

# CIS 4004: Web Based Information Technology Spring 2011

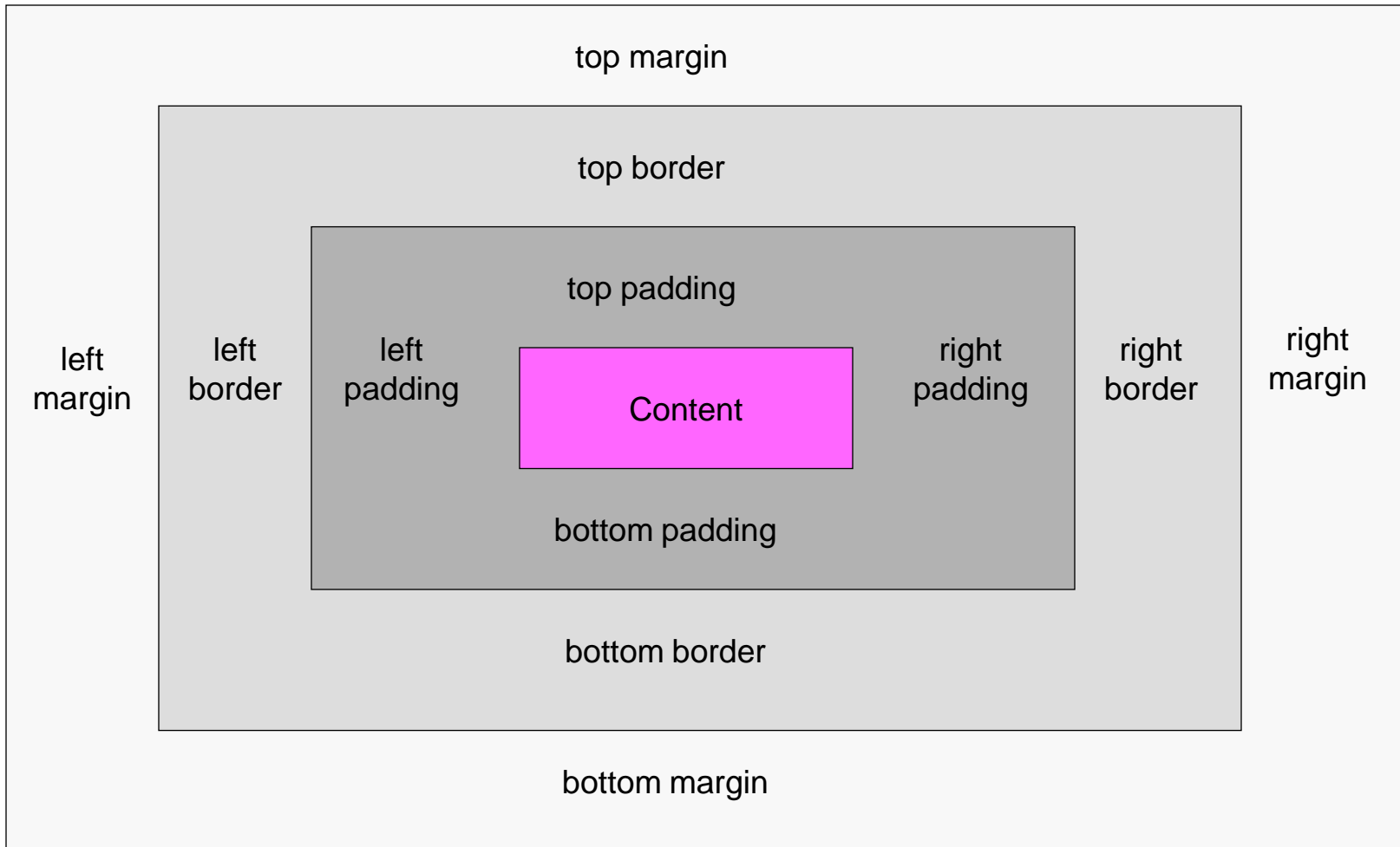
## Cascading Style Sheets – Page Layout - Part 3

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# The CSS Box Model



# Floating and Clearing

- In addition to managing boxes, another powerful technique you can use to organize your layout on the page involves combining floating and clearing using the `float` and `clear` properties.
- Floating an element is a way of moving it out of the normal flow of the document. Elements that follow a floated element will move up and set next to the floated element if there is room.
- The `clear` property enables you to stop elements moving up next to a floated element.



# Floating and Clearing

- Suppose that you have two paragraphs and only want the first one to set next to a floated element, even though both paragraphs would fit next to the floated element, you can “clear” the second one so it will be positioned under the floated element rather than along side of it.
- Over the next few pages we’ll look at these two properties more closely.



# The `float` Property

- The `float` property is primarily used to flow text around images, however it is also the basis for one of the ways to create multi-column layouts.
- Let's start by looking at an example of how to flow text around an image. In the CSS for the `<img>` element we'll set the `float` property to be left as follows:

```
img {float:left; margin:0 4px 4px 0;}
```

- This will float the image to the left, so that the text will wrap around it to its right.



```
C:\Courses\CIS 4004 - Web Based IT\Spring 2011\code\CSS-P\CSS-P - Part 3\float demo - version 1.html - Notepad++
File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?
slideshow.js column layout demo - version 3.html float demo - version 1.html
1 <?xml version="1.0" encoding="UTF-8" standalone="no"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4 <html xmlns="http://www.w3.org/1999/xhtml">
5 <head>
6 <title>Float demo - version 1</title>
7 <style type="text/css">
8 <!--
9 body {background-color:#FFCC99;}
10 p {width:400px; margin:0; border:1px solid red; background-color:#FFF;}
11 img {float:left; margin:0 4px 4px 0;}
12 -->
13 </style>
14 </head>
15 <body>
16 <p>` element does not see the floated `<img>` element as preceding it in the normal flow. So the `<p>` element takes the top left corner position of its parent (`<body>`). However, its content, the text of the paragraph, wraps itself around the floated image.



```
5 <head>
6 <title>Float demo - version 2</title>
7 <style type="text/css">
8   <!--
9   body {background-color:#FFCC99;}
10  p {width:400px; margin:0; border:1px solid red; background-color:#FFF;}
11  img {float:right; margin:0 4px 4px 0;}
12  -->
13 </style>
14 </head>
15 <body>
16 <p>Here is a
17 paragraph of text and a floated image. The floated image moves up as high and
18 to the right as it can within the parent element, body. With the image removed
19 from of the document flow because it is floated, the paragraph (which is not
20 floated) can also occupy the top right corner along with image, as the paragraph'
21 red border shows. However, the paragraph's text wraps around the image to the left
22 because the image is floated right. Once the text gets below the image, it returns
23 to its normal width. The floated element must appear directly before, or nested
24 at the start of, the non-floated element in the markup for this effect to work.
25 </p>
26 </body>
27 </html>
28
```

This time the image is floated to the right of its parent element, which in this case is the paragraph.





Why do we see the white background of the paragraph element here? Why doesn't it go all the way to the edge like it did in the previous example?

Here is a paragraph of text and a floated image. The floated image moves up as high and to the right as it can within the parent element, body. With the image removed from the document flow because it is floated, the paragraph (which is not floated) can also occupy the top right corner along with image, as the paragraph's red border shows. However, the paragraph's text wraps around the image to the left, because the image is floated right. Once the text gets below the image, it returns to its normal width. The floated element must appear directly before, or nested at the start of, the non-floated element in the markup for this effect to work.



Answer: because the right margin for the image element is set at 4px.



# The float Property

- In short, when you float an image or any element, you are asking for it to be pushed as far as possible up and to the left (or right – in the case of a `float:right`) of the parent (containing) element.
- To see an illustration of this, look carefully at the next version of the markup, which is identical to the previous version (version 2) except that the image appears before the paragraph element.
  - This means that the parent element of the `<img>` is now the `<body>` element and thus the image will be pushed as far as possible up and to the right in the body of the document.



C:\Courses\CIS 4004 - Web Based IT\Spring 2011\code\CSS-P\CSS-P - Part 3\float demo - version 3.html - Notepad++

File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?

slideshow.js column layout demo - version 3.html float demo - version 1.html float demo - version 2.html float demo - version 3.html

