CIS 4004: Web Based Information Technology
Spring 2011

Basic Page Layouts – Part 2

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A Two-Column Liquid Layout

- A layout which is designed to fit a smaller screen can look like a postage stamp on a large screen. The solution to this is to create a liquid layout that can change its width to more closely fit the width of any screen.
- This is a user-friendly approach to website design.

A Two-Column Liquid Layout

- To modify the two-column fixed-width layout that we covered in the previous section of notes, we'll need to do only one thing:

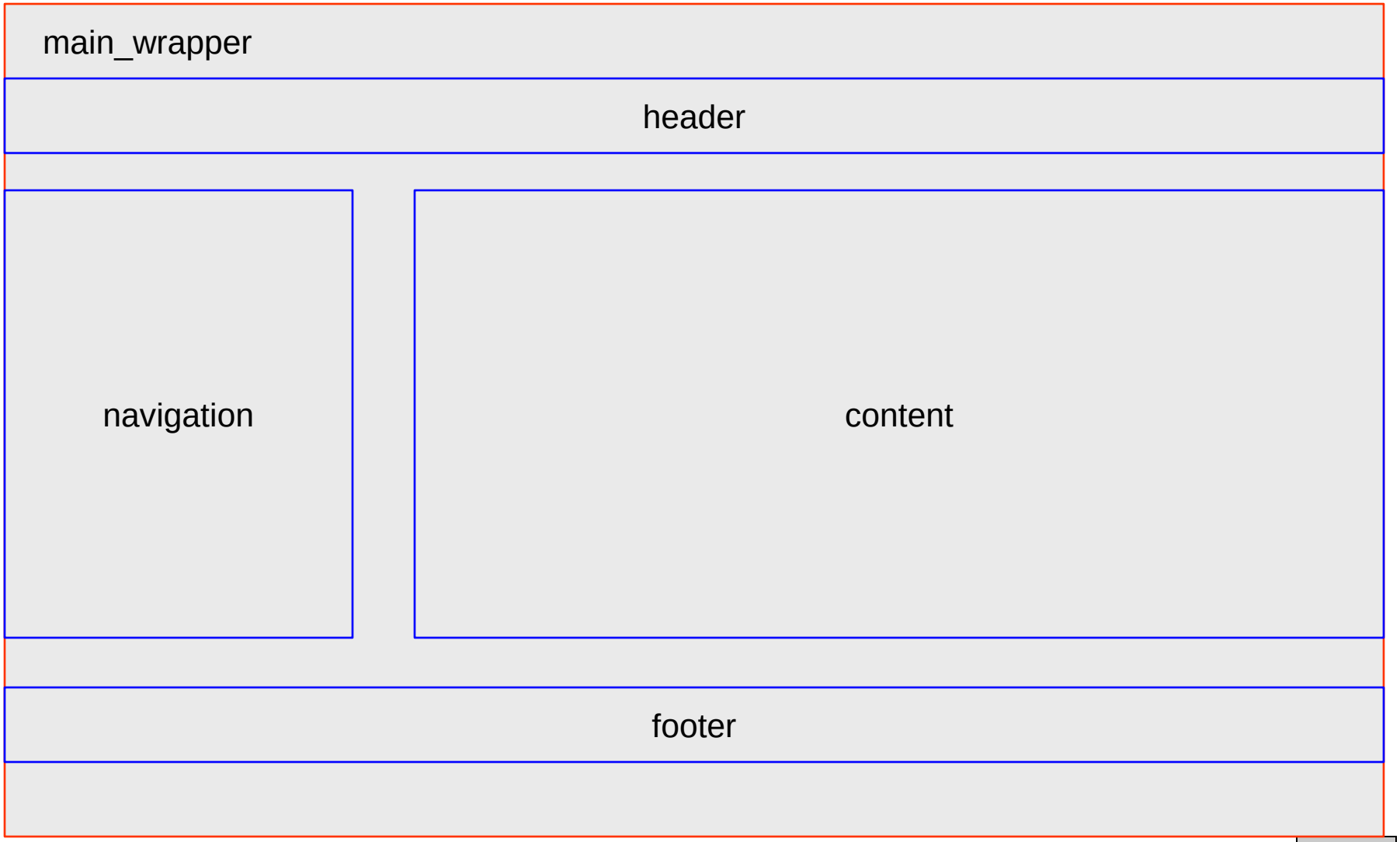
  1. Remove the fixed-width setting on the `main_wrapper` `<div>` element, so the layout's width can change with the browser window's width.

