

# Web Development

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Produced  
by

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# Multicolumn Page Layout

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Web Development

# Agenda

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- The DOM, HTML Parsing & Rendering
- Formatting concepts in CSS
- A simple, worked example of multicolumn layout
- A worked example of a “tabbed” multicolumn layout

# Parsing & Rendering

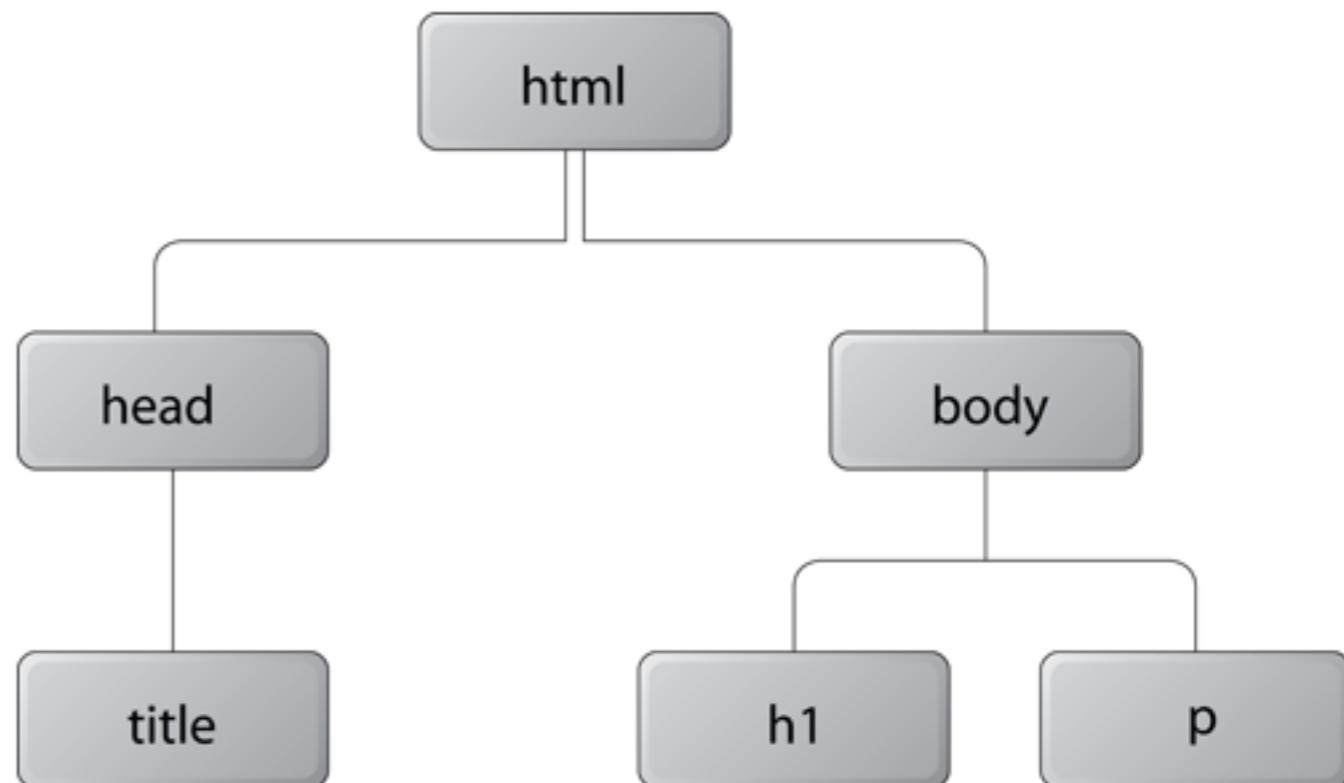
---

- A web browser typically reads and renders HTML documents in two phases:
  - the parsing phase
  - the rendering phase.
- During the parsing phase, the browser reads the markup in the document, breaks it down into components, and builds a Document Object Model (DOM) tree.
- The DOM is a in-memory data structure, typically traversed by Java Script code

# DOM Tree

- Each object in the DOM tree is called a node.
- There are several types of nodes, including element nodes and text nodes.
- At the top of the tree is a document node, which contains an element node called the root node; this is always the html element in HTML documents.
- It branches into two child element nodes—head and body—which then branch into other children.