```
1 <?xml version="1.0" encoding="UTF-8" standalone="no"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4 <html xmlns="http://www.w3.org/1999/xhtml">
5   <head>
6     <title>Float demo - version 3</title>
7     <style type="text/css">
8       <!--
9       body {background-color:#FFCC99;}
10      p {width:400px; margin:0; border:1px solid red; background-color:#FFCC99;}
11      img {float:right; margin:0 4px 4px 0;}
12      -->
13   </style>
14 </head>
15 <body>
16 <div>Here is a paragraph of text and a floated image. The floated image moves
18 to the left as it can within the parent element, body. With the image
```

The image comes before the paragraph so the containing element of the image is now the body and thus the image is pushed as far up and to the right in the body of the document as is possible.

Hyper Text Mark nb char : 1260 nb line : 29 Ln : 16 Col : 72 Sel : 0 UNIX ANSI INS




Float demo - ... x Float demo - ... x Float demo - ... x +

file:///C:/Courses/CIS%204004%20-%20Web%20I ☆

Free Hotmail KeepVid- Download ... Suggested Sites Other bookmarks

Here is a paragraph of text and a floated image. The floated image moves up as high and to the left as it can within the parent element, body. With the image removed from of the document flow because it is floated, the paragraph (which is not floated) can also occupy the top left corner along with image, as the paragraph's red border shows. However, the paragraph's text wraps around the image to the right, because the image is floated left. Once the text gets below the image, it returns to its normal width. The floated element must appear directly before, or nested at the start of, the non-floated element in the markup for this effect to work.



The paragraph width is still 400px, and the image is now floated up and to the right in the body element and not in the paragraph element.



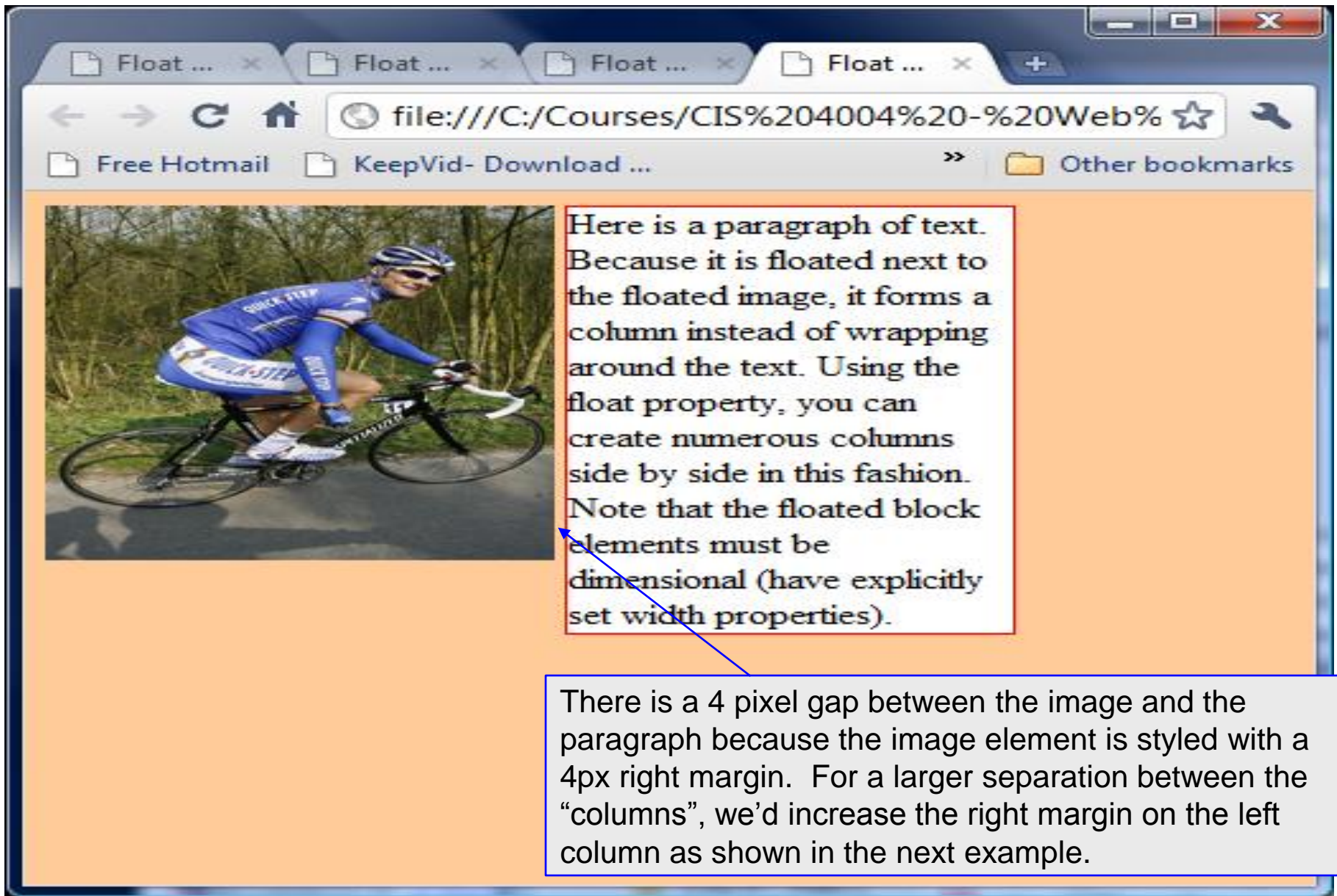
# The float Property

- Once you understand how the float property works in relation to its containing element, it's a simple step to use the float property to form columns.
- In the next version of the floating example, we've added the float property to the paragraph element as well as to the image element. *(I modified the width of the paragraph element to make it more narrow to more closely resemble a column for this example.)*