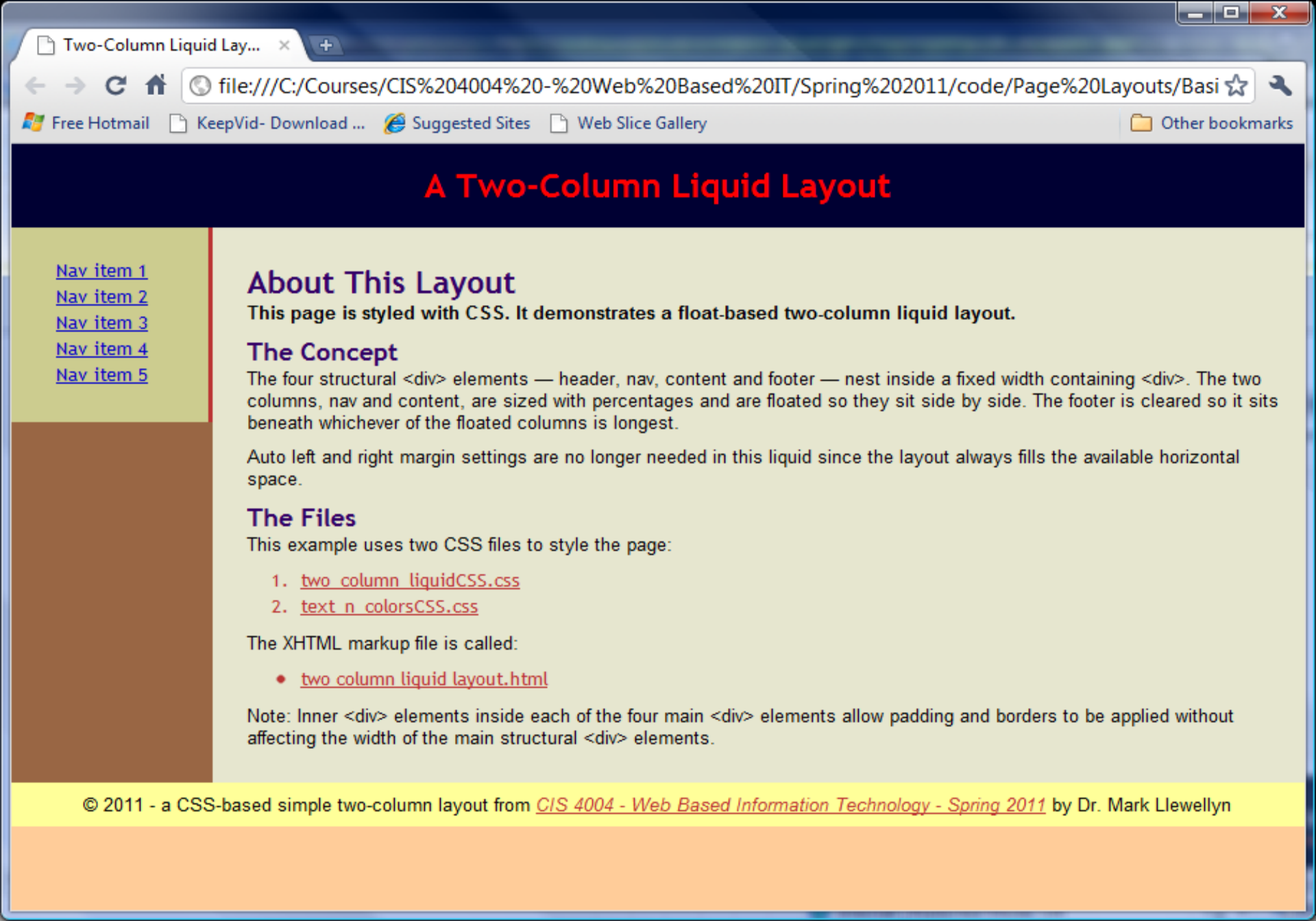
- Creating the liquid layout from the fixed-width layout is that simple! The layout now instantly changes width as the browser window width changes. The now undimensional `main_wrapper` becomes the full width of its parent (the `<body>` element), which is by default the full width of the browser.

A Two-Column Liquid Layout

- Since both columns in the layout are sized in percentages, they now both change size proportionately with any changes in the browser window width, and "liquidness" is obtained.
- Note that the `margin-left:auto;` and `margin-right-auto;` CSS rules do nothing now in the liquid layout (since the layout always fills the available horizontal space in the browser) and can be removed without problems from the stylesheet.
- The next page is a storyboard for the layout and the following page is a browser rendering of the two-column liquid layout.

A Two-Column Liquid Layout

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A Two-Column Liquid Layout
Nav item 1
Nav item 2
Nav item 3
Nav item 4
Nav item 5
About This Layout
This page is styled with CSS. It demonstrates a float-based two-column liquid layout.
The Concept
The four structural elements — header, nav, content and footer — nest inside a fixed width containing . The two columns, nav and content, are sized with percentages and are floated so they sit side by side. The footer is cleared so it sits beneath whichever of the floated columns is longest.
Auto left and right margin settings are no longer needed in this liquid since the layout always fills the available horizontal space.
The Files
This example uses two CSS files to style the page:
1. two_column_liquidCSS.css
2. text_n_colorsCSS.css
The XHTML markup file is called:
two column liquid layout.html
Note: Inner elements inside each of the four main elements allow padding and borders to be applied without affecting the width of the main structural elements.
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two column liquid layout.html | two_column_liquidCSSV1.css | two_column_fixed_width

Two-column fixed-width layout CSS

```
1   /* CSS Stylesheet for Simple Two Column Layout */
2   /* filename: two_column_fixed_widthCSS.css   */
3
4   #main_wrapper {
5         width:840px;  /* widths of columns will change proportionately as this width is changed */
6         margin-left:auto;    /* centers layout in browser */
7         margin-right:auto;  /* centers layout in browser */
8         text-align:left;  /* resets the centering hack for IE6 on the body tag */
9   }
```

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two column liquid layout.html | two_column_liquidCSSV1.css

Two-column liquid layout CSS

```
1   /* TWO COLUMN  LIQUID LAYOUT */
2   /* filename: two_column_liquidCSS.css  */
3
4   /* there are no styles to apply to the main_wrapper in this format */
5   #main_wrapper {
6   }
7
8   #header {
9         text-align: center;
```