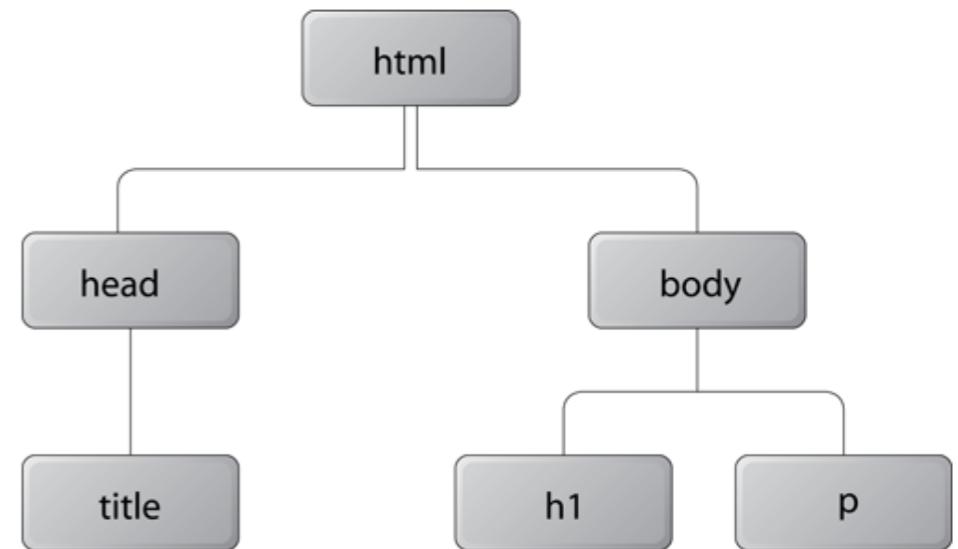
```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN"  
      "http://www.w3.org/TR/html4/strict.dtd">  
<html>  
  <head>  
    <title>Widgets</title>  
  </head>  
  <body>  
    <h1>Widgets</h1>  
    <p>Welcome to Widgets, the number one company  
       in the world for selling widgets!</p>  
  </body>  
</html>
```



# Parents, Grandparents, Children, Grandchildren

---

## Siblings



- A child node is structurally subordinate to its parent node - the child's tags are nested inside the tags of the parent.
- A node can be called a descendant node if it's a child, grandchild, and so on, of another node.
- A node can be called an ancestor node if it's a parent, grandparent, and so on, of another node.
- Nodes that have the same parent are called *siblings*. .

# Block & Inline

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- When the DOM tree has been constructed, and any CSS style sheets have been loaded and parsed, the browser starts the rendering phase.
- Each node in the DOM tree will be rendered as zero or more boxes.
- A box is always rectangular, it has four sides with a 90° angle between each side.
- HTML Elements are either block-level or inline-level.
  - block-level HTML elements generate block boxes,
  - while inline-level HTML elements generate inline boxes.
- The separation into block-level and inline elements in HTML is specified in the HTML document type definition

# CSS Box Model

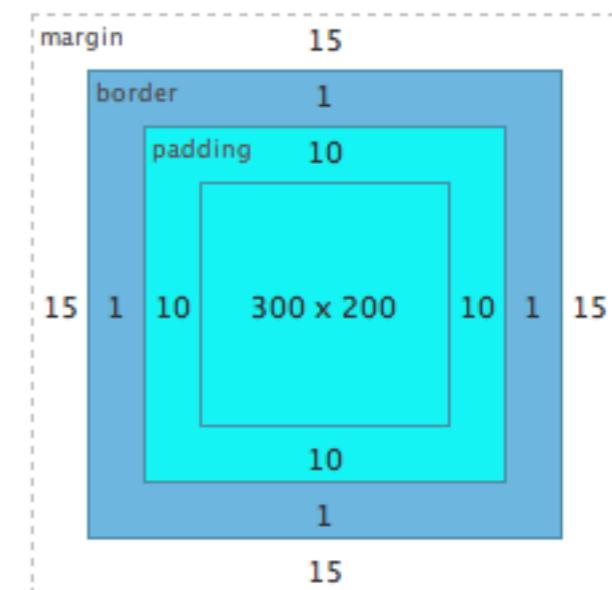
---

- The box model is the central mechanism for determining how an element is positioned on a web page.
- Some key concepts:
  - Box Structure
  - Calculating Box Dimensions
  - The Containing Block
  - Collapsing Margins

# Box Structure

- The content area in the center, the padding around the content area, the border area, and the margin area.
- The outer edge of the content area is called the content edge or inner edge; the outer edge of the padding area is called the padding edge; the outer edge of the border area is called the border edge; and the outer edge of the margin area is called the margin edge or outer edge

```
.box
{
    width: 300px;
    height: 200px;
    padding: 10px;
    border: 1px solid #000;
    margin: 15px;
}
```



# Calculating Box Dimensions

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- Block-level elements can only be rectangular.
- Calculate the overall dimensions of a block-level element by taking into account the height and width of the content area, as well as any margins, padding, and borders that are applied to the element.
- Define the content width of an element by declaring its [width](#) and [height](#) properties. If no declarations are applied, the default value for the width and height properties is auto.