```
C:\Courses\CIS 4004 - Web Based IT\Spring 2011\code\CSS-P\CSS-P - Part 3\float demo - version 4.html - Notepad++
File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?
float demo - version 1.html float demo - version 2.html float demo - version 3.html float demo - version 4.html
6 <title>Float demo - version 4</title>
7 <style type="text/css">
8 <!--
9 body {background-color:#FFCC99;}
10 p {float:left; width:175px; margin:0; border:1px solid red; background-color:#FFF;}
11 img {float:left; margin:0 4px 4px 0;}
12 -->
13 </style>
14 </head>
15 <body>
16 <div>Here is a paragraph of text. Because it is floated next to the float
18 image, it forms a column instead of wrapping around the text. Using
19 float property, you can create numerous columns side by side in this
20 Note that the floated block elements must be dimensional (have explic
21 width properties) .
22 </p>
23 </body>
24 </html>
Hyper Text Mark nb char : 932 nb line : 26 Ln : 16 Col : 72 Sel : 0 UNIX ANSI INS
```





The screenshot shows a web browser window with several tabs labeled "Float ...". The address bar contains the file path: `file:///C:/Courses/CIS%204004%20-%20Web%`. Below the address bar, there are bookmarks for "Free Hotmail" and "KeepVid- Download ...". The main content area features a blue cyclist on a road bike on the left and a white text box with a red border on the right. The text in the white box explains floating elements and their dimensions. A blue arrow points from the text box to a 4-pixel gap between the cyclist image and the text box.

Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

There is a 4 pixel gap between the image and the paragraph because the image element is styled with a 4px right margin. For a larger separation between the "columns", we'd increase the right margin on the left column as shown in the next example.

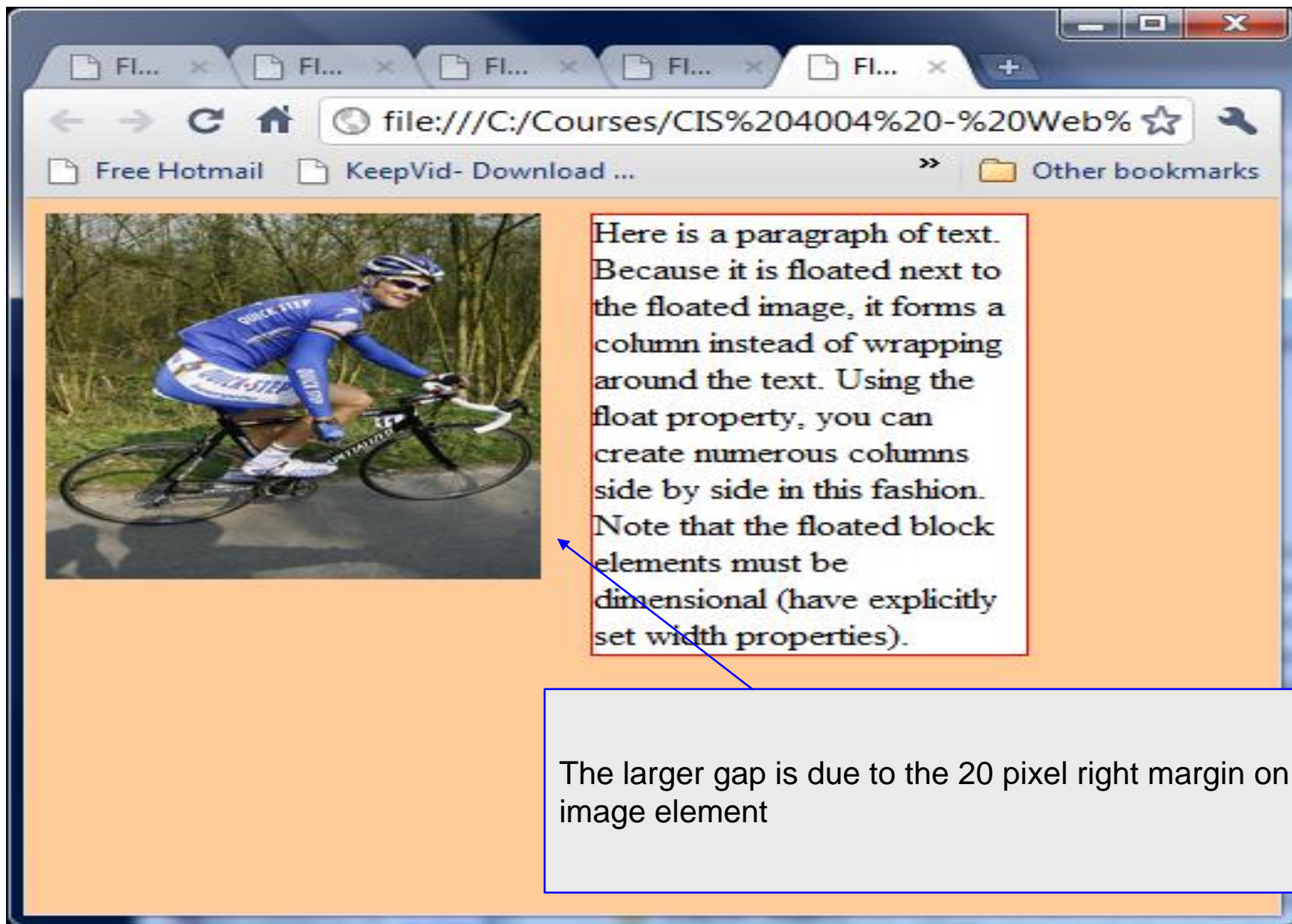


```
C:\Courses\CIS 4004 - Web Based IT\Spring 2011\code\CSS-P\CSS-P - Part 3\float demo - version 4-1.html - Notepad++
File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?
float demo - version 1.html float demo - version 2.html float demo - version 3.html float demo - version 4-1.html
6 <title>Float demo - version 4-1</title>
7 <style type="text/css">
8 <!--
9 body {background-color:#FFCC99;}
10 p {float:left; width:175px; margin:0; border:1px solid red; background-color:#FFF;}
11 img {float:left; margin:0 20px 4px 0;}
12 <!--
13 </style>
14 </head>
15 <body>
16 <div>
17 <p>Here is a paragraph of text. Because of the image, it forms a column instead of a row. Note that the floated block element (the image in this case) does not have width properties).
18
19
20
21
22 </p>
23 </body>
24 </html>
```

Same as previous version except for a 20px right margin on the image element








The screenshot shows a web browser window with a file:// URL. The page content includes a photograph of a cyclist on the left and a block of text on the right. The text is contained within a white box with a red border. A blue arrow points from the bottom of this text box to a larger white box with a blue border at the bottom of the page. The larger box contains an explanatory note about a 20-pixel right margin on the image element.

file:///C:/Courses/CIS%204004%20-%20Web% ...

Free Hotmail KeepVid- Download ... Other bookmarks



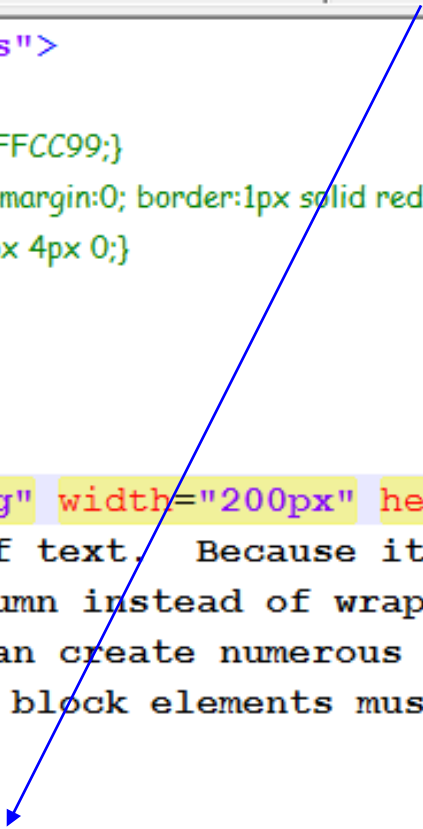
Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

The larger gap is due to the 20 pixel right margin on the image element