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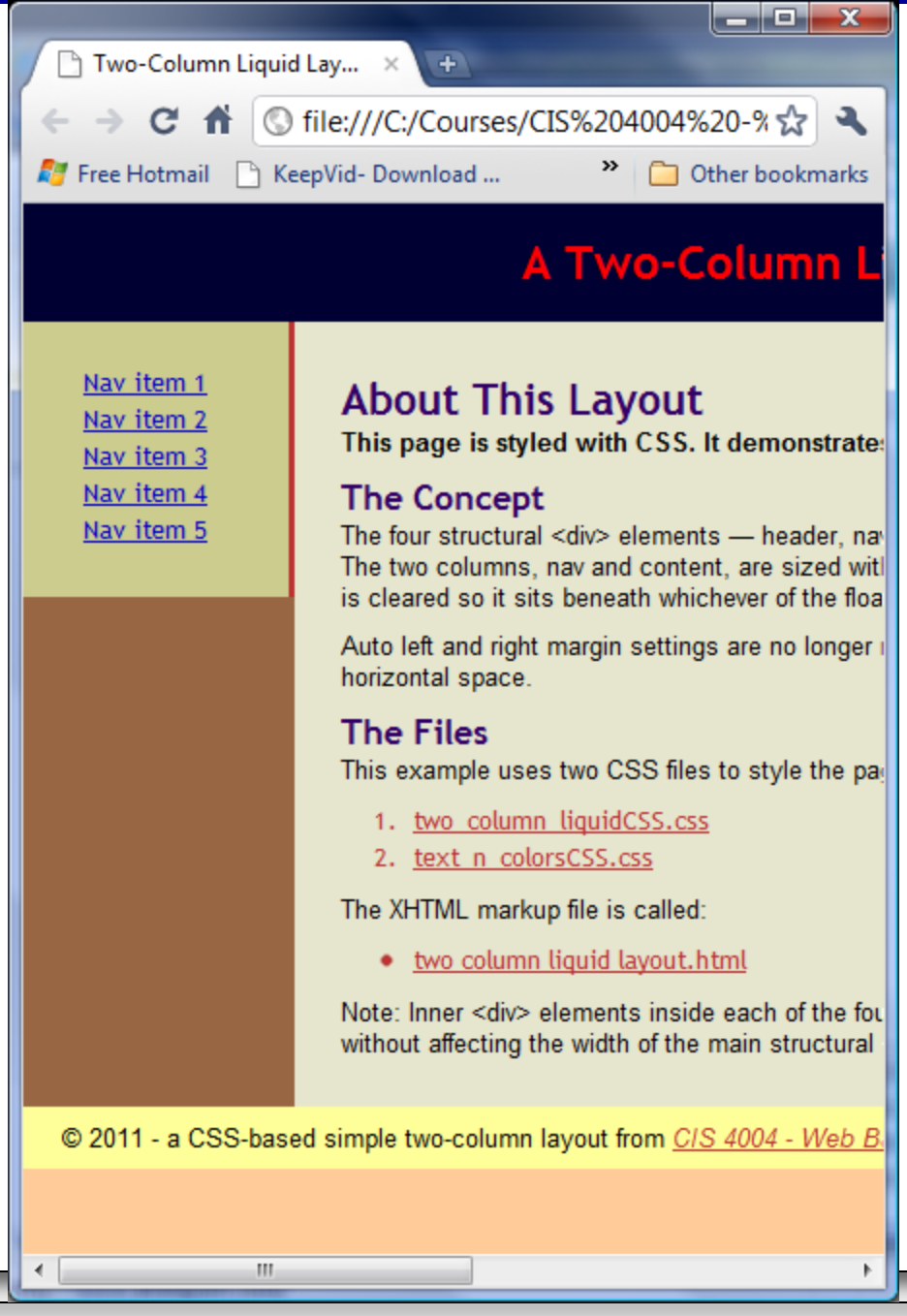
A Two-Column Liquid Layout