# The Containing Block

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- CSS rendering comprises the tasks of laying out and rendering numerous boxes. Element boxes are positioned within a formatting context, which, by default, is provided by the box generated by a parent element.
- When we specify the positions or dimensions of element boxes, we're doing so relative to what's known as the containing block, which is a very important concept in CSS layout.
- The containing block for the root element is called the initial containing block, and has the same dimensions as the [viewport](#) - generally the browser window
- The containing block for other elements is generally the immediate parent

# Collapsing Margins

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- When the vertical margins of two elements are touching, only the margin of the element with the largest margin value will be honored, while the margin of the element with the smaller margin value will be collapsed to zero
- In this example, the gap between the elements is only 25px, and the smaller margin has collapsed to zero
- Exceptions to this rule:
  - floated elements
  - absolutely positioned elements
  - 4 other special cases....

```
h1 { margin: 0 0 25px 0; background: #cfc; } p { margin: 20px 0 0 0; background: #cf9; }
```



# Formatting Concepts

---

- Layout Rules
  - Block Formatting
  - Inline Formatting
  - List Formatting
  - Table Formatting
  - Replaced Elements
- Positioning Rules
  - Relative Positioning
  - Absolute Positioning
  - Fixed Positioning
  - Stacking Contexts
  - Floating & Clearing

# Liquid Layout vs Fixed Layout

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- Liquid Layout:
  - All containers on the page have their widths defined in percents.
  - A liquid layout will move in and out when you resize your browser window.
- Fixed Layout:
  - All containers on the page have their widths defined in pixels or other fixed units
  - A fixed layout will not move in and out when you resize your browser window.

# References (1)



maxdesign

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## Liquid layouts the easy way

Date: 30 December 2003  
Author: [Russ Weakley](#)

This article explains one method of achieving a successful liquid layout as well as providing basic definitions of liquid, fixed-width and em-driven layouts.

### Some definitions

#### Liquid layout

All containers on the page have their widths defined in percents – meaning that they are completely based on the [viewport](#) rather than the initial [containing block](#). A liquid layout will move in and out when you resize your browser window.

▶ [Liquid layout example](#)

#### Combination liquid and fixed layouts

Similar to liquid layouts, except one or more of the containers on the page have fixed widths.

▶ [Liquid/fixed layout example](#)

#### Fixed-width layouts

All containers on the page have their widths defined in pixels or other fixed units. They are completely independent of the viewport. A fixed layout will not move in and out when you resize your browser window.

<http://www.maxdesign.com.au/articles/liquid/>

# References (2)

▼ CSS Layout and Formatting	
The Viewport, the Page Box, and the Canvas	
▼ The CSS Box Model	
Containing Block	
Collapsing Margins	
The Internet Explorer 5 Box Model	
The Internet Explorer hasLayout Property	
▼ Formatting Concepts	
Block Formatting	
Inline Formatting	
List Formatting	
Table Formatting	
Replaced Elements	
▼ Positioning	
Relative Positioning	
Absolute Positioning	
Fixed Positioning	
Stacking Contexts	
Floating and Clearing	
The Relationship Between display, position, and float	

## Floating and Clearing

A floated element is one whose `float` property has a value other than `none`. The element can be shifted to the left (using the value `left`) or to the right (using the value `right`); non-floated content will flow along the side opposite the specified float direction.<sup>1</sup>

The floated box is shifted to the left or right until its margin edge touches the padding edge of the containing block, or the margin edge of another floated element. If the floated element is within a line box, the top of the floated box is aligned with the top of the line box. If there isn't enough horizontal room left for non-floated content to flow alongside the floated box on the current line, it's shifted down until it fits, or there are no more floated elements.



### Defining the Margin Edge

The **margin edge** of a box surrounds the margin of the box. If the box has no margins, the margin edge is the same as the border edge. See [The CSS Box Model](#) for more information.

A floated box is taken out of the flow, so it doesn't affect the block-level boxes around it. Line boxes located next to a floated box, however, are shortened to make room for the float. A containing block will not expand to accommodate a floating child box, unless the containing block is also floating, or has its `overflow` property set to something other than `visible`.<sup>2</sup>

[Figure 1](#) shows a schematic view of the following HTML fragment, in which the image is floated to the left:

# Multi-Column Layout - A Worked Example

## **Lorem ipsum dolor sit**

*...lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus.*

Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.

Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.

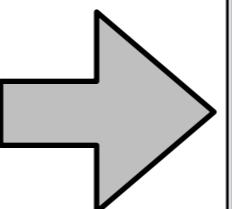
Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.

Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus.

Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero.

- Mauris
  - Cras
  - Proin
  - Integer
  - Curabitur
  - Integer
  - Suspendisse
  - Quisque

Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.



## **Lorem ipsum dolor sit**

- Mauris
  - Cras
  - Proin
  - Integer
  - Curabitur
  - Integer
  - Suspendisse
  - Quisque

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus.

Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.

Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi

Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.

Vestibulum interdum  
aliquet lacus.  
Vestibulum egestas.  
Fusce adipiscing quam  
sed metus.

Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero.

Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.