```
C:\Courses\CIS 4004 - Web Based IT\Spring 2011\code\CSS-P\CSS-P - Part 3\float demo - version 5.html - Notepad++
File Edit Search View Format Language Settings Macro Run TextFX Plugins
float demo - version 1.html float demo - version 2.html float demo - version 3.html float
7 <style type="text/css">
8 <!--
9 body {background-color:#FFCC99;}
10 p {float:left; width:175px; margin:0; border:1px solid red;}
11 img {float:left; margin:0 4px 4px 0;}
12 <!--
13 </style>
14 </head>
15 <body>
16 <div>Here is a paragraph of text. Because it is floated next to the float
18 image, it forms a column instead of wrapping around the text. Using
19 float property, you can create numerous columns side by side in this
20 Note that the floated block elements must be dimensional (have explic
21 width properties).
22 </p>
23 <p>Here is a paragraph of text. Because it is floated next to the float
24 image, it forms a column instead of wrapping around the text. Using
25 float property, you can create numerous columns side by side in this
Hyper Text Mark nb char : 1274 nb line : 32 Ln : 16 Col : 72 Sel : 0 UNIX ANSI INS
```

The second paragraph is styled identical to the first and thus will float as far up and to the left as it can inside the <body> element. In this case, since there are already two floated elements it will appear after them.



The screenshot shows a web browser window with two tabs: "Float demo - version 1" and "Float demo - version 5". The address bar shows a file path: "file:///C:/Courses/CIS%204004%20-%20Web%20Based%20IT/". The browser interface includes navigation buttons (back, forward, refresh, home), a search icon, and a list of bookmarks: "Free Hotmail", "KeepVid- Download ...", "Suggested Sites", and "Other bookmarks".

The main content area has a light orange background. On the left is a photograph of a cyclist in a blue "QUICK-STEP" jersey riding a road bike. To the right of the image are two columns of text, each enclosed in a red border. Both columns contain the same text:

Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).


A blue callout box with a white background and a blue border is positioned at the bottom right. It contains the text: "The second paragraph floats up and to the left as far as it can relative to the other already floated elements." A blue arrow points from the callout box to the second column of text.



Float demo - version 1 x Float demo - version 5 x

file:///C:/Courses/CIS%204004%20-%20We ☆

Free Hotmail KeepVid- Download ... Other bookmarks

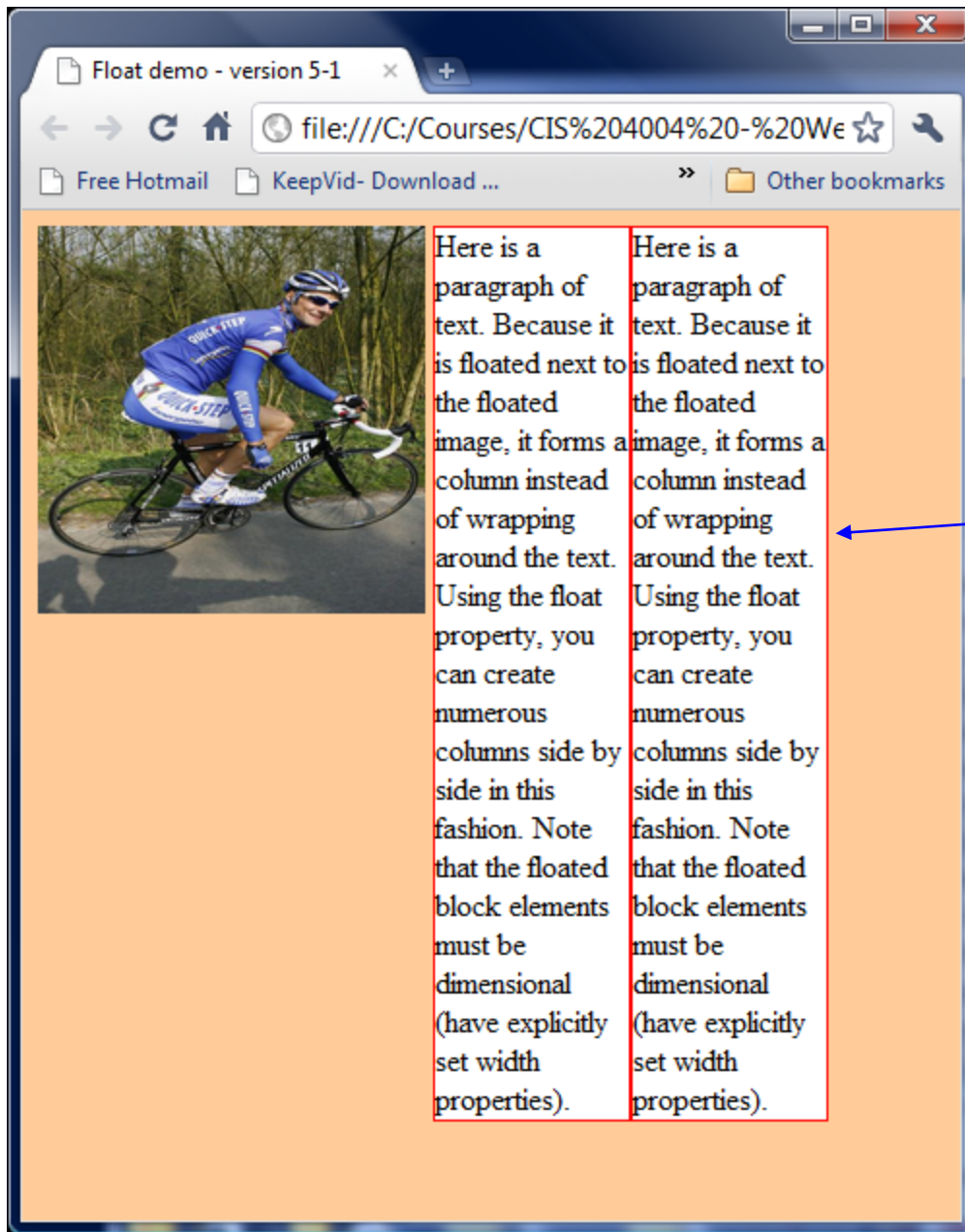


Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

As this shot illustrates, as far up and to the left as possible is dependent on the width of the encompassing element (in this case, the body element). When the browser window is narrowed, there is no room for the second paragraph to float up to the right side of the first paragraph, so it floats as far up and to the left underneath the other two elements. Notice too, that it “up” position is determined by the paragraph’s height which is taller than the image, so it does not float up immediately under the image. The next two pages illustrates a more exaggerated example of this, when the first paragraph is taller.

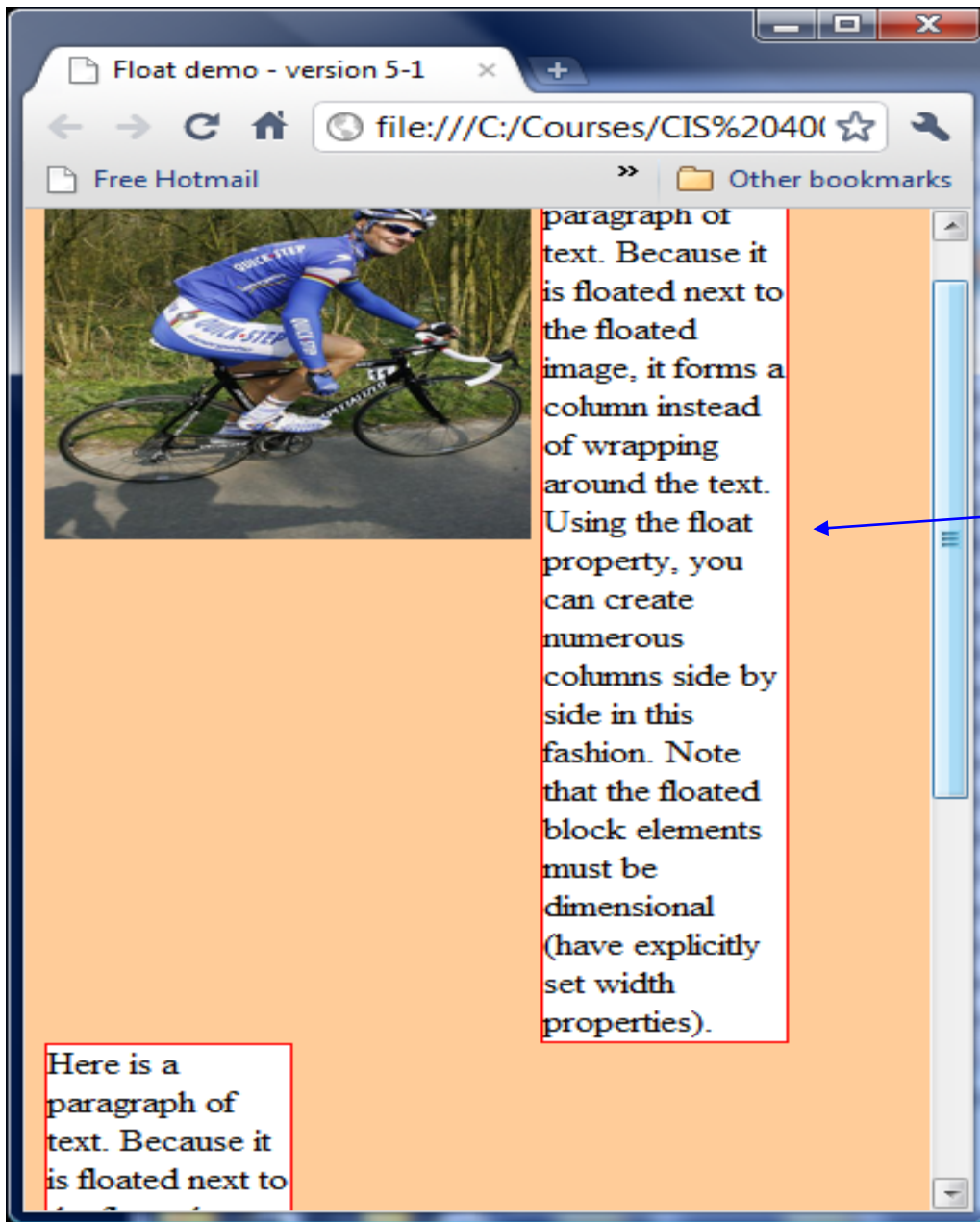




In this case, the body element is wide enough to allow both paragraphs to float up to the top of the body element in line with the top of the image element.

The next page illustrates what happens when the body element is narrowed.



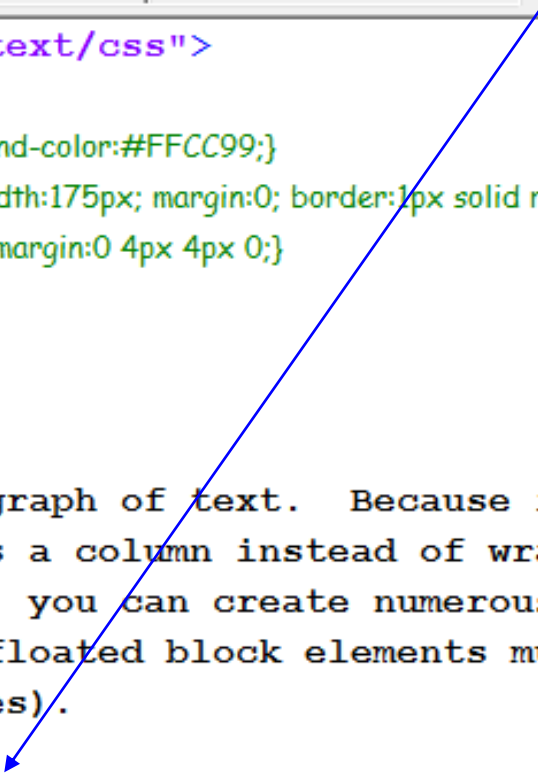


In this case, there is again, no room to place the second paragraph to the right of the first paragraph and it can only float up as far as the bottom of the first paragraph.



