LECTURE: POSITIONING CONTENT BOXES OVERLAPPING ELEMENTS

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POSITIONING

- CSS position properties allows you to position an element.
- Can also place an element behind another, and specify what should happen when an element's content is too big.
- Elements can be positioned using the top, bottom, left, and right properties.
- Four different positioning methods (Slide 4).
- Each has its own set of rules.

Offset properties- top, right, bottom, left

Offset Properties	Values
top, right, left, right	px, %, auto

Can take length values, percentages, 'inherit', and 'auto' (initial).

The effect of 'auto' depends on which other properties have been set to 'auto'.

<u>Percentages</u>

Refers to width of containing box for left & right

Refers to height of containing box for top and bottom

4 LAYOUT POSITIONS

- 1. Static
- Fixed
- 3. Relative
- 4. Absolute

1. STATIC POSITION

- HTML elements are positioned static by default.
- A static positioned element is always positioned according to the <u>normal flow</u> of the page.
- Static positioned elements are not affected by the top, bottom, left, and right properties.
- Block boxes flow vertically starting at the top of their containing block with each placed directly below the preceding one.
- Inline boxes flow horizontally from left to right.

STATIC - NORMAL FLOW (BLOCKS)

content content content content content content content

content content content content content content content content content content content content content content content

Vertical margins are collapsed in the normal flow i.e. the larger of the two values is used Horizontal margins, however, are never collapsed

1. STATIC - NORMAL FLOW (INLINE)

- Inline boxes are wrapped as needed, moving down to a new line when the available width is exceeded.
- Can cause some ugly visuals if borders are used as seen below.

content conten

2. FIXED POSITION

- An element with fixed position is positioned relative to the browser window.
- It will not move even if the window is scrolled:

```
p.pos_fixed
{
    position:fixed;
    top:30px;
    right:5px;
}
```

Placed 30px from the top & 5px to the right of the browser window

--- position is set to unit relative to its containing element

2. FIXED POSITION

```
p.pos_fixed
{
  position:fixed;
  top:30px;
  right:5px;
}
```

```
FIXED TEXT FIXED TEXT
Some text
```

2. FIXED POSITION

- Note: Internet Explorer supports the fixed value only if a !DOCTYPE is specified.
- Fixed positioned elements are removed from the normal flow.
- The document and other elements behave like the fixed positioned element does not exist.
- Fixed positioned elements can overlap other elements.

* A relative positioned element is positioned relative to its normal position.

```
h2.pos_left
{
position:relative;
left: -20px;
}

h2.pos_right
{
position:relative;
left: 20px;
}
```

left property sets the **left edge of an element** to a unit to the left/right to its normal position.

```
h2.pos_left{
position:relative;
left: -20px;
}

h2.pos_right{
position:relative;
left: 20px;
}
```

```
Your Result:
    Edit and Click Me >>
                                                                 This is a heading with no position
<style type="text/css">
h2.pos left
                                                                his heading is moved left according to its
position:relative;
                                                               ormal position
left:-20px;
                                                                   This heading is moved right according to
h2.pos right
                                                                   its normal position
position:relative;
left:20px;
                                                                 Relative positioning moves an element RELATIVE to its original position.
</style>
</head>
                                                                 The style "left:-20px" subtracts 20 pixels from the element's original left
                                                                 position.
<body>
<h2>This is a heading with no position</h2>
                                                                 The style "left:20px" adds 20 pixels to the element's original left position.
<h2 class="pos left">This heading is moved left
according to its normal position</h2>
<h2 class="pos right">This heading is moved right
according to its normal position</h2>
Relative positioning moves an element RELATIVE to its
```

<h2>This is a heading with no position</h2>

<h2 class="pos_left">This heading is moved left according to its normal position</h2>