# Content

---

- 1 

#

- 6 

's

- 1

- 1

```
...
<body>
  <h1>
    Lorem ipsum dolor sit
  </h1>
  <p>
    Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed feugiat nisi
    at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis
    sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet
    neque, non pellentesque mauris turpis eu purus.
  </p>
  <p>
    Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla
    fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus
    pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis
    adipiscing diam at enim. Vestibulum nibh.
  </p>
  <p>
    Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet
    massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices.
    Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros.
    Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in
    elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit
    amet, semper ut, felis. Praesent nisi.
  </p>
  <p>
    Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at,
    euismod sit amet, porttitor ac, mauris.
  </p>
  <p>
    Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing
    quam sed metus.
  </p>
  <p>
    Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar
    sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae
    libero.
  </p>
  <ul>
    <li>Mauris</li>
    <li>Cras</li>
    <li>Proin</li>
    <li>Integer</li>
    <li>Curabitur</li>
    <li>Integer</li>
    <li>Suspendisse</li>
    <li>Quisque</li>
  </ul>
  <p>
    Proin quis orci eu erat molestie varius. Praesent condimentum
    orci in lectus. Ut ipsum. In hac habitasse platea dictumst.
  </p>
</body>
...
```

# Content

- header
  - maincontent
    - primary
    - second
  - navigation
  - footer
- 
- ```
...<body><h1>Lorem ipsum dolor sit</h1><p>Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus.</p><p>Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.</p><p>Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.</p><p>Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.</p><p>Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus.</p><p>Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero.</p><ul><li>Mauris</li><li>Cras</li><li>Proin</li><li>Integer</li><li>Curabitur</li><li>Integer</li><li>Suspendisse</li><li>Quisque</li></ul><p>Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.</p>
```

# Target

- The diagram illustrates a website's layout structure with the following components:

  - header**: Points to the top section containing the title "Lorem ipsum dolor sit".
  - maincontent**: Points to the main content area, which is divided into three columns:
    - primary**: Points to the first column containing a bulleted list of navigation items.
    - secondary**: Points to the second column containing a block of placeholder text.
    - navigation**: Points to the third column containing a block of placeholder text.
  - navigation**: Points to the bottom section containing a block of placeholder text.
  - footer**: Points to the very bottom section containing a block of placeholder text.

The layout is defined by a vertical blue line on the left and a horizontal dashed line across the top, creating a header, main content, and footer area. The main content area is further divided into three columns by vertical dashed lines.

# DIVs (1)

```
<div id="header">
  <h1>
    Lorem ipsum dolor sit
  </h1>
</div>
```

- header
- maincontent
  - primary
  - second

```
<div id="maincontent">
  <div id="primary">
    <p>
      Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus.
    </p>
    <p>
      Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.
    </p>
    <p>
      Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.
    </p>
  </div>
  <div id="secondary">
    <p>
      Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.
    </p>
    <p>
      Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus.
    </p>
    <p>
      Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero.
    </p>
  </div>
</div>
```

# Divs (2)

---

- navigation
- footer

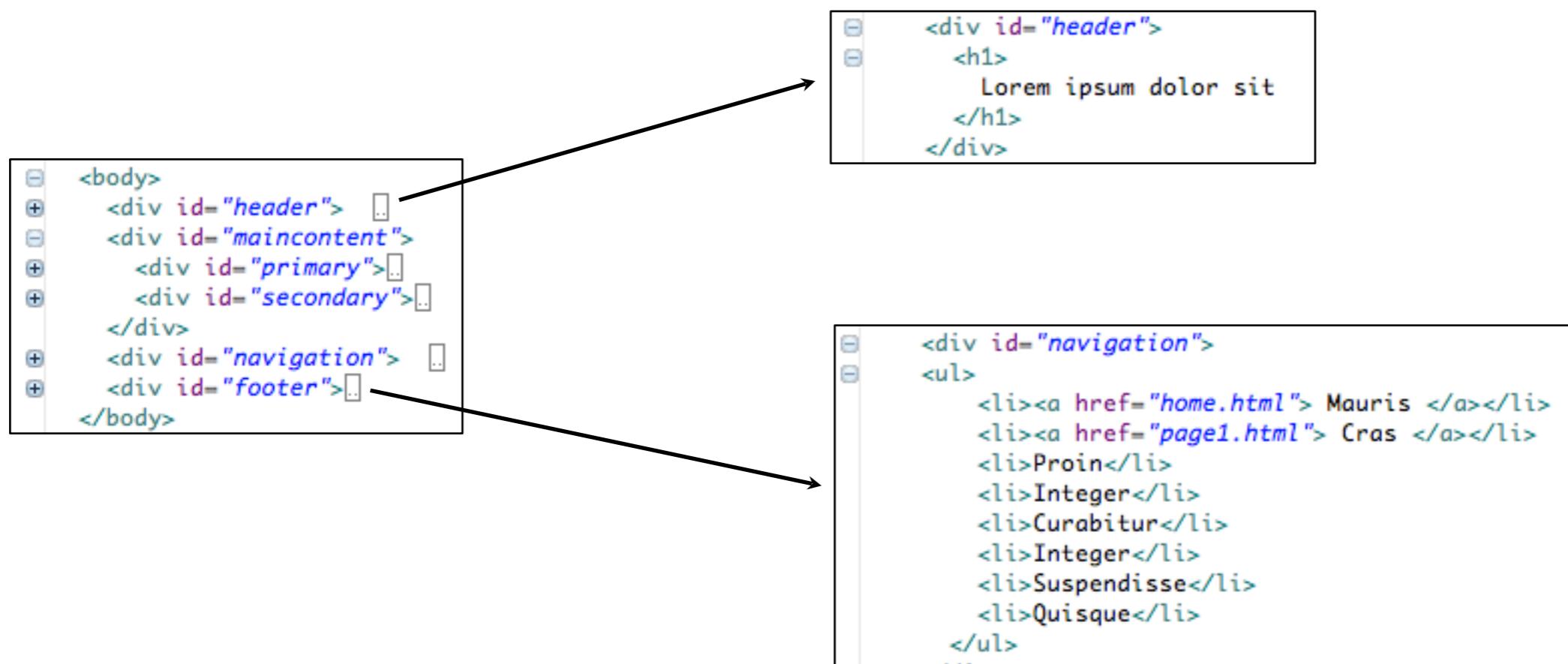
```
<div id="navigation">
  <ul>
    <li><a href="home.html"> Mauris </a></li>
    <li><a href="page1.html"> Cras </a></li>
    <li>Proin</li>
    <li>Integer</li>
    <li>Curabitur</li>
    <li>Integer</li>
    <li>Suspendisse</li>
    <li>Quisque</li>
  </ul>
</div>
```

```
<div id="footer">
  <p>
    Proin quis orci eu erat molestie varius. Praesent condimentum
    orci in lectus. Ut ipsum. In hac habitasse platea dictumst.
  </p>
</div>
```

