet devices (the extra small to small range) before becoming horizontal on desktop (medium) devices. Place grid columns in any `.row`.

Overview

Grid system

Introduction

Media queries

Grid options

Ex: Stacked-to-horizontal

Ex: Fluid container

Ex: Mobile and desktop

Ex: Mobile, tablet, desktop

Ex: Column wrapping

Responsive column resets

Offsetting columns

Nesting columns

Column ordering

Less mixins and variables

Typography

Code

Tables

Forms

Buttons

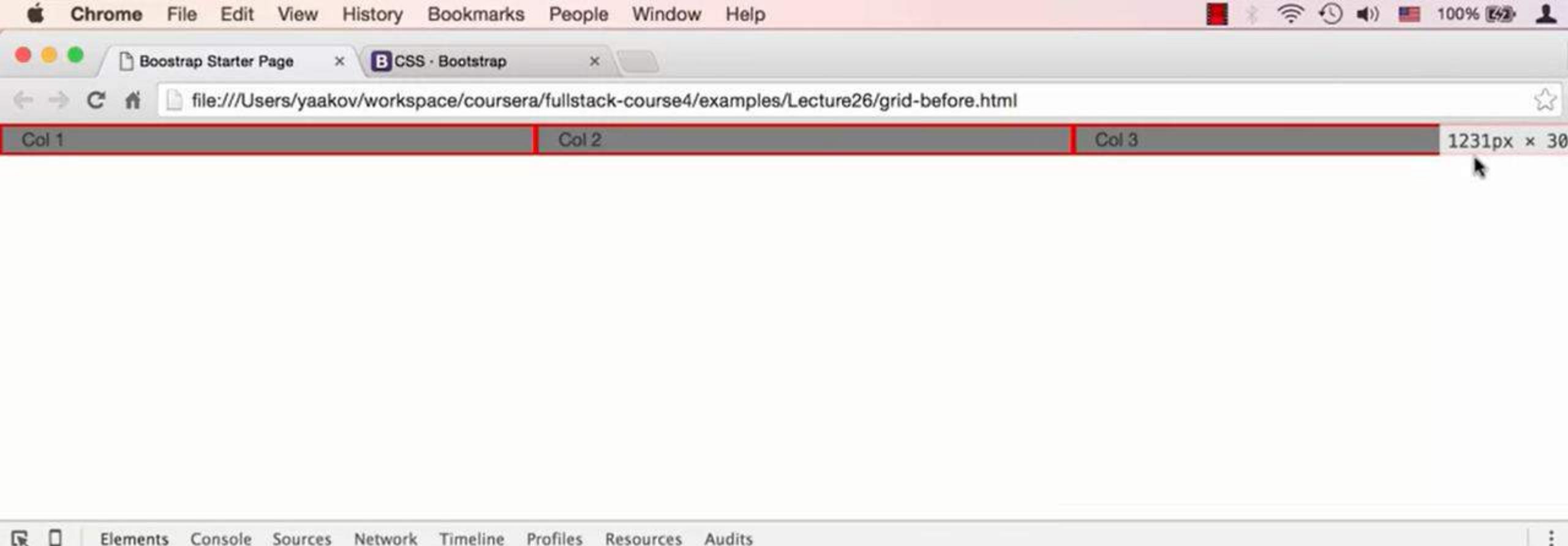
Images

Helper classes

Responsive utilities

Using Less

Using Sass



Elements    Console    Sources    Network    Timeline    Profiles    Resources    Audits