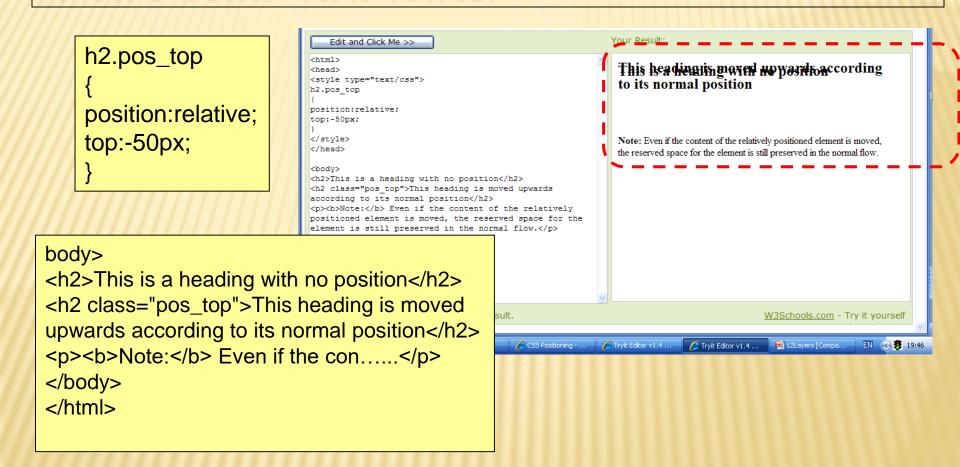
<h2 class="pos_right">This heading is moved right according to its normal position</h2>

- Relative positioning moves an element RELATIVE to its original position.
- The style "left:-20px" subtracts 20 pixels from the element's original left position.
- The style "left:20px" adds 20 pixels to the element's original left position.

3. RELATIVE

* The content of a relatively positioned elements can be moved and overlap other elements, but the reserved space for the element is still preserved in the normal flow.

```
h2.pos_top
{
position:relative;
top:-50px;
}
```



Even if the content of the relatively positioned element is moved, the reserved space for the element is still preserved in the normal flow

3. RELATIVE INLINE POSITION

Original content is shifted from its normal flow position into a newly-created content box positioned at the specified distance relative to its original position – left: 80px; top -15px.

Notice how the negative value is used.

3. RELATIVE INLINE POSITION

```
There is ______on this line - it pays no heed to other paragraph content for it is a content box unto itself
```

```
<div>
 There is
<span class = "up-right"> a repositioned
span target </span>
on this line - it pays no heed to other
paragraph content for it is a content box
unto itself
```

4. ABSOLUTE POSITION

- An absolute position element is positioned relative to the first parent element that has a position other than static.
- If no such element is found, the containing block is https://www.element.com/repairing-block-is-
- Absolutely positioned elements are removed from the normal flow and their original position is not reserved
- The document and other elements behave like the absolutely positioned element does not exist.
- Absolutely positioned elements can overlap other elements.

4. ABSOLUTE POSITION

```
h2
{
position:absolute;
left:100px;
top:150px;
}
```

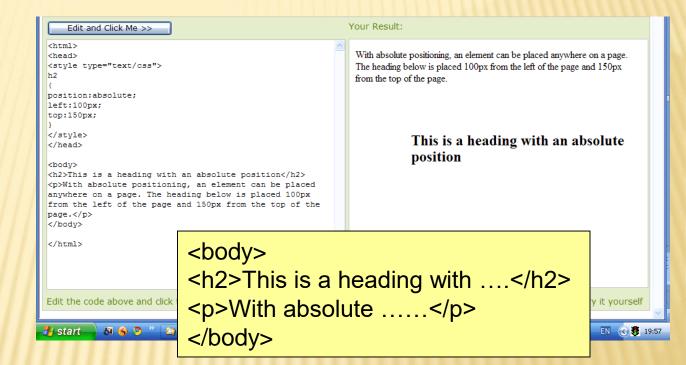
With absolute positioning, an element can be placed anywhere on a page.

This heading is placed:

- 100px from the left of the page &
- 150px from the top of the page.