# Eclipse Folding View

---

- Eclipse Folding editor can “Expand all” or “Collapse all” of the elements, facilitating a precise focus on the elements under consideration.



# Stylesheet

---

```
<link type="text/css" rel="stylesheet" href="home.css" media="screen" />
```

- Width of body to be 80% of “containing element” (the browser window)

```
body
{
    width: 80%;
    margin: 0 auto;
}
```

- No top/bottom margin for the page

shortcut for...

- “auto” for left and right
  - i.e. the margins to be proportional to the container width and equal in size.

```
body
{
    width: 80%;
    margin-top: 0;
    margin-bottom: 0;
    margin-left: auto;
    margin-right: auto;
}
```

# **Lorem ipsum dolor sit**

Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.

Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.

Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.

Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus.

Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero.

- Mauris
  - Cras
  - Proin
  - Integer
  - Curabitur
  - Integer
  - Suspendisse
  - Quisque

Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.

```
body
{
    width: 80%;
    margin: 0 auto;
}
```

- Entire page  
is  
positioned  
centered  
within the  
browser

# Float

```
#maincontent
```

```
{  
    width: 80%;  
    float: right;  
}
```

- Width of maincontent is to be 80% of it's container , which in turn is 80% of its container.
- Maincontent is a “floated” box shifted to the right until its margin edge touches the padding edge of the containing block (or the margin edge of another floated element).

The screenshot shows a web browser window with the URL `file:///Users/edeleastar/perforce/modo/edeleastar/CourseWare/2010/webdevelopment/course/src/workspace/Lab12/`. The page title is **Lorem ipsum dolor sit**. On the left, there is a sidebar with a list of bullet points:

- Mauris
- Cras
- Proin
- Integer
- Curabitur
- Integer
- Suspendisse
- Quisque

Below this list, there is some placeholder text (Lorem ipsum) and a paragraph starting with "Proin quis orci eu". To the right of the sidebar, the main content area contains several paragraphs of placeholder text, demonstrating the effect of floating the sidebar to the left.

# Show Borders (temporarily)

```
#maincontent
{
    width: 80%;
    float: right;
    border: dashed thin;
}
```

The screenshot shows a web browser window with the URL `file:///Users/edeleastar/perforce/modo/edeleastar/CourseWare/2010/webdevelopment/course/src/workspace/Lab12/`. The page contains the following content:

## **Lorem ipsum dolor sit**

- Mauris
- Cras
- Proin
- Integer
- Curabitur
- Integer
- Suspendisse
- Quisque

Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.

Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.

Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.

Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus.

Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero.

- Show a dashed border around the `maincontent` to better understand the layout behaviour

# Navigation - take 1

```
#navigation
{
    width: 20%;
    float: left;
    border: dashed thin;
}
```

The screenshot shows a web page with a navigation bar on the left and main content on the right. The navigation bar has a dashed border and is set to 20% width and float-left. The main content area contains several paragraphs of placeholder text (Lorem ipsum dolor sit) and a bulleted list.

**Navigation**

```
#navigation
{
    width: 20%;
    float: left;
    border: dashed thin;
}
```

**Main Content**

Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.

Proin quis orci eu erat molestie varius. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus.

Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.

Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.

Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.

Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus.

Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero.