```
C:\Courses\CIS 4004 - Web Based IT\Spring 2011\code\CSS-P\CSS-P - Part 3\float demo - version 6.html - Notepad++
File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?
float demo - version 3.html float demo - version 4-1.html float demo - version 5-1.html
7 <style type="text/css">
8 <!--
9 body {background-color:#FFCC99;}
10 p {float:left; width:175px; margin:0; border:1px solid red; background-color:#FFF;}
11 img {float:left; margin:0 4px 4px 0;}
12 -->
13 </style>
14 </head>
15 <body>
16 <p>Here is a paragraph of text. Because it is floated next to the float
17 image, it forms a column instead of wrapping around the text. Using
18 float property, you can create numerous columns side by side in this
19 Note that the floated block elements must be dimensional (have explic
20 width properties).
21 </p>
22 <div>Here is a paragraph of text. Because it is floated next to the float
24 image, it forms a column instead of wrapping around the text. Using
25 float property, you can create numerous columns side by side in this
Hyper Text Mark nb char : 1273 nb line : 32 Ln:1 Col:1 Sel:0 UNIX ANSI INS
```

In this example, the image is relocated in the XHTML to appear after the first paragraph. Where will it appear in the rendered version?




Float demo - version 5-1    Float demo - version 6

file:///C:/Courses/CIS%204004%20-%20Web%20Based%20IT/Spring%202011/code/

Free Hotmail    KeepVid- Download ...    Suggested Sites    Web Slice Gallery    Other bookmarks

Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).



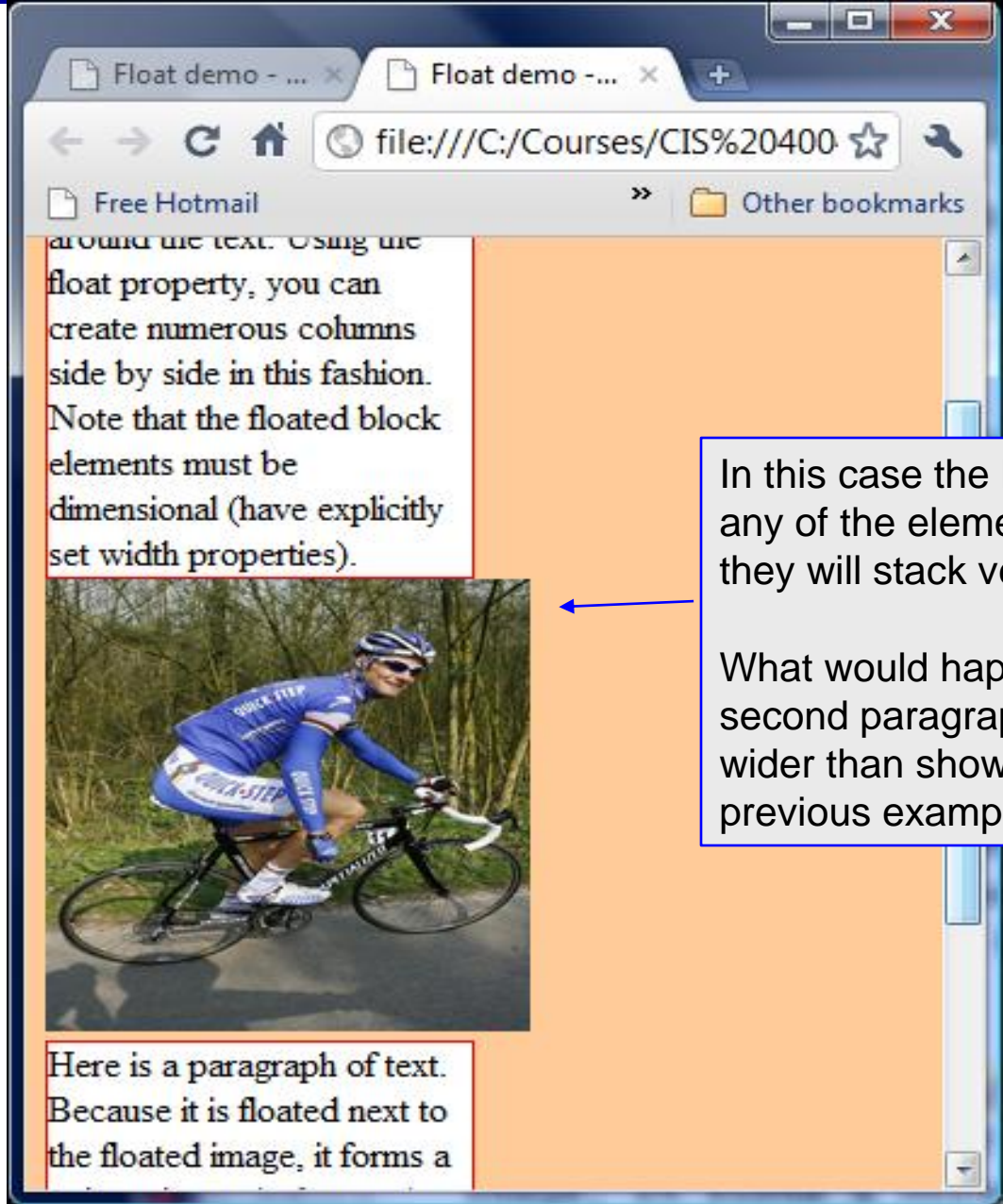
Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

The image appears where you would expect it following the first paragraph. It has floated into its position out of normal flow, but it was not positioned absolutely, so it still appears as the second element in this document.

In this case the body element is wide enough to move all three elements to the top of the body element.







In this case the body element is too narrow to allow any of the elements to be positioned side by side, so they will stack vertically along the page.

What would happen (where would the image and the second paragraph be placed if the body element was wider than shown here but not as wide as the previous example?




Float demo - vers... x Float demo - vers... x +

file:///C:/Courses/CIS%204004%20-%20; ☆ 🔧

Free Hotmail KeepVid- Download ... >> Other bookmarks

Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).



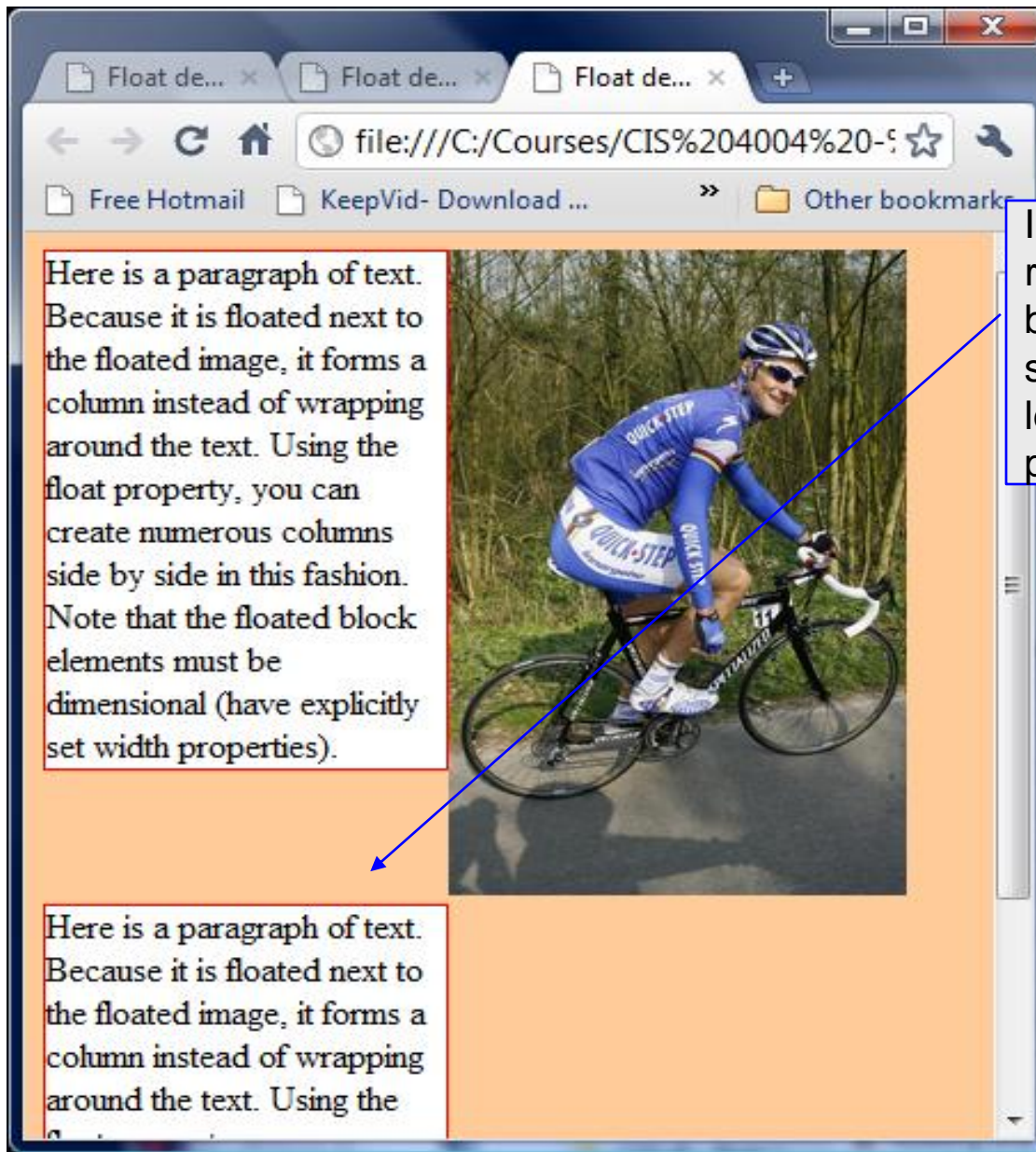
Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

Why is the second paragraph under the image and not underneath the first paragraph?

What would happen if the image was taller?

Answer: because the paragraph floats as far up and to the left as it can following the previous element which is the image. Since the image did not extend down the page as far as the first paragraph, the second image will move up underneath the image and not underneath the first paragraph.





In this example, the image height is 300 rather than 200 so it extends below the bottom of the first paragraph. When the second paragraph floats up and to the left, it will now appear under the first paragraph and to the left of the image.



C:\Courses\CIS 4004 - Web Based IT\Spring 2011\code\CSS-P\CSS-P - Part 3\float demo - version 7.html - Notepad++

File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?

float demo - version 4-1.html float demo - version 5-1.html float demo - version 6-1.html