4. ABSOLUTE POSITION

```
h2
{
position:absolute;
left:100px;
top:150px;
}
```



CONTENT OF LECTURE

- Width property
- Float property
- Clear property
- Floating text, images, first letter
- Creating sidebars, links, multi-column page layouts
- Making floating elements fit
- Problem of floating too late

FLOATING ELEMENTS

- There are times when the browser's normal layout simply won't position an element the way you want e.g.
 - + Want an image on the side of your page with the text wrapped around it
 - + Want multiple columns of text
 - + Want sidebar of useful links
- Floating layouts are useful in these situations

WIDTH PROPERTY

- Normally a block element is given a width equal to the entire page width
- Width property applies only block elements and to img element – not to inline elements
- If you set a width, you can control how wide that element and its content appear in the browser.
- Width property very important when creating floating layouts

WIDTH EXAMPLE

```
I am the very model of a modern Major-General,
I've information vegetable, animal, and mineral.
```

```
<style type="text/css">
#ex1, #ex2{
    width: 12em;
    border: 4px solid red;
    }

#ex2 {text-align: right;}
</style>
```

```
I am the very model of a
modern Major-General,
I've information vegetable,
animal, and mineral.
```

Notice – text-align is set to right. It makes the text within the element right-aligned,

But element itself is still on the left edge of the page.

FLOAT PROPERTY

- Float property removes an element from the normal content flow and
- Shifts it either to the left or right edge of the page
- It hovers or floats above other content
- Any nearby elements' text wraps around the floating element, as necessary

Property	Value
Float	Left, right, none (default)

FLOATING ELEMENT

- * A floating element's vertical position is the same as it otherwise would have been on page.
- Horizontal position is flush against the left or right edge of the document
- If floating element is contained within another block element, it floats against the edge of that element instead.
- If you want it to float a distance from that edge, set a margin.
- Can only float to left and right, no float to center.

FLOATING ELEMENT - SIDEBAR

```
<aside>  sidebar  more sidebar  </aside> <h1> This is a heading. This is heading. </h1>  as the very model of a modern Major-General ...  l've information vegetable, animal, and mineral. .
```

```
<style type="text/css">
aside{
float: right;
width: 20%;
border: 3px solid red;
}
</style>
```

This is a heading. This is heading.

sidebar sidebar sidebar sidebar

more sidebar more sidebar more sidebar more sidebar

I am the very model of a modern Major-General, I am the very model of a modern Major-General of the very model of the

I've information vegetable, animal, and mineral. I've information vegetable, animal, and mineral.

FLOATING - BOX

- Normally, we float block elements such as a div
- Any element that is floated is treated as a block box.
- Means we can apply margins, border, padding etc.
- * An image (inline element) can be floated

FLOATING AN IMAGE

```
<img class ="hovericon" src="boris.png" alt="Boris" />
Boris Sadigev (born July 30, 1972) is a fictional Uzbekistan journalist played by British-Jewish comedian Sasha Von Neumann. He is the main character portrayed in the controversial and successful film Boris: Culinary Learnings of America for Make Money to Glorious Nation of Uzbekistan. Boris ...
```

```
<style type="text/css">
img.hovericon {
        float: right;
        width: 130px;
}
</style>
```

FLOATING AN IMAGE

Boris Sadigev (born July 30, 1972) is a fictional Uzbekistan journalist played by British-Jewish comedian Sasha Von Neumann. He is the main character portrayed in the controversial and successful film Boris: Culinary Learnings of America for Make Money to Glorious Nation of Uzbekistan. Boris ...



Floating an image

- Example image will float to the right.
- A dotted black border is added to the image.
- Added margins to the image to push the text away from the image:
 - 0 px margin on the top and right side,
 - 15 px margin on the bottom, and
 - 20 px margin on the left side of the image.

Floating + Images

```
img
{
float:right;
border:1px dotted black;
margin:0px 0px 15px 20px;
}
```

```
<body>In the paragraph ......<img src="logocss.gif" width="95" height="84" />
This is some text. .....
```

In the paragraph below, the image will float to the right.

This is some text. This is some text.



This is some text. This is some text.

FLOATING INLINE CONTENT

- If a floating block element has lengthy inline content, it should have a width property to constrain its width.
- If no width property is set, it will occupy 100% of page and there will be no room for content to wrap around it.
- Examples show
 - + no width set
 - + width of 45% set

FLOATING INLINE CONTENT - WIDTH

```
<style type="text/css">
#no_width_set{
         float:right;
         border: 3px ridge red;
#float_left{
         float:left;
         width:45%;
         border: 3px solid blue;
#float_right{
         float:right;
         width:45%;
         border: 3px solid green;
</style>
```

FLOATING ELEMENTS WITH WIDTH

I am NOT floating and have NO width set. a 100% SO I OCCUPY a 100% I'm FLOATING LEFT I'm FLOATING I'm FLOATING RIGHTI'm FLOATING LEFT WIDTH 45% SET RIGHT WIDTH 45% SET ddd.ddd.ddd.ddd. ddd.ddd.ddd.ddd.

