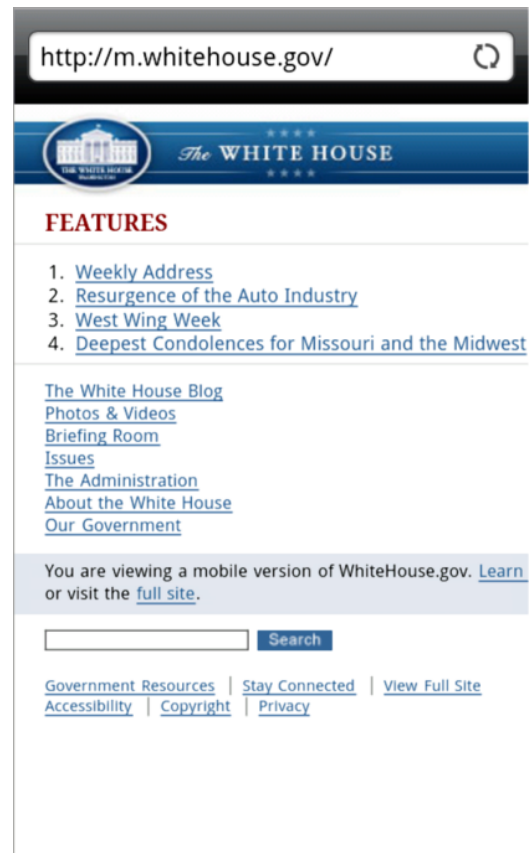


CSS Layout Part 2

Web Development

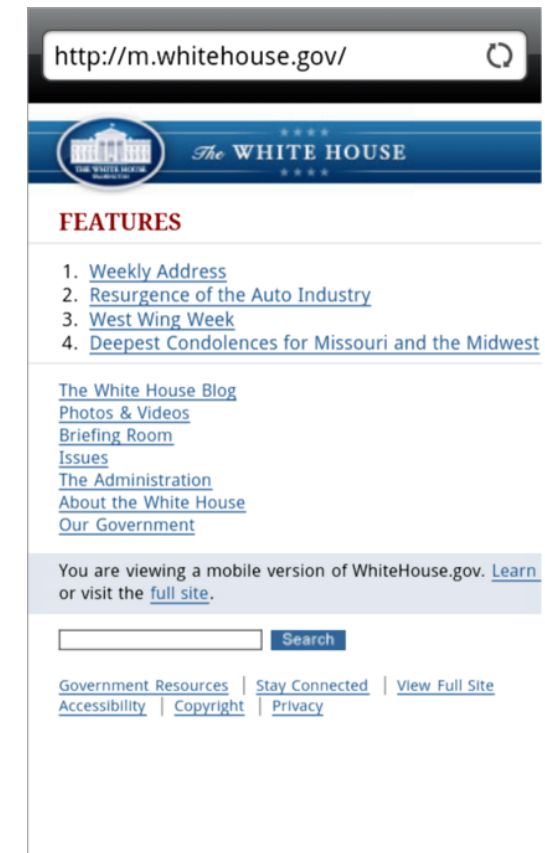
Mobile Web Design Best Practices



- The global internet report by [internetsociety.org](http://www.internetsociety.org/sites/default/files/Global_Internet_Report_2014_0.pdf) states there are almost 2 billion mobile Internet users Dec 2013
http://www.internetsociety.org/sites/default/files/Global_Internet_Report_2014_0.pdf
- Three Approaches to Mobile Web:
 - Create a separate website hosted within your current domain targeted for mobile users e.g. m.itworld.com
 - Use CSS to configure your current website for display on both mobile and desktop devices.
 - Develop a mobile app which resides on the device

Mobile Web Limitations

- Small Screen Size
- Low bandwidth
- Poor connectivity
- No hover states
- Slow error prone typing
- Less context
- Inaccurate clicks
- Slow hardware
- Awkward controls
- Limited processor and memory