• Mauris  
• Cras  
• Proin  
• Integer  
• Curabitur

- Resize the navigation to be 20% of container
- Float left
- However, as width does not include padding & margins, this is too wide to fit on “row” with maincontent, so “flows” below it

# Navigation - take 2

```
#navigation
{
    width: 18%;
    float: left;
    border: dashed thin;
}
```

The screenshot shows a web browser window with the URL `file:///Users/edeleastar/perforce/modo/edeleastar/CourseWare/2010/webdevelopment/course/src/workspace/Lab12/`. The page has a header with the title "Lorem ipsum dolor sit". Below the header is a navigation menu with the following items:

- Mauris
- Cras
- Proin
- Integer
- Curabitur
- Integer
- Suspendisse
- Quisque

The main content area contains several paragraphs of placeholder text (Lorem ipsum) and some descriptive text about the navigation bar's width and float properties.

Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.

Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.

Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.

Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus.

Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero.

- Reset width to 18% - now enough room for navigation & maincontent

# Header & Footer

```
#header
{
    width: 100%;
    border: dashed thin;
}

#footer
{
    width: 100%;
    border: dashed thin;
}
```

The screenshot shows a web page with a header and footer. The header contains the text "Lorem ipsum dolor sit". The footer contains a bulleted list and some placeholder text. Arrows point from the bulleted list and the placeholder text to the corresponding CSS rules in the code block above.

**Header & Footer to be 100% of the container**

**Anomalies arise - footer (the text on the left) seem misplaced.**

**These borders seem confused**

```
file:///Users/edeleastar/perforce/modo/edeleastar/CourseWare/2010/webdevelopment/course/src/workspace/Lab12/
```

**Header & Footer to be 100% of the container**

**Anomalies arise - footer (the text on the left) seem misplaced.**

**These borders seem confused**

- Header & Footer to be 100% of the container
- Anomalies arise - footer (the text on the left) seem misplaced.
- These borders seem confused

# Clear

---

- “clear” forces an element to start below any floated elements
- An element whose clear property is set to “left” will start below all left-floated boxes in the same block formatting context
- A clear value of “right” will clear all right-floated boxes.
- If clear is set to “both”, the element will start below any floated box in that context

# Footer:clear

```
#footer
{
    width: 100%;
    clear: both;
    border: dashed thin;
}
```

The diagram illustrates the effect of the CSS rule `#footer { width: 100%; clear: both; border: dashed thin; }`. A black arrow points from the rule to a screenshot of a web browser window.

The browser window shows a page with a header containing the text "Lorem ipsum dolor sit". Below the header, there are several content blocks separated by horizontal dashed lines:

- A list of bullet points:
  - Mauris
  - Cras
  - Proin
  - Integer
  - Curabitur
  - Integer
  - Suspendisse
  - Quisque
- A paragraph of text: "Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus."
- A paragraph of text: "Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh."
- A paragraph of text: "Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi."
- A paragraph of text: "Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris."
- A paragraph of text: "Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus."
- A paragraph of text: "Nullam dignissim aliquam dui. Proin laoreet, elit sed pulvinar sollicitudin, urna arcu fermentum felis, in rhoncus nunc neque vitae libero."
- A final paragraph at the bottom: "Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst."