FLOATING INLINE TEXT

Can float inline text by using the tag

```
<span class = "note"> sidebar sidebar sidebar sidebar sidebar more sidebar more sidebar more sidebar more sidebar more sidebar </span> This is a heading. This is heading.
```

I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a modern Major-General,

```
<style type="text/css">
.note{
          float:right;
          width: 20%;
          border: 3px solid red;
        }
</style>
```

FLOATING INLINE TEXT

This is a heading. This is heading. I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a modern sidebar more sidebar Major-General, I've information vegetable, animal, and mineral. I've information vegetable, animal, and mineral.

sidebar sidebar sidebar sidebar sidebar more more sidebar more sidebar

Note: Could also have used the HTML5 ,aside> tag in this example

FLOATING INLINE TEXT AGAIN

```
<style type="text/css">
.note{
    float:right;
    margin:10px;
    width: 200px;
    background-color:lime;
    padding:5px;
    border: 3px solid red;
    }
</style>
```

The HTML is the same as the previous example, but the CSS is different

This is a heading. This is heading. I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a modern Major-General, I am the very model of a nodern Major-General, I've information vegetable, animal, and mineral. I've information vegetable, animal, and mineral.

sidebar sidebar sidebar sidebar more sidebar more sidebar more sidebar more sidebar

- Disallows any floating element from overlapping some other elements
- Place this element below any left floating element by setting clear to left.
- Place it below any right floating element by setting clear to right
- Place clear below any floating on either side by setting clear to both.

This is a heading. This is heading.

sidebar sidebar sidebar sidebar sidebar

more sidebar more sidebar more sidebar more sidebar

I am the very model of a modern Major-General, I am the very model of a

I've information vegetable, animal, and mineral. I've information vegetable, animal, and mineral. I've information vegetable, animal, and mineral. I've information vegetable, animal, and mineral.

```
<aside>  sidebar sidebar   more sidebar </aside> </h1> This is a heading. This is heading. </h1>  id = "section2">I am the very model of a modern Major-General, I am the very   >I've information vegetable, animal, and mineral. I've information vegetable, animal,
```

```
<style type="text/css">
aside{
          float:right;
          width: 20%;
          border: 3px solid red;
        }

#section2{
          clear:right;
}
</style>
```

- Effect of clear is that the element will appear below any previous floating content, rather than side-by-side.
- Next example show a floating image and <u>a</u> heading that clears.
- The yellow text drops below the image of the character, which wouldn't happen without a clear setting.

```
<img class="hoveringicon"
src="starhome.png"
alt="starhome" />
```

Starhome Sprinter is a Flash animated Internet cartoon. It mixes surreal humour with references to 1980s and 1990s pop culture, notably video games, classic television and popular music.

<h2> My Starhome Sprinter Fan Site</h2>

```
<style type="text/css">
img.hoveringicon {
         float: left;
          margin-right: 1em;
h2{
         clear:left;
         background-color:yellow;
p{
         background-color:lime;
</style>
```



Starhome Sprinter is a Flash animated Internet cartoon. It mixes surreal humour with references to 1980s and 1990s pop culture, notably video games, classic television and popular music.

My Starhome Sprinter Fan Site

PROBLEMS WITH FLOATS

Floating element hanging down below content

Floating late

- One annoyance with floating elements:
- If you place a tall floating element inside a block element without much other content, the floating element may hang down past the bottom edge of the block element that contains it.
- Remove cleared h2 from previous example see problem

```
<div id="main">
>
<img class="hoveringicon"
      src="starhome.png" alt="starhome" />
Starhome Sprinter is a Flash animated Internet
cartoon. It mixes surreal humour with references to
1980s and 1990s pop culture,
notably video games, classic television and popular
music.
 Starhome's theme song says, "Everyperson!
Everyperson!"
</div>
```

```
<style type="text/css">

img.hoveringicon {
  float: left;
  margin-right: 1em;
}

#main {
  border: 2px solid black;
}
</style>
```

- Image hangs below black border for the div that contains it
- Want border to extend downwards to enclose floating image

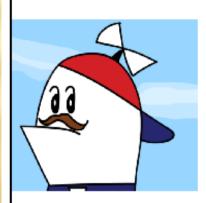


Starhome Sprinter is a Flash animated Internet cartoon. It mixes surreal humour with references to 1980s and 1990s pop culture, notably video games, classic television and popular music.