Approaches to mobile web

- Make web sites that work well on a variety of screens (presentation)
- Adjust your content for mobile users (content)
- Give your users a smooth experience even on a slow connection (performance)

Design Techniques for Mobile Web

- Single column design

- Avoid floats, tables, frames

- Descriptive page title

- Descriptive heading tags

- Optimize images

- Descriptive alt text for images

- Eliminate unneeded images

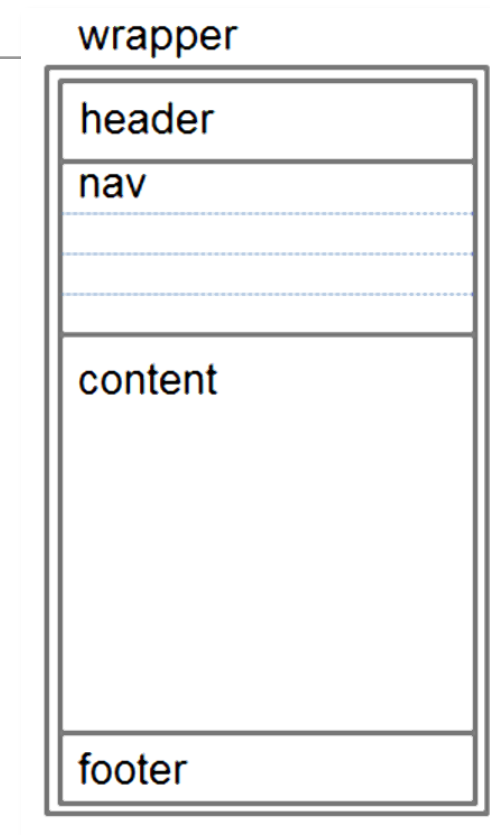
- Navigation in lists

- Em or percentage font size units

- Common font typefaces

- Good contrast between text and background colors

- Provide “Skip to Content” hyperlink

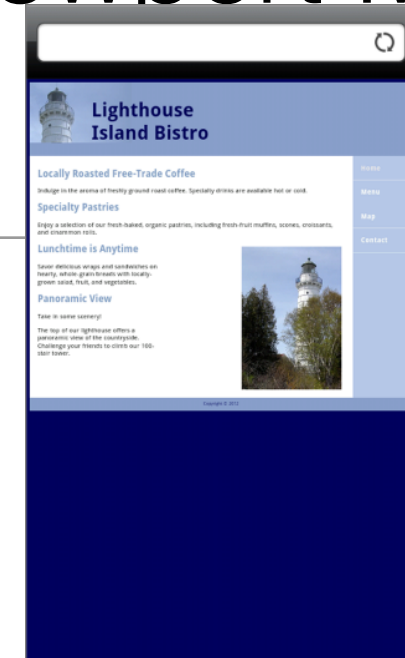


Design Techniques for Mobile Web

- Set most padding and margin to 0.
- Background images may have to be adjusted so they have no-repeat and are positioned in the right top of the screen.
- Logos may also need modifying.

Viewport Meta Tag

- Default action for most mobile devices is to zoom out and scale the web page



- Viewport Meta Tag
- Created as an Apple extension to configure display on mobile devices
- Configures width and initial scale of browser viewport

`<meta name="viewport" content="width=device-width, initial-scale=1.0">`



Media queries

- The second part of responsive design is CSS3 media queries, which currently enjoy decent support across many modern browsers. They basically allow you to gather data about the site visitor and use it to conditionally apply CSS styles. For our purposes, we're primarily interested in the min-width media feature, which allows us to apply specific CSS styles if the browser window drops below a particular width that we can specify.
- The set of pixel widths I recommend targeting are as follows:
- 320px, 480px, 600px, 768px, 900px, 1200px

