4.3: Floating Elements

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Borat Sagdiyev (born July 30, 1972) is a fictional Kazakhstani journalist played by British-Jewish comedian Sacha Baron Cohen. He is the main character portrayed in the controversial and successful film Borat: Cultural Learnings of America for Make Benefit Glorious ...

The CSS **float** property (reference) (4.3.1)

```css
img.headericon {
    float: right;
    width: 130px;
}
```

<table>
<thead>
<tr>
<th>property</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>float</td>
<td>side to hover on; can be left, right, or none (default)</td>
</tr>
</tbody>
</table>

- removed from normal document flow; underlying text wraps around as necessary

Floating elements diagram
Common float bug: missing width

I am not floating, no width

I am floating right, no width

I am not floating, 45% width

I am floating right, 45% width

- often floating block elements must have a width property value
  - if no width is specified, the floating element may occupy 100% of the page width, so no content can wrap around it

The clear property (4.3.2)

Homestar Runner 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 Homestar Runner Fan Site

<table>
<thead>
<tr>
<th>property</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear</td>
<td>disallows floating elements from overlapping this element; can be left, right, or none (default)</td>
</tr>
</tbody>
</table>
Common error: container too short (4.3.3)

- We want the p containing the image to extend downward so that its border encloses the entire image.
The **overflow** property (4.3.3)

<table>
<thead>
<tr>
<th>property</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>overflow</td>
<td>specifies what to do if an element’s content is too large; can be auto, visible, hidden, or scroll</td>
</tr>
</tbody>
</table>

Homestar Runner is a Flash animated Internet cartoon. It mixes surreal humour with ....

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**Multi-column layouts (4.3.4)**

```html
div
  <p>first paragraph</p>
  <p>second paragraph</p>
  <p>third paragraph</p>
  Some other text that is important
</div>
```

```css
div { border: 3px dotted green; overflow: hidden; }
```

Some other text that is important  | third paragraph  | second paragraph  | first paragraph
----------------------------------|------------------|--------------------|------------------
4.4: Sizing and Positioning

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The `position` property (examples) (4.4.2)

```css
div#ad {
    position: fixed;
    right: 10%;
    top: 45%;
}
```

<table>
<thead>
<tr>
<th>property</th>
<th>value</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>position</code></td>
<td>static</td>
<td>default position</td>
</tr>
<tr>
<td></td>
<td>relative</td>
<td>offset from its normal static position</td>
</tr>
<tr>
<td></td>
<td>absolute</td>
<td>a fixed position <code>within its containing element</code></td>
</tr>
<tr>
<td></td>
<td>fixed</td>
<td>a fixed position <code>within the browser window</code></td>
</tr>
<tr>
<td><code>top, bottom, left, right</code></td>
<td>positions of box's corners</td>
<td>Here I am!</td>
</tr>
</tbody>
</table>
Absolute positioning

```css
#sidebar {
  position: absolute;
  left: 400px;
  top: 50px;
}
```

- removed from normal flow (like floating ones)
- positioned relative to the block element containing them (assuming that block also uses absolute or relative positioning)
- actual position determined by `top`, `bottom`, `left`, `right` values
- should often specify a `width` property as well

Relative positioning

```css
#area2 { position: relative; }
```

- absolute-positioned elements are normally positioned at an offset from the corner of the overall web page
- to instead cause the absolute element to position itself relative to some other element's corner, wrap the absolute element in an element whose `position` is `relative`
**Fixed positioning**

- removed from normal flow (like floating ones)
- positioned relative to the browser window
  - even when the user scrolls the window, element will remain in the same place

**Alignment vs. float vs. position**

1. if possible, lay out an element by *aligning* its content
   - horizontal alignment: `text-align`
     - set this on a block element; it aligns the content within it (not the block element itself)
   - vertical alignment: `vertical-align`
     - set this on an inline element, and it aligns it vertically within its containing element
2. if alignment won't work, try *floating* the element
3. if floating won't work, try *positioning* the element
   - absolute/fixed positioning are a last resort and should not be overused
Details about inline boxes

- size properties (width, height, min-width, etc.) are ignored for inline boxes
- margin-top and margin-bottom are ignored, but margin-left and margin-right are not
- the containing block box's text-align property controls horizontal position of inline boxes within it
  - text-align does not align block boxes within the page
- each inline box's vertical-align property aligns it vertically within its block box

The **vertical-align** property

<table>
<thead>
<tr>
<th>property</th>
<th>description</th>
</tr>
</thead>
<tbody>
<tr>
<td>vertical-align</td>
<td>specifies where an inline element should be aligned vertically, with respect to other content on the same line within its block element's box</td>
</tr>
</tbody>
</table>

- can be top, middle, bottom, baseline (default), sub, super, text-top, text-bottom, or a length value or %
  - baseline means aligned with bottom of non-hanging letters
**vertical-align example**

```html
<p style="background-color: yellow;">
  <span style="vertical-align: top; border: 1px solid red;">
    Don't be sad! Turn that frown upside down!
  </span>
  <img src="images/sad.jpg" alt="sad" />
  Smiling burns calories, you know.
  <img style="vertical-align: middle;" src="images/puppy.jpg" alt="puppy" />
  Anyway, look at this cute puppy; isn't he adorable! So cheer up, and have a nice day. The End.
</p>
```

**output**

Don't be sad! Turn that frown upside down! Smiling burns calories, you know. Anyway, look at this cute puppy; isn't he adorable! So cheer up, and have a nice day. The End.

---

**Common bug: space under image**

```html
<p style="background-color: red; padding: 0px; margin: 0px">
  <img src="images/smiley.png" alt="smile" />
</p>
```

- red space under the image, despite padding and margin of 0
- this is because the image is vertically aligned to the baseline of the paragraph (not the same as the bottom)
- setting `vertical-align` to `bottom` fixes the problem (so does setting `line-height` to 0px)