- While the modification to our original two-column fixed-width layout to create a two-column liquid layout was quite simple, it never-the-less leaves us with a major user problem as it stands at this point.
- The problem that exists in our layout now is a problem that is often overlooked in many liquid layouts: The browser window dictates the width of the layout.
- This, of course, was basically the effect we were trying to achieve; but what it the user's browser window isn't set to full screen? What will they see?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A Two-Column L
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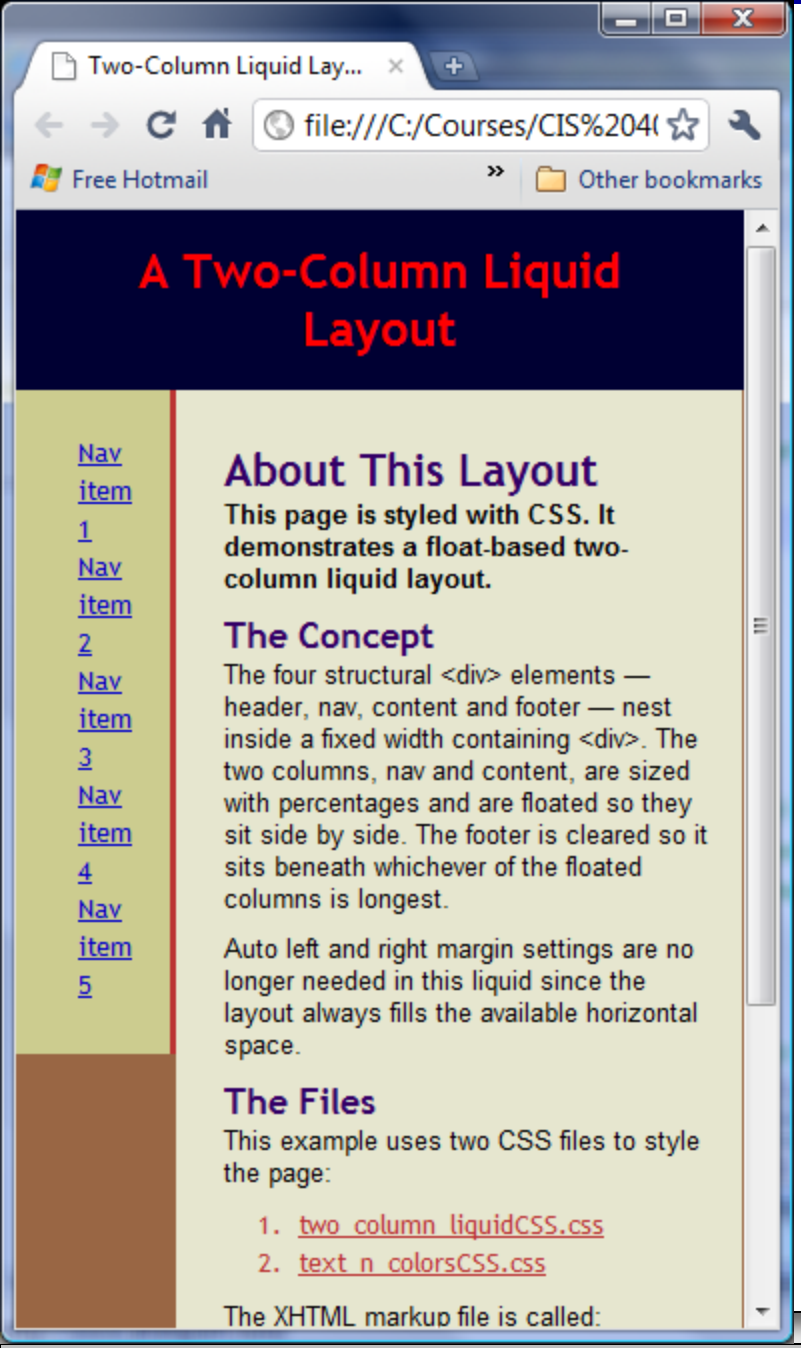
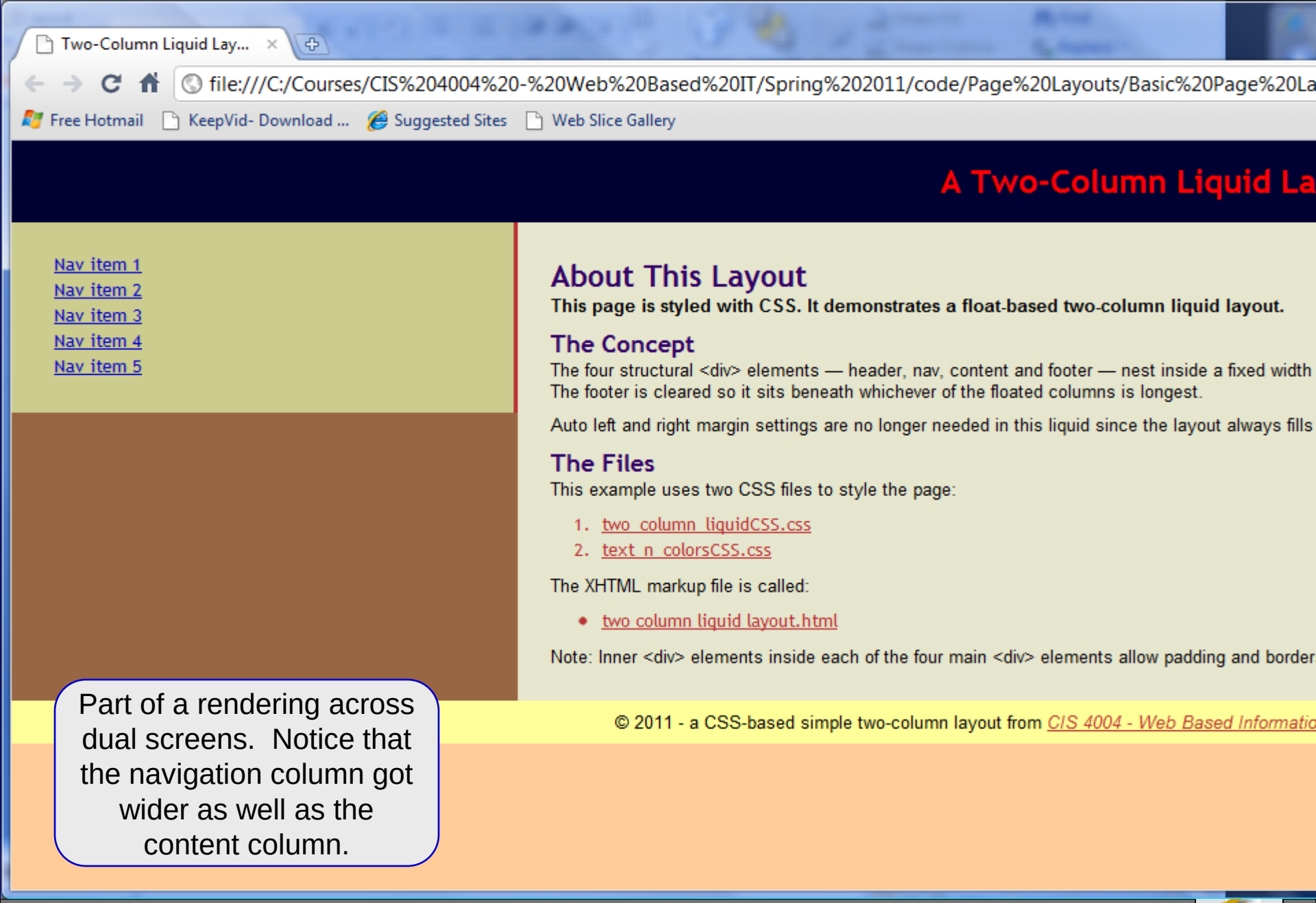


Neither effect is desirable !



Part of a rendering across dual screens. Notice that the navigation column got wider as well as the content column.