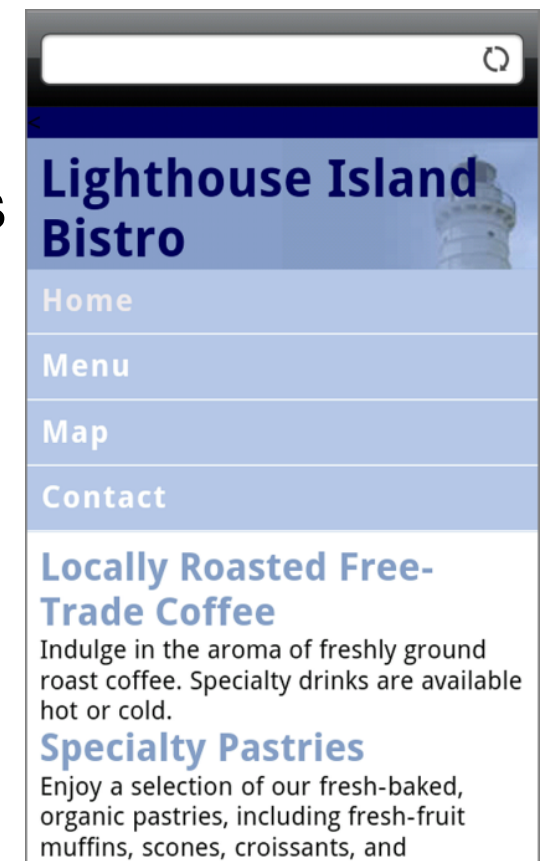
CSS3 Media Queries

- **Media Query**

- Determines the capability of the mobile device, such as screen resolution
- Directs the browser to styles configured specifically for those capabilities

- Example:

```
<link href="lighthousemobile.css" rel="stylesheet"
      media="only screen and (max-device-width: 480px)">
```



Lab 07: Learn CSS Layout Part 2

01. position

Vel et enim consulatu. Te civibus copiosae salutandi vel. Adhuc sonet libris ad eam, mundi affert mea ex. Dicunt feugiat patrioque et mel, id qui nusquam maluisset, ei vim justo ceteros vituperata. Mei saepe mediocrem ut. Repudiare definitiones ea ius, sint commodo est ea, nam no nemore diceret.

Te iriure moderatius vis, nam prodesset honestatis te. Atqui facilisi at est. Ex duo vocent incorrupte eloquentiam. Agam deterruisset vel at, has no illum ipsum alterum. Virtute vivendo officiis his et, ius viris tollit homero ad. In sit euismod salutatus, cu eos malorum luptatum consulatu, et nec debet antiopam.

Saperet maiestatis instructor te per, cu vel tota cotidieque. Vix illum regione deterruisset cu, ne cum diam suavitate complectitur, nec ex erant principes. Augue omittam no sea, putant forensibus usu te. Te iusto dicam verear mei. Dolorum posidonium no vel.

This element is relatively-positioned. If this element was `position: static`; its absolutely-positioned child would escape and would be positioned relative to the document body.

This element is absolutely-positioned. It's positioned relative to its parent.

margin: auto;

Lorem ipsum dolor sit amet, eos ut diam interesset, cu modo necessitatibus pri. Ne sit elit dicit, eum dico autem convenire an. Sed ei clita nullam, elit legimus voluptatibus ei his. Duo facilisi cotidieque at, invidunt platonem incorrupte ut has.

Vel et enim consulatu. Te civibus copiosae salutandi vel. Adhuc sonet libris ad eam, mundi affert mea ex. Dicunt feugiat patrioque et mel, id qui nusquam maluisset, ei vim justo ceteros vituperata. Mei saepe mediocrem ut. Repudiare definitiones ea ius, sint commodo est ea, nam no nemore diceret.

the box model

I'm smaller...

And I'm bigger!

box sizing

We're the same size now!

Hooray!