Starhome's theme song says, "Everyperson! Everyperson!"

- One workaround is to place a final empty element at the bottom of the main section and give it a suitable clear value.
- Causes the div to extend its height downwards to accommodate the floating image & the empty element below it.
- Otherwise, use add <u>overflow:hidden</u> to outer div
- Overflow did not work in this instance

Empty element added to html - a WORKAROUND

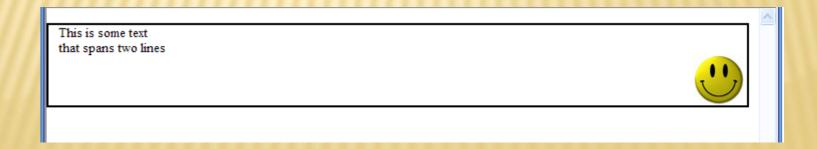


Starhome Sprinter is a Flash animated Internet cartoon. It mixes surreal humour with references to 1980s and 1990s pop culture, notably video games, classic television and popular music.

Starhome's theme song says, "Everyperson! Everyperson!"

COMMON ERROR: FLOATING TOO LATE

- × Floating an element too late in the page
- If you specify a floating element after another block element, it will appear below that element.
- We want an image to appear to the right of the text but it appears below the text



FLOATING TOO LATE

```
<style type="text/css">
#logo {
  float: right;
}
.spacer {
  clear: both;
}
.urgent {
  border: 2px solid black;
}
</style>
```

FIX:FLOATING TOO LATE

This is some text that spans two lines

- Proper fix is to <u>define the logo image before the text in the HTML</u>
- Therefore, image's floating position is decided / established before the text is drawn by the browser.

USING FLOATS

Sidebar - done

Images - done

Multi-column page layout

Horizontal navigation bar

Floating a letter

CREATE A MULTI-COLUMN FLOATING LAYOUT

- Create multiple divs, each with a float & width attribute.
- * As the columns float, the paragraph following the columns is given a clear value to make sure it is placed below the columns

Float columns to Right - add padding, margins

XXXXXXXXXXXXXXXXXX

XXXXXXXXXXXX XXXXXXXXXXXX XXXXXXXXX

MULTI-COLUMN FLOATING LAYOUT

<div class="column">

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Integer pretium dui sit amet felis.

</div>

<div class="column">

Integer sit amet diam. Phasellus ultrices viverra velit. </div>

<div class="column">

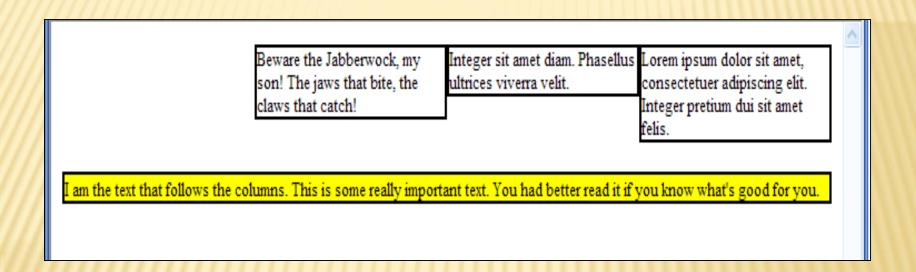
Beware the Jabberwock, my son!The jaws that bite, the claws that catch!

</div>

I am the text that follows the columns. This is some really important text. You had better read it if you know what's good for you.