A Two-Column Liquid Layout

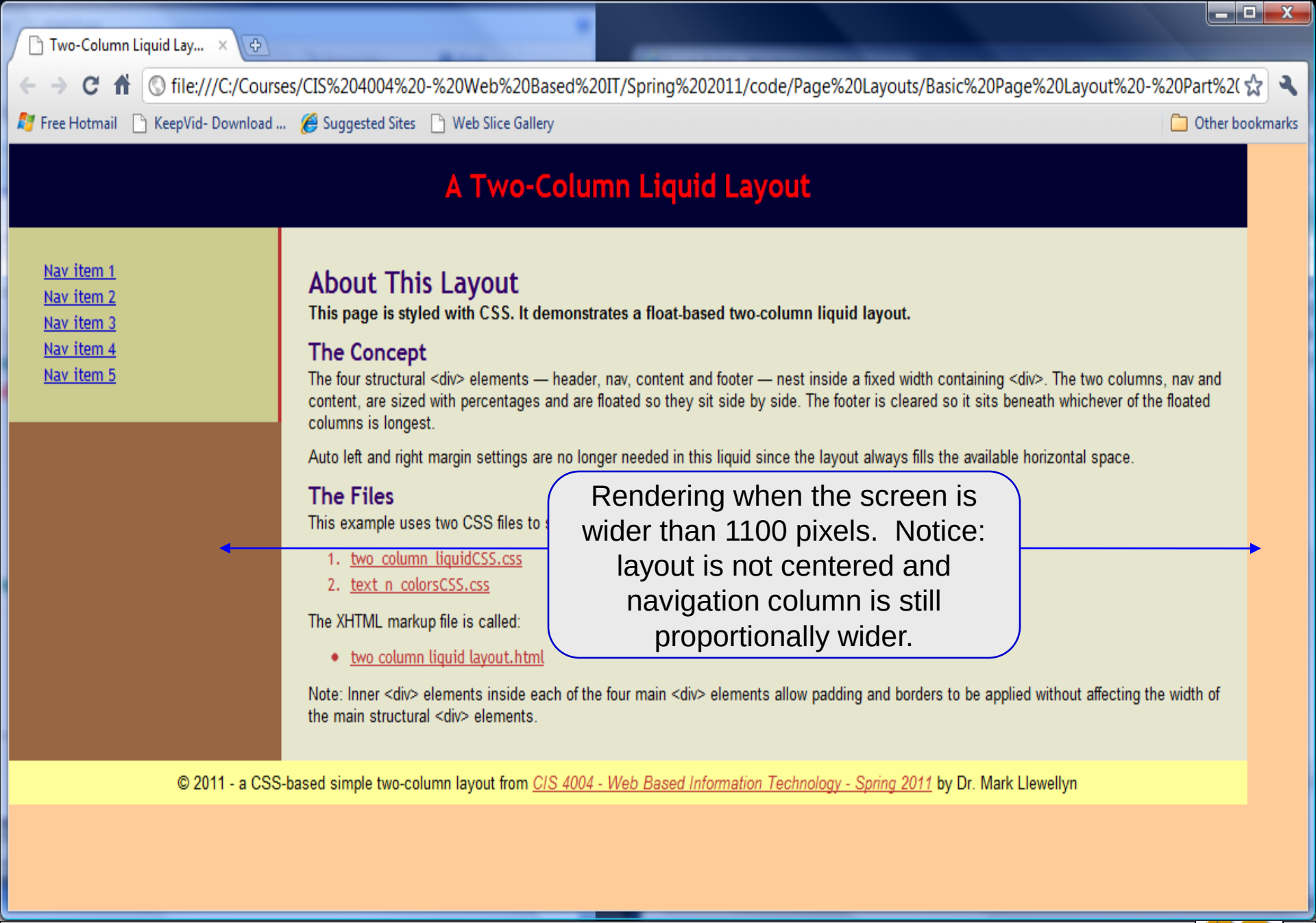
- As the three previous pages illustrate, the liquid layout can get crushed down to a point where the line length of the content is just a word or two.
- Even worse, the page can get so wide on a very large screen (or across two or three screens if you have this sort of setup) that when you read to the end of one incredibly long line, your eye can't find its way back to the start of the next line.
- Also, you'll usually only want the content column to change width, not the navigation column.
- We need to refine our design to fix these issues.