CSS Layout Part 2

- The clearfix hack
- Float layout example
- Percent width
- Media queries
- Inline-block
- Inline-block layout
- Column
- Flexbox
- Css frameworks

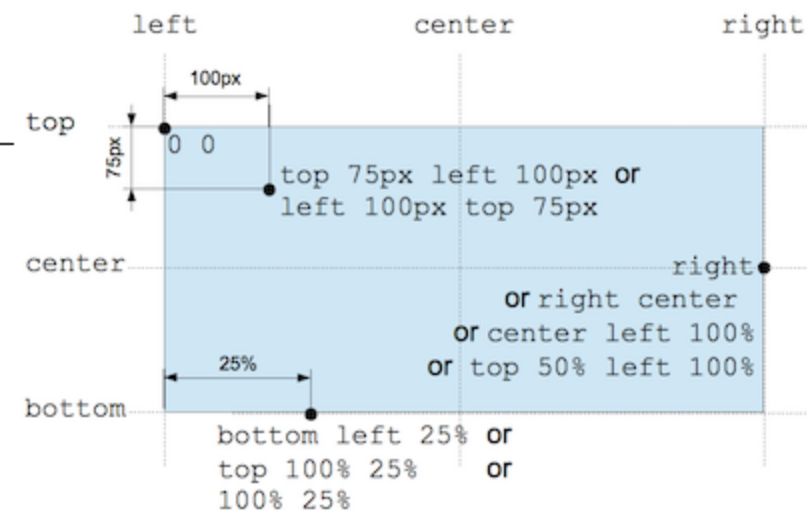
Clearfix hack

11. the clearfix hack

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, Uh oh... this image is taller than the element containing it, and it's floated, so it's overflowing outside of its container!

```
<div>
  <p>
    
    Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, Uh oh... this image is taller
    than the element containing it, and it's floated, so it's overflowing outside of its container!
  </p>
</div>
<br><br><br> <br><br><br> <br><br><br> <br><br><br>

<div class="clearfix">
  <p>
    
    Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, Uh oh... this image is taller
    than the element containing it, and it's floated, so it's overflowing outside of its container!
  </p>
</div>
```



```
img {
  float: right;
}

.clearfix{
  overflow: auto;
}
```

In this case an image overflows the container, we used float right for the image within the <p>, however because it is taller than the text it overflows.

Float layout example

```
<h1> 12. float layout example </h1>
<div class="clearfix">
  <nav>
    <ul>
      <li> <a href="#">Home</a>      </li>
      <li> <a href="#">Taco Menu</a>  </li>
      <li> <a href="#">Draft List</a> </li>
      <li> <a href="#">Hours</a>      </li>
      <li> <a href="#">Directions</a> </li>
      <li> <a href="#">Contact</a>    </li>
    </ul>
  </nav>
  <section>
    <p>
      This example works just like the last one. Notice we put a clearfix on the container. It's not needed in this
      example, but it would be if the nav was longer than the non-floated content.
    </p>
  </section>
  <section>
    <p>
      Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum, nisi
      lorem egestas odio, vitae scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec congue
      eget, auctor vitae massa. Fusce luctus vestibulum augue ut aliquet. Mauris ante ligula, facilisis sed ornare
      eu, lobortis in odio. Praesent convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis
      dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc venenatis imperdiet sed ornare turpis.
      Donec vitae dui eget tellus gravida venenatis. Integer fringilla congue eros non fermentum. Sed dapibus
      pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.
    </p>
  </section>
</div>
```

```
nav {
  float: left;
  width: 200px;
  border: solid 1px;
}

section {
  margin-left: 200px;
  border: solid 1px;
}

.clearfix {
  overflow: auto;
}
```

12. float layout example

<ul style="list-style-type: none">HomeTaco MenuDraft ListHoursDirectionsContact	<p>This example works just like the last one. Notice we put a clearfix on the container. It's not needed in this example, but it would be if the nav was longer than the non-floated content.</p>
	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut aliquet. Mauris ante ligula, facilisis sed ornare eu, lobortis in odio. Praesent convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc venenatis imperdiet sed ornare turpis. Donec vitae dui eget tellus gravida venenatis. Integer fringilla congue eros non fermentum. Sed dapibus pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.</p>

percent width

```

article img {
  float: right;
  width: 50%;
}

nav {
  float: left;
  width: 25%;
  border: solid 1px;
}

section {
  margin-left: 25%;
  border: solid 1px;
}

.clearfix {
  overflow: auto;
}