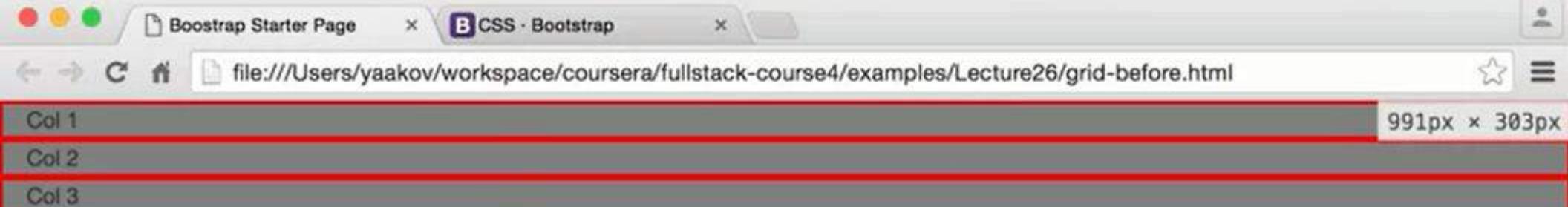
<!DOCTYPE html>  
<html lang="en">  
  <head>...</head>  
  <body>  
    <div class="container-fluid">...</div>  
    <!-- jQuery (Bootstrap JS plugins depend on it) --&gt;<br/>    <script src="js/jquery-1.11.3.min.js"></script>  
    <script src="js/bootstrap.min.js"></script>  
    <script src="js/script.js"></script>  
  </body>  
</html>

Styles    Computed    Event Listeners    DOM Breakpoints    Properties

Filter

element.style {  
}  
body {  
  font-family: "Helvetica Neue", Helvetica, Arial, sans-serif;  
  font-size: 14px;  
  line-height: 1.42857143;  
  color: #333;  
  background-color: #fff;  
}  
body {  
  margin: 0;  
}  
\* {

scaffolding.less:  
normalize.less:  
bootstrap.css:10



Elements Console Sources Network Timeline Profiles Resources Audits

Styles Computed Event Listeners DOM Breakpoints Properties

Filter

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    <div class="container-fluid">...</div>
    <!-- jQuery (Bootstrap JS plugins depend on it) -->
    <script src="js/jquery-1.11.3.min.js"></script>
    <script src="js/bootstrap.min.js"></script>
    <script src="js/script.js"></script>
  </body>
</html>
```

element.style {  
}

body {  
 font-family: "Helvetica Neue", Helvetica, Arial, sans-serif;  
 font-size: 14px;  
 line-height: 1.42857143;  
 color: #333;  
 background-color: #fff;  
}  
scaffolding.less:31

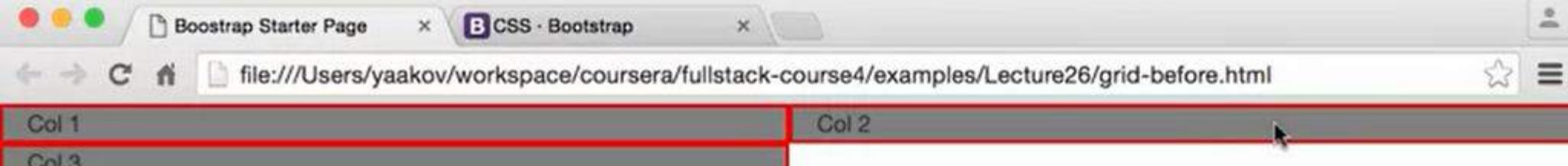
body {  
 margin: 0;  
}  
normalize.less:19

\* {  
}  
bootstrap.css:1062

grid-before.html — fullstack-course4

```
grid-before.html styles.css
```

1 <!doctype html>  
2 <html lang="en">  
3 <head>  
4 <meta charset="utf-8">  
5 <meta http-equiv="X-UA-Compatible" content="IE=edge">  
6 <meta name="viewport" content="width=device-width, initial-  
scale=1">  
7 <title>Bootstrap Starter Page</title>  
8 <link rel="stylesheet" href="css/bootstrap.min.css">  
9 <link rel="stylesheet" href="css/styles.css">  
10 </head>  
11 <body>  
12  
13 <div class="container-fluid">  
14 <div class="row">  
15 <div class="col-md-4 col-sm-6">Col 1</div>  
16 <div class="col-md-4 col-sm-6">Col 2</div>  
17 <div class="col-md-4 col-sm-6">Col 3</div>  
18 </div>  
19 </div>  
20  
21 <!-- jQuery (Bootstrap JS plugins depend on it) -->  
22 <script src="js/jquery-1.11.3.min.js"></script>  
23 <script src="js/bootstrap.min.js"></script>



Elements Console Sources Network Timeline Profiles Resources Audits

Styles Computed Event Listeners DOM Breakpoints Properties

Filter

element.style {  
}

body {  
 font-family: "Helvetica Neue", Helvetica, Arial, sans-serif;  
 font-size: 14px;  
 line-height: 1.42857143;  
 color: #333;  
 background-color: #fff;  
}  
scaffolding.less:31

body {  
 margin: 0;  
}  
normalize.less:19

\* {  
}  
bootstrap.css:1062

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    <div class="container-fluid">...</div>
    <!-- jQuery (Bootstrap JS plugins depend on it) -->
    <script src="js/jquery-1.11.3.min.js"></script>
    <script src="js/bootstrap.min.js"></script>
    <script src="js/script.js"></script>
  </body>
</html>
```