Modifying The Two-Column Liquid Layout

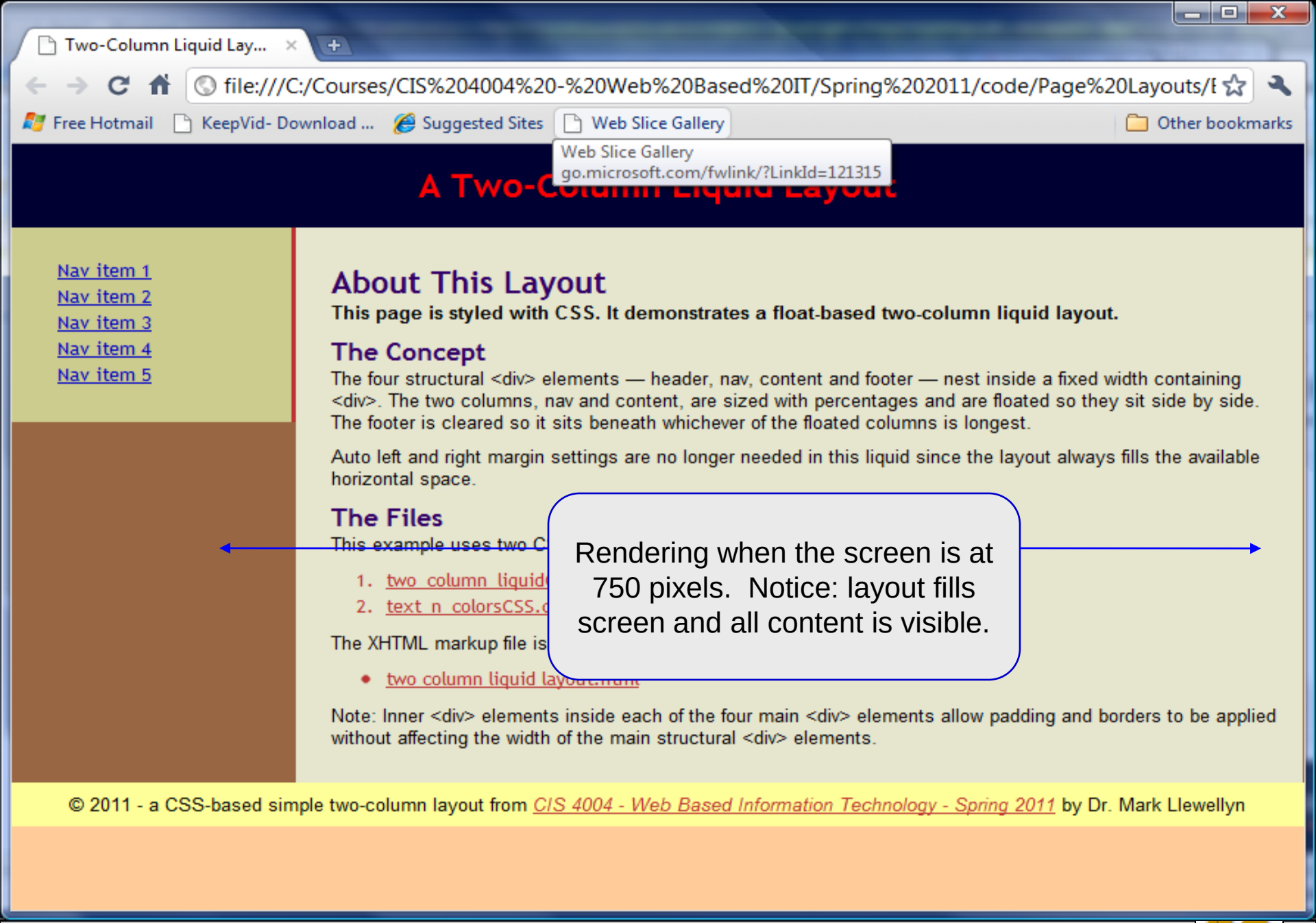
- The CSS properties `max-width` and `min-width` do exactly as their names suggest and allow you to set how large or small respectively an element can become.
- By adding these properties to the main_wrapper, we can constrain the page to only be liquid between a certain range of values.
- Doing something like this:

```
min-width: 750px;  max-width:1100px;
```

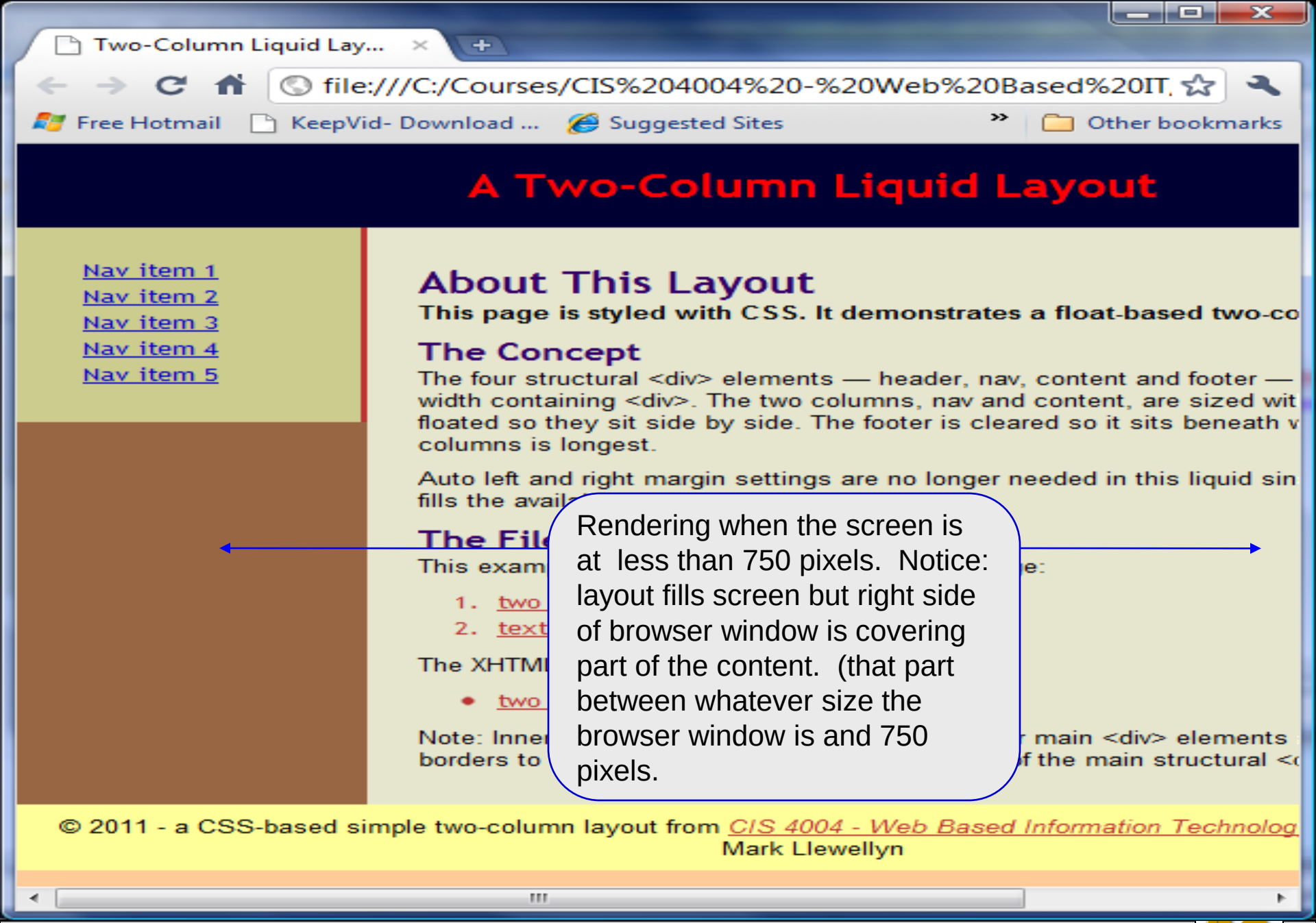
we're stating that the layout can have a minimum width of 750 pixels and a maximum width of 1100 pixels.