```

```
<article class="clearfix dashed">
  
  <p>
    You could even use <code>min-width</code> and <code>max-width</code> to 1.
  </p>
</article>

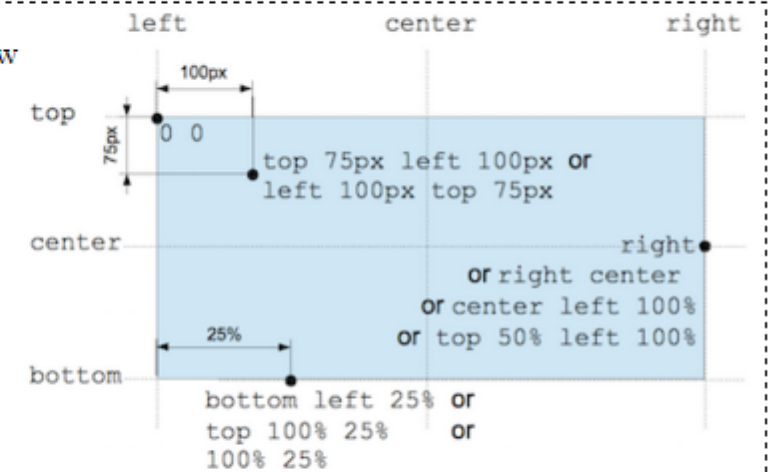
<nav>
  <ul>
    <li> <a href="#">Home</a>      </li>
    <li> <a href="#">Taco Menu</a>  </li>
    <li> <a href="#">Draft List</a>  </li>
    <li> <a href="#">Hours</a>      </li>
    <li> <a href="#">Directions</a> </li>
    <li><a href="#">Contact</a>      </li>
  </ul>
</nav>

<section>
  <p>
    This example works just like the last one. Notice we put a clearfix on the
  </p>
</section>

<section>
  <p>
    Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperd
    nec congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut ali
    congue. Nunc sagittis dictum nisi, sed ullamcorper ipsum dignissim ac. In
    eros non fermentum. Sed dapibus pulvinar nibh tempor porta. Cras ac leo p
  </p>
</section>
```

13. percent width

You could even use `min-width` and `max-width` to limit how big or small the image can get!



- [Home](#)
- [Taco Menu](#)
- [Draft List](#)
- [Hours](#)
- [Directions](#)
- [Contact](#)

This example works just like the last one. Notice we put a clearfix on the container. It's not needed in this example, but it would be if the nav was longer than the non-floated content.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut aliquet. Mauris ante ligula, facilisis sed ornare eu, lobortis in odio. Praesent convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc venenatis imperdiet sed ornare turpis. Donec vitae dui eget tellus gravida venenatis. Integer fringilla congue eros non fermentum. Sed dapibus pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.