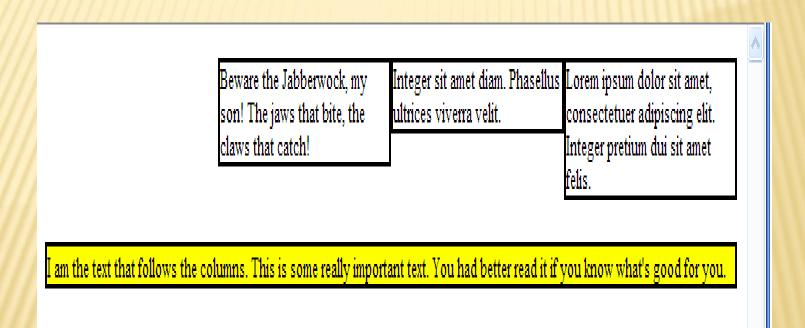
```
<style type="text/css">
div, p {
 border: 2px solid black;
.column {
 float: right;
 width: 25%;
#aftercolumns {
 background-color: yellow;
 clear: both;
</style>
```

MULTI-COLUMN FLOATING LAYOUT

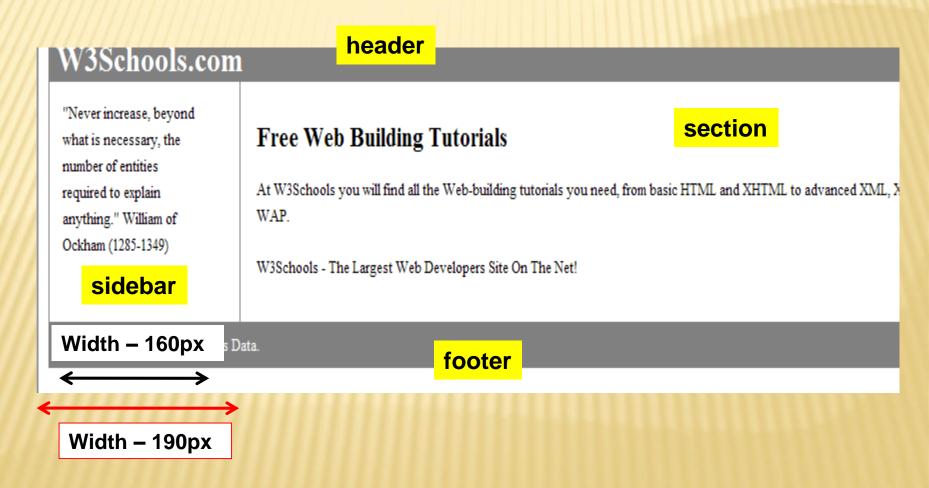


- Important that any content to follow the columns should clear the previously set float.
- •If not done, the final paragraph in the example will wrap around the floating columns.

MULTI-COLUMN FLOATING LAYOUT



Using Float - Page Layout



HTML5 LAYOUT TAGS



- Use HTML5 tags + divs
 - + Container (or wrapper) div
 - + Header
 - + Aside
 - × Float:left
 - + Section
 - + Footer

```
<body>
<div class="container">
<header>
<h1 class="header">W3Schools.com</h1>
</header>
<aside>"Never increase, beyond what is necessary, the number of
entities required to explain anything." William of Ockham (1285-1349)
</aside>
<section>
<h2>Free Web Building Tutorials</h2>
At W3Schools you will find all the Web-building tutorials you need, from
basic HTML and XHTML to advanced XML, XSL, Multimedia and
WAP.
W3Schools - The Largest Web Developers Site On The Net!
</section>
<footer>Copyright 1999-2005 by Refsnes Data.
</footer>
</div>
</body>
```

- Left Sidebar
 - + Float it to the left
 - + Width of 160px
 - + No margins, padding all round of 1em
- × Section
 - + Left margin of 190 px
 - + Left border of 1px, solid line and gray
 - + Padding all round of 1em
- Header & Footer
 - + Padding of 0.5 em
 - + Text in white, white background
 - + Clear the left float

```
<style type="text/css">
.container
width:100%;
margin:0px;
border:1px solid gray;
line-height:150%;
header,footer
padding:0.5em;
color:white;
background-color:gray;
clear:left;
```

```
h1 header{
padding:0;
margin:0;
aside{
float:left;
width:160px;
margin:0;
padding:1em;
section{
margin-left:190px;
border-left:1px solid gray;
padding:1em;
</style>
```