Rendering when the screen is wider than 1100 pixels. Notice: layout is not centered and navigation column is still proportionally wider.



Rendering when the screen is at 750 pixels. Notice: layout fills screen and all content is visible.



Rendering when the screen is at less than 750 pixels. Notice: layout fills screen but right side of browser window is covering part of the content. (that part between whatever size the browser window is and 750 pixels.

Modifying The Two-Column Liquid Layout

- While we've fixed the overall width problem using the `min-width` and `max-width` properties, we still have the problem that the navigation column is still proportional in size to the main content column.
- A couple more quick changes to the CSS will ensure that only the content column changes width.
- Both the navigation and content columns need a slight modification as shown on the next page:

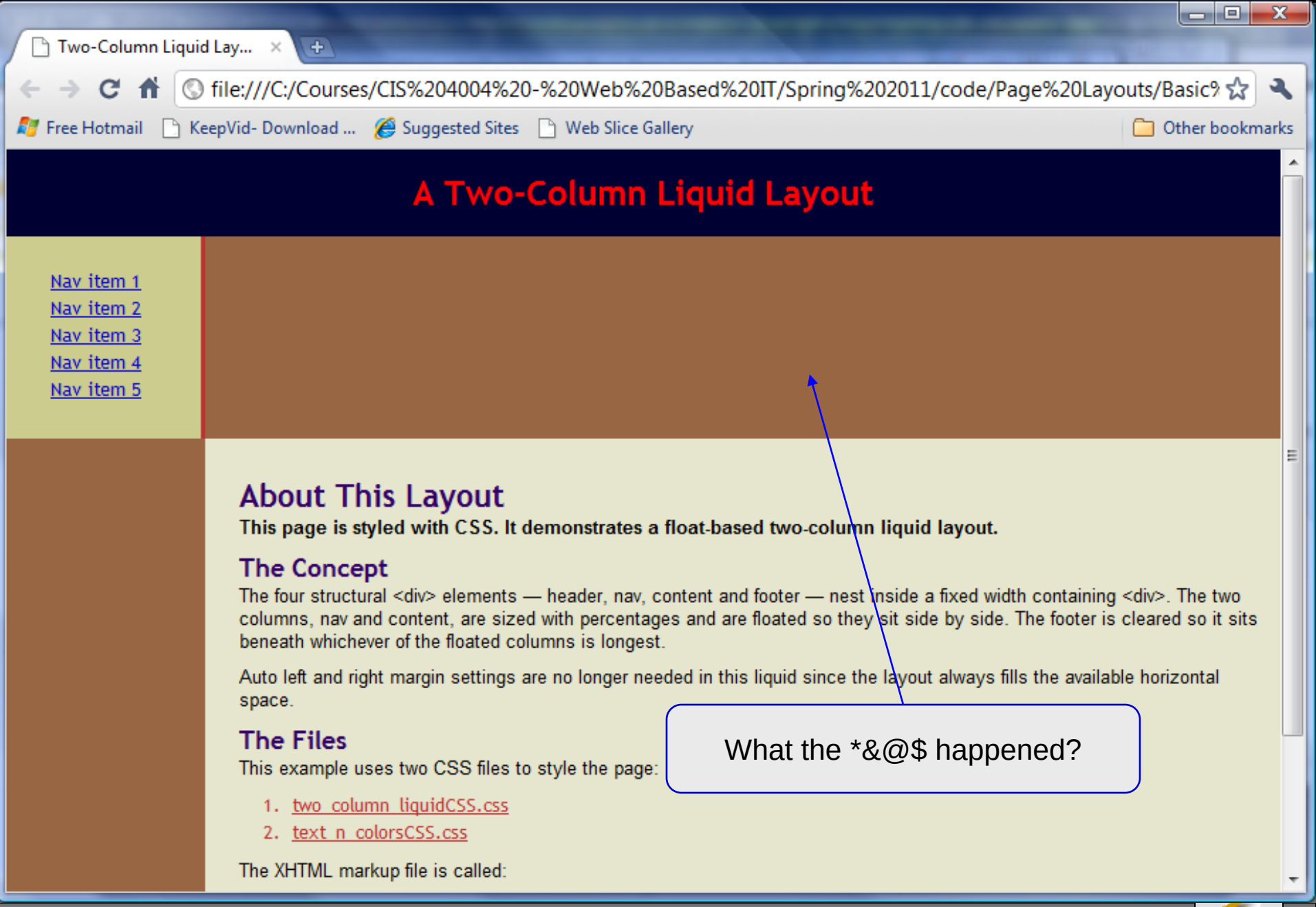
Modifying The Two-Column Liquid Layout

```
#nav { width:22%;  /*remove this style */
       width: 140px; /* add this style */
       float:left;
}

#content {
       top:0px;
       float: left;
       width: 78%;   /* remove this style */
       margin-left:140px; /* add this style */
}
```