The screenshot shows the Chrome DevTools interface with the 'Elements' tab selected. The left sidebar shows the DOM tree:

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    <div class="container-fluid">
    ...</div>
  </body>
</html>
```

The right panel shows the 'Styles' tab of the Styles Inspector. It lists the following CSS rules for the 'body' element:

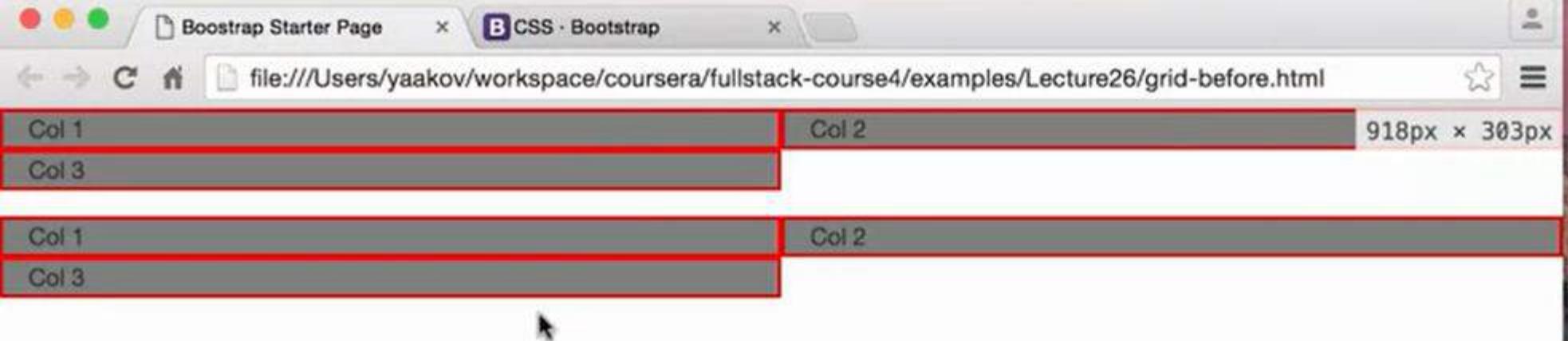
```
element.style {
}
body {
  font-family: "Helvetica Neue", Helvetica, Arial, sans-serif;
  font-size: 14px;
  line-height: 1.42857143;
  color: #333;
  background-color: #fff;
}
body {
  margin: 0;
}
* {
```

Comments next to the rules indicate their source: 'scaffolding.less:31' for the first 'body' rule, 'normalize.less:19' for the second 'body' rule, and 'bootstrap.css:1062' for the '\*' rule.

grid-before.html — fullstack-course4

```
grid-before.html styles.css
```

```
3 <head>
4   <meta charset="utf-8">
5   <meta http-equiv="X-UA-Compatible" content="IE=edge">
6   <meta name="viewport" content="width=device-width, initial-
scale=1">
7   <title>Bootstrap Starter Page</title>
8   <link rel="stylesheet" href="css/bootstrap.min.css">
9   <link rel="stylesheet" href="css/styles.css">
10  </head>
11  <body>
12
13  <div class="container-fluid">
14    <div class="row">
15      <div class="col-md-4 col-sm-6">Col 1</div>
16      <div class="col-md-4 col-sm-6">Col 2</div>
17      <div class="col-md-4 col-sm-6">Col 3</div>
18    </div> ...
19
20  <div class="row">
21    <div class="col-md-4 col-sm-6">Col 1</div>
22    <div class="col-md-4 col-sm-6">Col 2</div>
23    <div class="col-md-4 col-sm-6">Col 3</div>
24  </div>
```



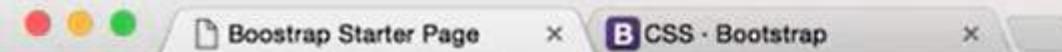
The screenshot shows the Chrome DevTools interface. The Elements tab is active, displaying the DOM structure of the page. The Styles tab in the DevTools sidebar is selected, showing the CSS rules applied to the elements. The body element has the following styles defined:

```
element.style {  
}  
  
body {  
    font-family: "Helvetica Neue", Helvetica, Arial, sans-serif;  
    font-size: 14px;  
    line-height: 1.42857143;  
    color: #333;  
    background-color: #fff;  
}  
  
body {  
    margin: 0;  
}  
  
* {
```

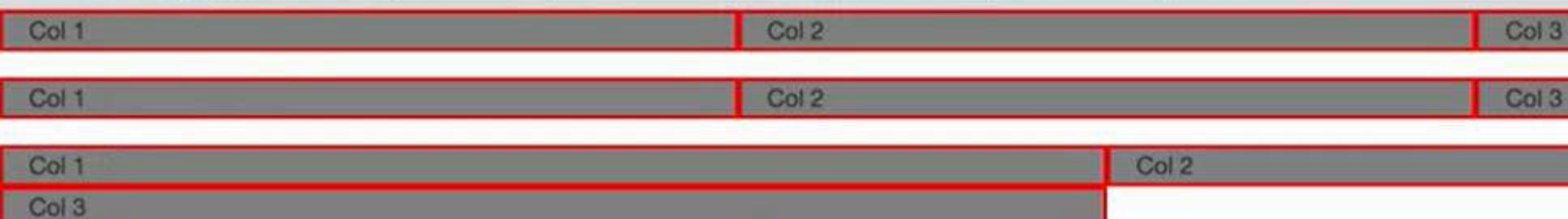
The styles are sourced from "scaffolding.less:31" and "normalize.less:19". The background image of a mountain landscape is visible on the right side of the screen.

grid-before.html — fullstack-course4

```
12
13     <div class="container-fluid">
14         <div class="row">
15             <div class="col-md-4 col-sm-6">Col 1</div>
16             <div class="col-md-4 col-sm-6">Col 2</div>
17             <div class="col-md-4 col-sm-6">Col 3</div>
18         </div>
19
20         <div class="row">
21             <div class="col-md-4 col-sm-6">Col 1</div>
22             <div class="col-md-4 col-sm-6">Col 2</div>
23             <div class="col-md-4 col-sm-6">Col 3</div>
24         </div>
25
26         <div class="row">
27             <div class="col-xs-6">Col 1</div>
28             <div class="col-xs-6">Col 2</div>
29             <div class="col-xs-6">Col 3</div>
30         </div>
31     </div>
32
33     <!-- jQuery (Bootstrap JS plugins depend on it) -->
34     <script src="js/jquery-1.11.3.min.js"></script>
35     <script src="js/bootstrap.min.js"></script>
```



file:///Users/yaakov/workspace/coursera/fullstack-course4/examples/Lecture26/grid-before.html



Elements Console Sources Network Timeline Profiles Resources Audits

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    <div class="container-fluid">...</div>
    <!-- jQuery (Bootstrap JS plugins depend on it) -->
    <script src="js/jquery-1.11.3.min.js"></script>
    <script src="js/bootstrap.min.js"></script>
    <script src="js/script.js"></script>
  </body>
</html>
```

Styles Computed Event Listeners DOM Breakpoints Properties

Filter

```
element.style { }
body {
  font-family: "Helvetica Neue", Helvetica, Arial, sans-serif;
  font-size: 14px;
  line-height: 1.42857143;
  color: #333;
  background-color: #fff;
}
body {
  margin: 0;
}
* {
```

# Summary

- ❖ Structure Bootstrap expects for the grid-based layout
  - Needs to be include .container (or .container-fluid)
  - All columns must be inside .row
- ❖ SIZE identifier identifies at which breakpoint specified column spans will be ignored and all elements will collapse (i.e., stack)
- ❖ If no other rules apply, specifying col-xs-... will keep that layout no matter what the size of the screen