media queries

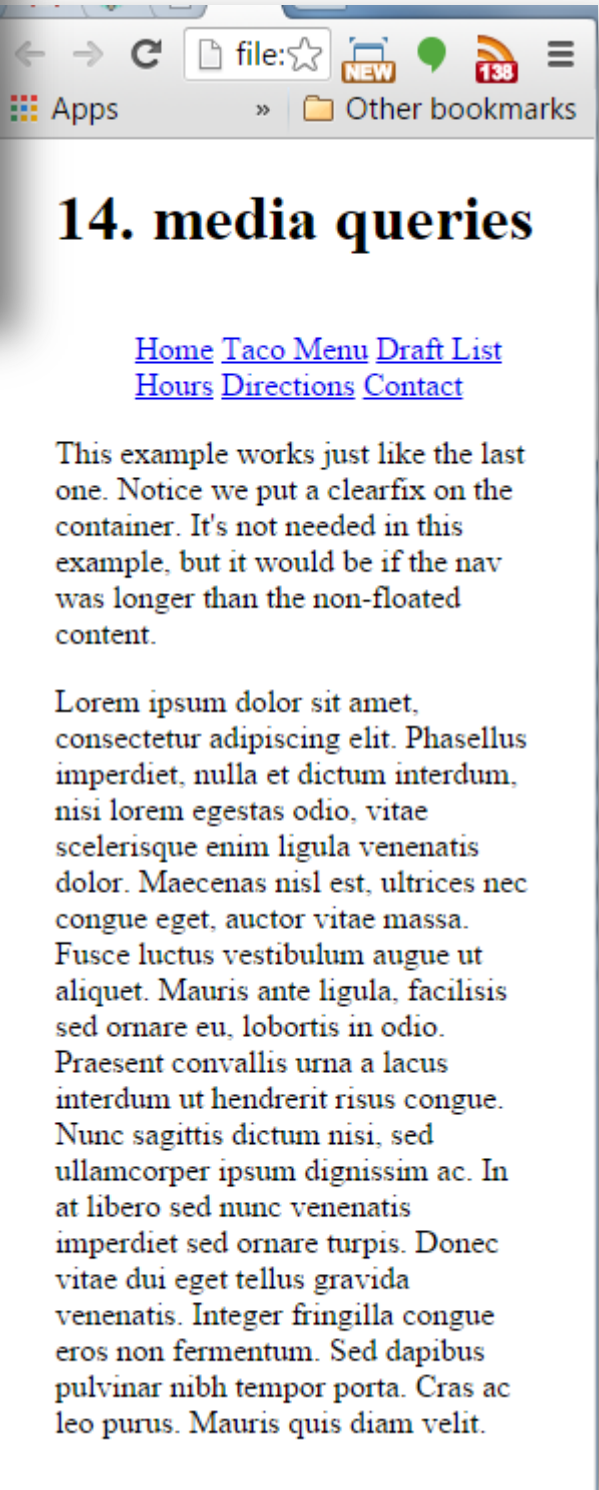
```
<h1> 14. media queries </h1>
<div class="clearfix">
<nav>
  <ul>
    <li> <a href="#">Home</a>      </li>
    <li> <a href="#">Taco Menu</a>  </li>
    <li> <a href="#">Draft List</a> </li>
    <li> <a href="#">Hours</a>      </li>
    <li> <a href="#">Directions</a> </li>
    <li><a href="#">Contact</a>     </li>
  </ul>
</nav>
<section>
  <p>
    This example works just like the last one. Notice we put a clearfix on the
    container. It's not needed in this example, but it would be if the nav was
    longer than the non-floated content.
  </p>
</section>
<section>
  <p>
    Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus
    imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae
    scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec
    congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut
    aliquet. Mauris ante ligula, facilisis sed ornare eu, lobortis in odio.
    Praesent convallis urna a lacus interdum ut hendrerit risus congue.
    Nunc sagittis dictum nisi, sed ullamcorper ipsum dignissim ac. In at
    libero sed nunc venenatis imperdiet sed ornare turpis. Donec vitae dui
    eget tellus gravida venenatis. Integer fringilla congue eros non
    fermentum. Sed dapibus pulvinar nibh tempor porta. Cras ac leo purus.
    Mauris quis diam velit.
  </p>
</section>
</div>
```

```
@media screen and (min-width:600px) {
  nav {
    float: left;
    width: 25%;
    border: solid 1px;
  }
  section {
    margin-left: 25%;
    border: solid 1px;
  }
}

@media screen and (max-width:599px) {
  nav li {
    display: inline;
  }
}
```

14. media queries

<ul style="list-style-type: none">HomeTaco MenuDraft ListHoursDirectionsContact	<p>This example works just like the last one. Notice we put a clearfix on the container. It's not needed in this example, but it would be if the nav was longer than the non-floated content.</p> <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut aliquet. Mauris ante ligula, facilisis sed ornare eu, lobortis in odio. Praesent convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc venenatis imperdiet sed ornare turpis. Donec vitae dui eget tellus gravida venenatis. Integer fringilla congue eros non fermentum. Sed dapibus pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.</p>
--	---



inline-block

```
.box {
  display: inline-block;
  width: 200px;
  height: 100px;
  margin: 1em;
  border: solid 1px;
}

.after-box {
  border: solid 1px;
}
```

[illegible]

15. inline block

I'm floating!