# Pattern Matching Selectors

```
body
{
    width: 80%;
    margin: 0 auto;
}

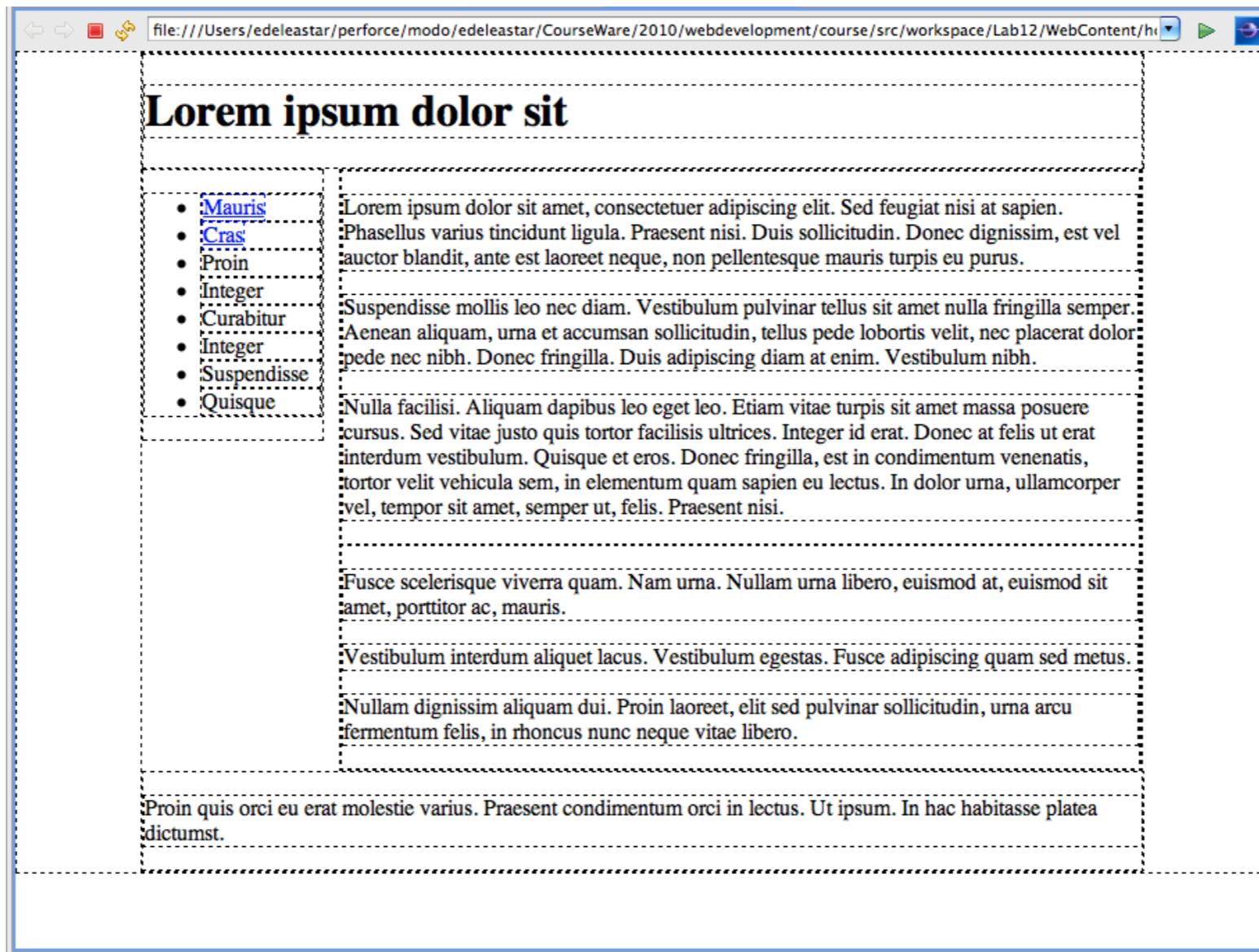
#maincontent
{
    width: 80%;
    float: right;
    border: dashed thin;
}

#navigation
{
    width: 18%;
    float: left;
    border: dashed thin;
}

#header
{
    width: 100%;
    border: dashed thin;
}

#footer
{
    width: 100%;
    clear: both;
    border: dashed thin;
}
```

- “\*” matches all elements.
- Simplifies CSS, and can be removed when layout under control



```
* {
    border: dashed thin;
}

body
{
    width: 80%;
    margin: 0 auto;
}

#maincontent
{
    width: 80%;
    float: right;
}

#navigation
{
    width: 18%;
    float: left;
}

#header
{
    width: 100%;
}

#footer
{
    width: 100%;
    clear: both;
}
```

# Primary & Secondary

```
#primary
{
    width: 68%;
    float: left;
}

#secondary
{
    width: 30%;
    float: right;
}
```

The screenshot shows a web page with a header containing the text "Lorem ipsum dolor sit". Below the header, there are two main sections: a primary section on the left and a secondary section on the right. The primary section contains a list of items and some descriptive text. The secondary section contains three paragraphs of placeholder text.

**Primary Section:**

- Mauris
- Cras
- Proin
- Integer
- Curabitur
- Integer
- Suspendisse
- Quisque

**Secondary Section:**

• Mauris dolor sit amet, consectetuer adipiscing elit. Sed feugiat nisi at sapien. Phasellus varius tincidunt ligula. Praesent nisi. Duis sollicitudin. Donec dignissim, est vel auctor blandit, ante est laoreet neque, non pellentesque mauris turpis eu purus.

• Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.

• Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.

• Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.

The browser's address bar shows the file path: file:///Users/edeleastar/perforce/modo/edeleastar/CourseWare/2010/webdevelopment/course/src/workspace/Lal.