```
16 <body>
17 <div>
18 
21 <p>Here is a paragraph of text. Because it is floated next to the float
22 image, it forms a column instead of wrapping around the text. Using
23 float property, you can create numerous columns side by side in this
24 Note that the floated block elements must be dimensional (have explic
25 width properties) .
26 </p>
27 <p>Here is a paragraph of text. Because it is floated next to the float
28 image, it forms a column instead of wrapping around the text. Using
29 float property, you can create numerous columns side by side in this
30 Note that the floated block elements must be dimensional (have explic
31 width properties) .
32 </p>
33 <p>Here is a paragraph of text. Because it is floated next to the float
34 image, it forms a column instead of wrapping around the text. Using
```

Hyper Text Mark nb char : 1743 nb line : 42 Ln : 19 Col : 67 Sel : 0 UNIX ANSI INS

We've added a third paragraph to the document. Where will this third paragraph go?

Will it be along side paragraph 2, or underneath it?



Float demo - version 7

file:///C:/Courses/CIS%204004%20-%20Web%20Based%20IT/Spring%202011/code/CSS-P/CSS-P%20-%20

Free Hotmail | KeepVid- Download ... | Suggested Sites | Web Slice Gallery | Other bookmarks

0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850



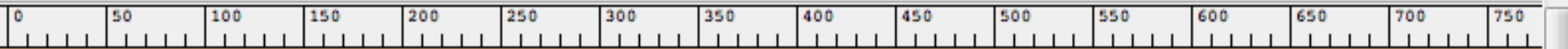
Here is a paragraph of text.  
 Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

Here is a paragraph of text.  
 Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

Here is a paragraph of text.  
 Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

In this case, the browser window was wide enough to fit it along side the second paragraph. If the browser window had been narrower, it would have been placed under the picture (see next slide.)

The total width of all element is:  $4px + 200px + 6px + 3 * 200px = 810px$   
 (the 4px = image right margin, the 6px = 1px border each side each paragraph)



Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this

In this case, the browser window wasn't wide enough to fit it along side the second paragraph, so the third paragraph was pushed below the image (but realize that it is still pushed as far up and to the left inside the <body> that it can be relative to the other elements which have already been positioned.



In this version, the paragraph and image elements have been styled the same in terms of their width, border, and margins. Notice now (on the next slide) how things line up nice and neat!