Modifying The Two-Column Liquid Layout

- Since we have now fixed the width of the navigation column, then the only useable value for the content column, if it is to remain liquid, is `auto`, which means as wide as the containing element – in this case `main_wrapper`.
- Because `auto` is the default width, we don't need to state it in our CSS (although some people like to explicitly list it in the CSS).
- Since the content column is now set to full width, we need to leave space for the navigation column, so we add a 140 pixel left-margin to the content column to create a visual space for the navigation column.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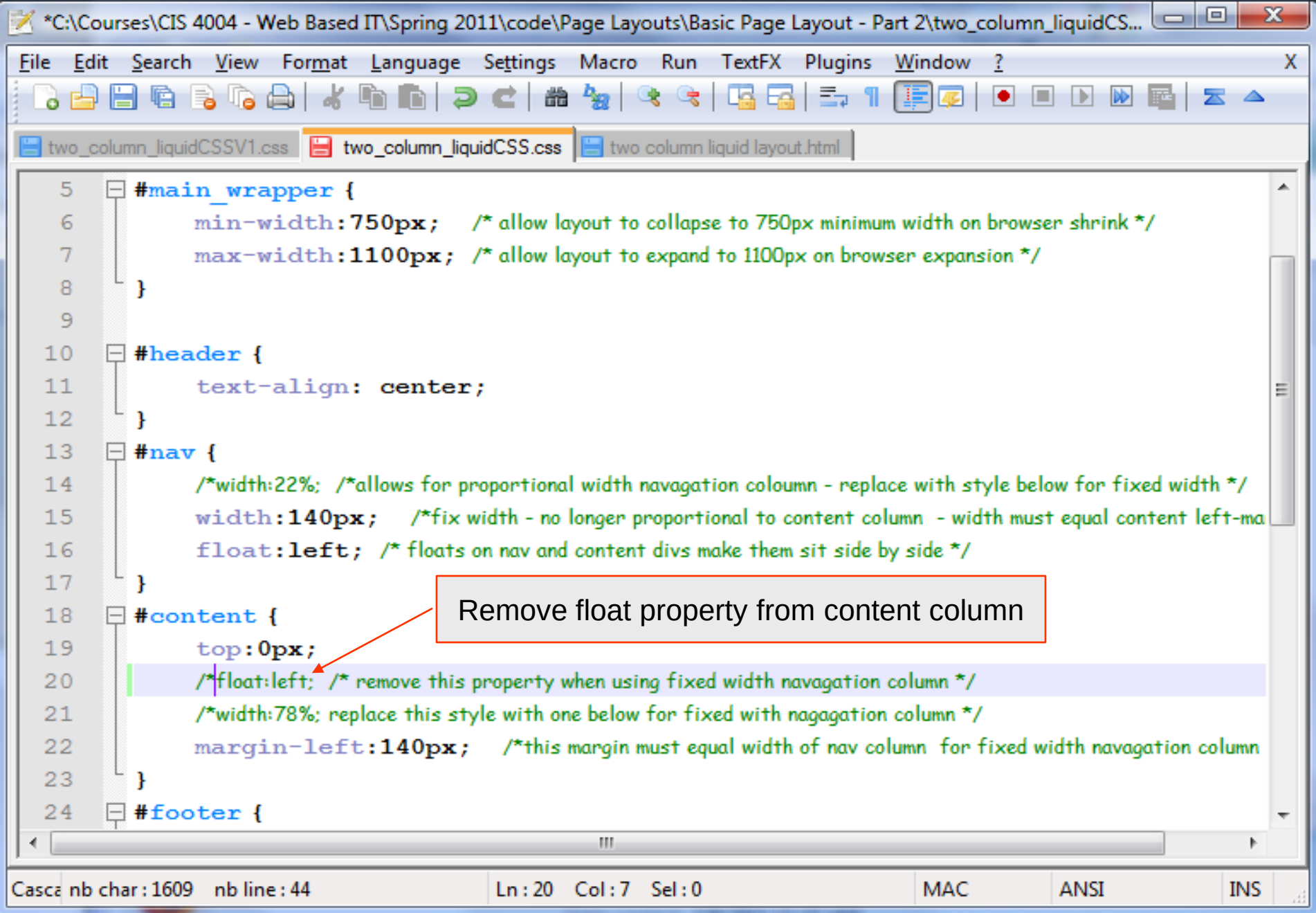
2. text_n_colorsCSS.css
The XHTML markup file is called:
What the *&@$ happened?

Modifying The Two-Column Liquid Layout

- Since the content column is now, by default, full width, the explicit setting of the navigation column width means that the floated content column no longer has room to sit next to the navigation column and its floated position will be on the page below the navigation column.
- The content column cannot float any higher up, because it is now full-width and the earlier-in-the-markup navigation column gets dibs on the upper left corner.
- What we need to do is unfloat the content column, which will return it to normal flow and it will sit up in the top-left corner of the page. The navigation column then floats up, also into the top-left corner, over the content divs empty left margin.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two_column_liquidCSSV1.css
two_column_liquidCSS.css
two column liquid layout.html
5 #main_wrapper {
6 min-width:750px; /* allow layout to collapse to 750px minimum width on browser shrink */
7 max-width:1100px; /* allow layout to expand to 1100px on browser expansion */
8 }
9
10 #header {
11 text-align: center;
12 }
13 #nav {
14 /*width:22%; /*allows for proportional width navagation coloumn - replace with style below for fixed width */
15 width:140px; /*fix width - no longer proportional to content column - width must equal content left-ma
16 float:left; /* floats on nav and content divs make them sit side by side */
17 }
18 #content {
19 top:0px;
20 /*float:left; /* remove this property when using fixed width navagation column */
21 /*width:78%; replace this style with one below for fixed with nagagation column */
22 margin-left:140px; /*this margin must equal width of nav column for fixed width navagation column
23 }
24 #footer {
Remove float property from content column
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Modifying The Two-Column Liquid Layout

- This might seem a little difficult to understand, but what we've done is position both elements (the navigation and the content columns) with their top-left corners in the top-left corner of the containing element, `body`.
- The floated navigation column is not in the normal flow, since it is floated, so it sits up as high and as far to the left as it can within its containing element. The content column `<div>` is now the first element in the normal flow, so it also moves into the top-left position.
- Its only the left margin on the content column that pushes it away from this position and prevents it from being underneath the navigation column. To see this effect, temporarily remove the left margin on the content column – see next page.

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Shown with left-margin:140px; property of #content removed.
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