# “CSS Craftsman”

```
#header
{
    width: 100%;
}

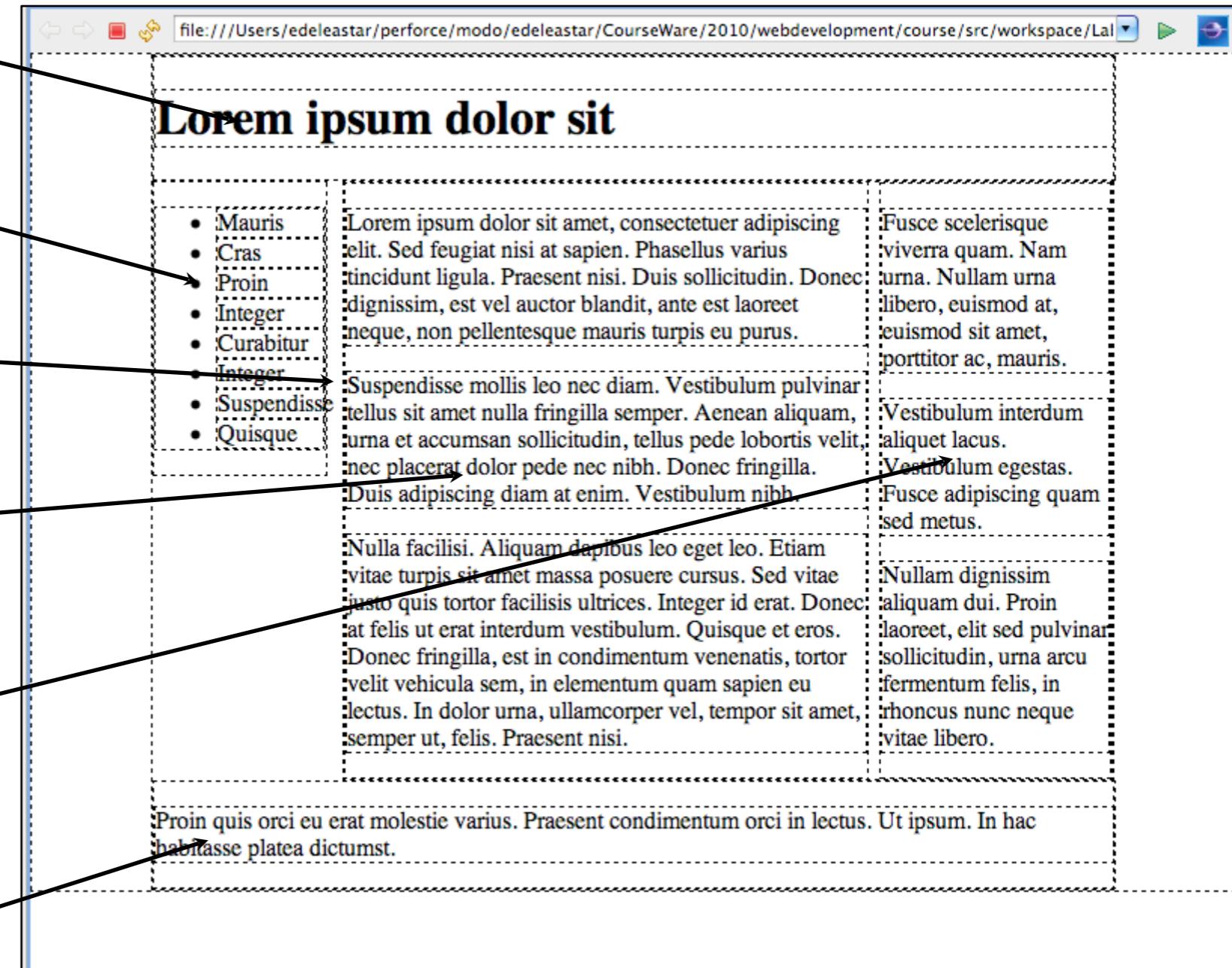
#navigation
{
    width: 18%;
    float: left;
}

#maincontent
{
    width: 80%;
    float: right;
}

#primary
{
    width: 68%;
    float: left;
}

#secondary
{
    width: 30%;
    float: right;
}

#footer
{
    width: 100%;
    clear: both;
}
```



# **Lorem ipsum dolor sit**

- Mauris
  - Cras
  - Proin
  - Integer
  - Curabitur
  - Integer
  - Suspendisse
  - Quisque

Suspendisse mollis leo nec diam. Vestibulum pulvinar tellus sit amet nulla fringilla semper. Aenean aliquam, urna et accumsan sollicitudin, tellus pede lobortis velit, nec placerat dolor pede nec nibh. Donec fringilla. Duis adipiscing diam at enim. Vestibulum nibh.

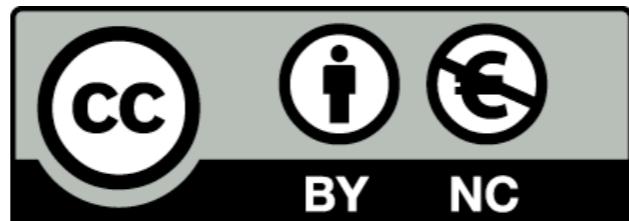
Nulla facilisi. Aliquam dapibus leo eget leo. Etiam vitae turpis sit amet massa posuere cursus. Sed vitae justo quis tortor facilisis ultrices. Integer id erat. Donec at felis ut erat interdum vestibulum. Quisque et eros. Donec fringilla, est in condimentum venenatis, tortor velit vehicula sem, in elementum quam sapien eu lectus. In dolor urna, ullamcorper vel, tempor sit amet, semper ut, felis. Praesent nisi.

Proin quis orci eu erat molestie varius. Praesent condimentum orci in lectus. Ut ipsum. In hac habitasse platea dictumst.

Fusce scelerisque viverra quam. Nam urna. Nullam urna libero, euismod at, euismod sit amet, porttitor ac, mauris.

Vestibulum interdum aliquet lacus. Vestibulum egestas. Fusce adipiscing quam sed metus.

Nullam dignissim aliquam  
dui. Proin laoreet, elit sed  
pulvinar sollicitudin, urna  
arcu fermentum felis, in  
rhoncus nunc neque vitae  
libero.



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