```
1 <?xml version="1.0" encoding="UTF-8" standalone="no"?>
2 <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
3   "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
4 <html xmlns="http://www.w3.org/1999/xhtml">
5 <head>
6   <title>Float demo - version 8</title>
7   <style type="text/css">
8     <!--
9     body {background-color:#FFCC99;}
10    p {float:left; width:200px; margin:0 4px 4px 0; border:1px solid red; background-color:#FFF;}
11    img {float:left; margin:0 4px 4px 0; border: 1px solid black;}
12    #ruler {position:relative; left:-51px; top:0px; margin-bottom:5px; }
13    -->
14  </style>
15 </head>
16 <body>
17 <div>
18 
19 
```

Hyper Text Mark nb char : 1778 nb line : 42 Ln : 19 Col : 67 Sel : 0 UNIX ANSI INS




Float demo - version 8

file:///C:/Courses/CIS%204004%20-%20Web%20Based%20IT/

Free Hotmail KeepVid- Download ... Suggested Sites Other bookmarks

0 50 100 150 200 250 300 350 400 450 500 550



Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).

Here is a paragraph of text. Because it is floated next to the floated image, it forms a column instead of wrapping around the text. Using the float property, you can create numerous columns side by side in this fashion. Note that the floated block elements must be dimensional (have explicitly set width properties).





# The `clear` Property

- The other property that is frequently used with `float` is `clear`.
- Any element that has room to do so will move up next to a floated element, but sometimes, you don't want this to happen; you want to clear – that is, to set below (not beside) the floated element.
- For demonstrating the `clear` property we'll need a slightly different document to work with, so get familiar with the XHTML/CSS on the next page.



```
C:\Courses\CIS 4004 - Web Based IT\Spring 2011\code\CSS-P\CSS-P - Part 3\floating and clearing demo - version 1.html - Notepad++
File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?
float demo - version 1.html float demo - version 2.html floating and clearing demo - version 1.html
6 <title>Floating and Clearing Demo - Version 1</title>
7 <style type="text/css">
8 <!--
9 body {background-color:#FFC; font-family:arial; font-size:12pt;}
10 p {margin:0 0 10px 0;}
11 p img {float:left; margin:0 4px 4px 0;}
12 -->
13 </style>
14 </head>
15 <body>
16 <p></p>
17 <p>The paragraphs follow normal flow. The racer pictured on the left is Thor Hushovd of
18 Garmin-Cervelo professional cycling. In late September 2010, in Australis, he became t
19 He is the first Norwegian rider in history to win this title. He won the race in
20 using his powerful sprint finish. The race was contested by more than 180
21 professional riders from all over the world. The race was 295 kilometers long and incl
22 10 climbs on a circuit near Melbourne. Earlier in the year he won Stage 3 in the Tour
23 classic race Paris-Roubaix. He will be considered a potential winner of many of the sp
24 <p></p>
25 <p>The paragraphs follow normal flow. This is Cat Osterman, arguably the greatest softb
26 <p> </p>
27 <p>The paragraphs follow normal flow. This is Alex the Parrot. Alex had a vocabulary o
Hyper Text Markup Language file nb char : 2113 nb line : 30 Ln:16 Col:56 Sel:0 Dos\Windows ANSI INS
```

**NEW CSS** (See page 36)





The paragraphs follow normal flow. The racer pictured on the left is Thor Hushovd of Norway. For the 2011 season he will ride for Garmin-Cervelo professional cycling. In late September 2010, in Australis, he became the World Professional Road Racing champion He is the first Norwegian rider in history to win this title. He won the race in using his powerful sprint finish. The race was contested by more than 180 professional riders from all over the world. The race was 295 kilometers long and included a total of 10 climbs on a circuit near Melbourne. Earlier in the year he won Stage 3 in the Tour de France and was 2nd in the one-day classic race Paris-Roubaix. He will be considered a potential winner of many of the spring classics this year.



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The paragraphs follow normal flow. This is Alex the Parrot. Alex had a vocabulary of about 150 words, but was exceptional in that he appeared to have understanding of what he said. When Alex would grow tired of being tested he would say " I'm going to go away." If the researcher expressed sadness at this, Alex would add " I'm sorry!"



## An Aside – Contextual Selectors

- In the interest of expanding your horizons a bit and also making your life easier when it comes to CSS, I've taken this opportunity to introduce the concept of **contextual selectors** in CSS.
- By now you are quite familiar with writing CSS rules such as: `p { color: red; }`, which would style every paragraph in the document to have red text.
- But what if you want only one particular paragraph to be red. While we've used classes for this before, there is yet another way to do this in CSS using **contextual selectors**.



## An Aside – Contextual Selectors

- As an example, we could do: `div p {color: red; }`
- In this case only paragraphs that appear within a `<div>` element would have red text. Any paragraph occurring outside of a `<div>` element would have the default text color (black).
- A contextual selector uses more than one tag name in the selector.
  - DO NOT confuse contextual selectors with multiple selectors!
  - Contextual selector: `div p {color: red; }`
  - Multiple selector: `h1, p {color: red; }`



## An Aside – Contextual Selectors

- When using a contextual selector, the rule is applied only to the last tag listed, and then only if the selectors that precede it appear in the same order somewhere in the hierarchy above it.
- As an example, we could do:

```
div p span {color: red; }
```

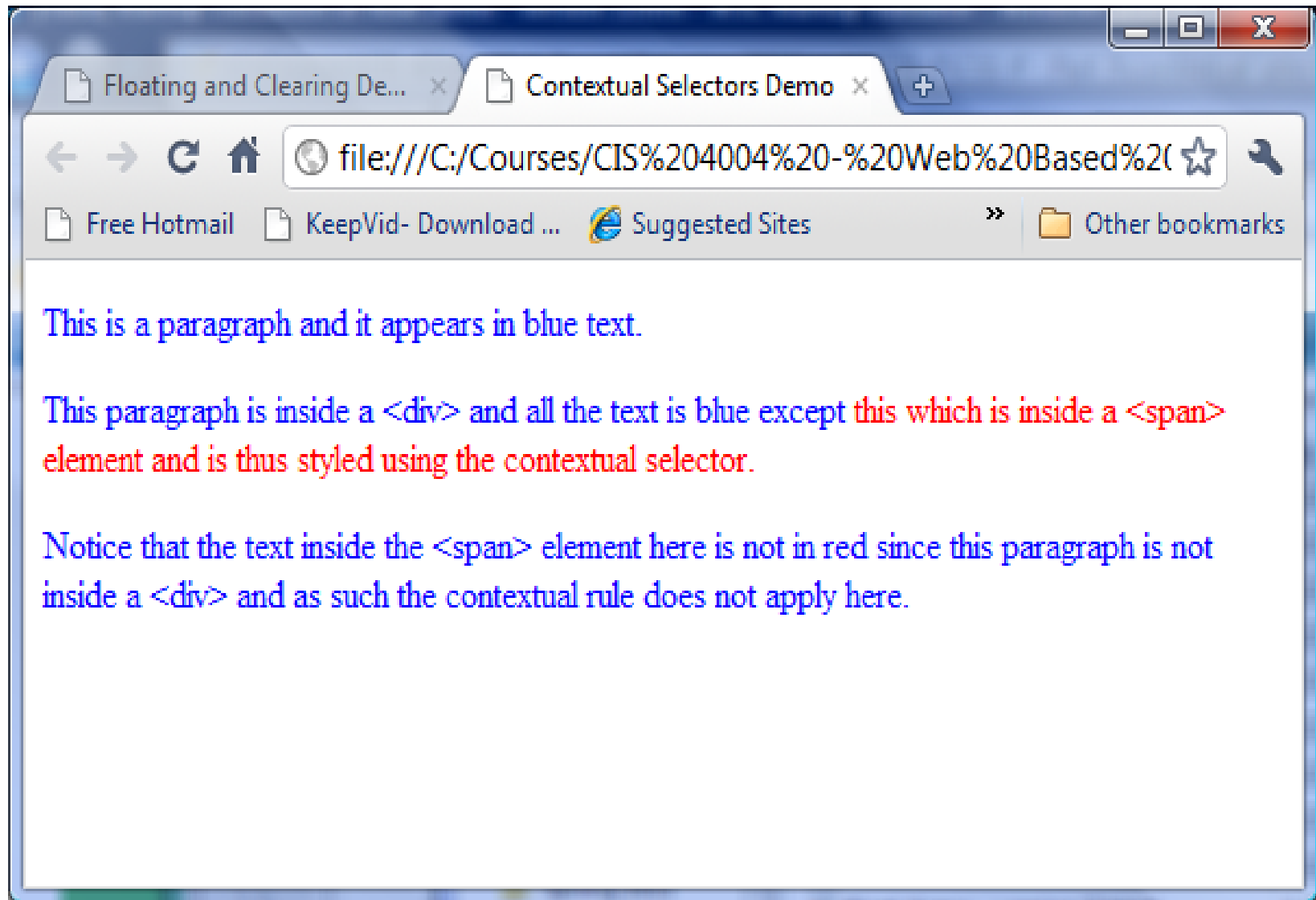
- In this case only paragraphs that appear within a `<div>` element would have red text. Any paragraph occurring outside of a `<div>` element would have the default text color (black).



```
File Edit Search View Format Language Settings Macro Run TextFX Plugins Window ?
float demo - version 1.html float demo - version 2.html floating and clearing demo - version 1.html contextual selectors demo.html
4 <html xmlns="http://www.w3.org/1999/xhtml">
5 <head>
6 <title>Contextual Selectors Demo</title>
7 <style type="text/css">
8 <!--
9 p {color:blue;}
10 div p span {color:red;}
11 -->
12 </style>
13 </head>
14 <body>
15 <p>This is a paragraph and it appears in blue text.</p>
16 <div><p>This paragraph is inside a <div>, and all the
17 text is blue except <span>this which is inside a <span>,
18 element and is thus styled using the contextual selector.</span>
19 </p>
20 </div>
21 <p>Notice that the text inside the <span> element here <span>
22 is not in red since this paragraph is not inside a <div>,
23 and as such the contextual rule does not apply here.</span>
24 </p>
25 </body>
```



# An Aside – Contextual Selectors





## An Aside – Contextual Selectors

- So, getting back to our original floating and clearing example, the contextual selector that I used in the CSS was:

```
p img {float: left;
       margin: 0 4px 4px 0; }
```

- Thus any `<img>` elements which appear inside a `<p>` element will be styled using this rule. Any `<img>` elements appearing outside of a `<p>` element will have a default style applied, since there are no other rules in the CSS that apply to `<img>` elements.



# The `clear` Property

- Getting back to the original floating and clearing example, now that you understand contextual selectors, the layout of the page as shown on slide 35 doesn't really look all that good, because the text associated with the second picture (the one of Cat Osterman) wasn't long enough to force the third image (of Alex the parrot) to appear below the second image.
- Since there was room for it and the float property was being applied to the third image, it floated up to appear next to the second image. Probably not the effect we were looking for. We probably want each image to float next to its associated text down the page.



# The `clear` Property

- The “fix” is to add a non-floated element into the markup that has a `clear` property applied to it to force the third element to start below the second.
- The XHTML document on the next page shows this modification and the resulting effect in the rendering on the following page.



```
10 p { margin:0 0 10px 0; }
11 p img { float:left; margin:0 10px 10px 0; }
12 .clearthefloats { clear: both; }
13 -->
14 </style>
15 </head>
16 <body>
17 <p></p>
18 <p>The paragraphs follow normal flow. The racer pictured on the left is Thor H
19 Garmin-Cervelo professional cycling. In late September 2010, in Australis, he
20 He is the first Norwegian rider in history to win this title. He won the race
21 using his powerful sprint finish. The race was contested by more than 180
22 professional riders from all over the world. The race was 295 kilometers long
23 10 climbs on a circuit near Melbourne. Earlier in the year he won Stage 3 in
24 classic race Paris-Roubaix. He will be considered a potential winner of many
25 <div class="clearthefloats"></div>
26 <p></p>
27 <p>The paragraphs follow normal flow. This is Cat Osterman, arguably the great
28 <div class="clearthefloats"></div>
29 <p> </p>
30 <p>The paragraphs follow normal flow. This is Alex the Parrot. Alex had a voc
31 grow tired of being tested he would say &quot; I'm going to go away.&quot;;
32 </body>
```

Technique for clearing

.clearthefloats { clear: both; }

<div class="clearthefloats"></div>





The paragraphs follow normal flow. The racer pictured on the left is Thor Hushovd of Norway. For the 2011 season he will ride for Garmin-Cervelo professional cycling. In late September 2010, in Australis, he became the World Professional Road Racing champion He is the first Norwegian rider in history to win this title. He won the race in using his powerful sprint finish. The race was contested by more than 180 professional riders from all over the world. The race was 295 kilometers long and included a total of 10 climbs on a circuit near Melbourne. Earlier in the year he won Stage 3 in the Tour de France and was 2nd in the one-day classic race Paris-Roubaix. He will be considered a potential winner of many of the spring classics this year.



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# The `clear` Property

- The new “cleared” element (the `<div>` element in this case) added between the second and third paragraphs is now positioned (invisibly, because it has no content associated with it) beneath the second image.
- Because the third image and paragraph follow this cleared element in the markup, they are positioned below it, and the desired layout is achieved.



# Practice Problems

1. Modify the markup and styles for the floating and clearing demo (page 44) to achieve the affect shown on the next page. Do not use absolute positioning, use only floating and clearing to achieve the layout. The markup for the layout shown on page 45 along with the image files are on the course webpage just below the link to this document.





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