I'm floating!

I'm floating!

I'm floating!

I'm floating!

I'm floating!

I'm floating!

I'm floating!

I'm floating!

I'm using clear so I don't float next to the above boxes.

inline-block layout

- [Home](#)
- [Taco Menu](#)
- [Draft List](#)
- [Hours](#)
- [Directions](#)
- [Contact](#)

This example works just like the last one. Notice we put a clearfix on the container. It's not needed in this example, but it would be if the nav was longer than the non-floated content.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut aliquet. Mauris ante ligula, facilisis sed ornare eu, lobortis in odio. Praesent convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc venenatis imperdiet sed ornare turpis. Donec vitae dui eget tellus gravida venenatis. Integer fringilla congue eros non fermentum. Sed dapibus pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.

```
<div class="dashed">
  <nav class="dashed">
    <ul>
      <li> <a href="#">Home</a>      </li>
      <li> <a href="#">Taco Menu</a>  </li>
      <li> <a href="#">Draft List</a> </li>
      <li> <a href="#">Hours</a>      </li>
      <li> <a href="#">Directions</a> </li>
      <li> <a href="#">Contact</a>    </li>
    </ul>
  </nav>
  <div class="column dashed">
    <section>
      <p>
        This example works just like the last one. Notice we put a clearfix on the
        container. It's not needed in this example, but it would be if the nav was
        longer than the non-floated content.
      </p>
    </section>
    <section>
      <p>
        Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus
        imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae
        scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec
        congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut aliquet.
        Mauris ante ligula, facilisis sed ornare eu, lobortis in odio. Praesent
        convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis
        dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc
        venenatis imperdiet sed ornare turpis. Donec vitae dui eget tellus gravida
        venenatis. Integer fringilla congue eros non fermentum. Sed dapibus
        pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.
      </p>
    </section>
  </div>
</div>
```

```
nav{
  display: inline-block;
  vertical-align: top;
  width: 25%;
}
.column{
  display: inline-block;
  vertical-align: top;
  width: 74%;
}
```

column

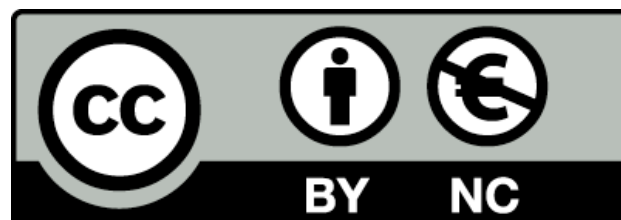
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec congue eget, auctor vitae massa. Fusce luctus

vestibulum augue ut aliquet. Mauris ante ligula, facilisis sed ornare eu, lobortis in odio. Praesent convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc venenatis

imperdiet sed ornare turpis. Donec vitae dui eget tellus gravida venenatis. Integer fringilla congue eros non fermentum. Sed dapibus pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.

```
<body>
  <section>
    <p class="three-column">
      Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus
      imperdiet, nulla et dictum interdum, nisi lorem egestas odio, vitae
      scelerisque enim ligula venenatis dolor. Maecenas nisl est, ultrices nec
      congue eget, auctor vitae massa. Fusce luctus vestibulum augue ut aliquet.
      Mauris ante ligula, facilisis sed ornare eu, lobortis in odio. Praesent
      convallis urna a lacus interdum ut hendrerit risus congue. Nunc sagittis
      dictum nisi, sed ullamcorper ipsum dignissim ac. In at libero sed nunc
      venenatis imperdiet sed ornare turpis. Donec vitae dui eget tellus gravida
      venenatis. Integer fringilla congue eros non fermentum. Sed dapibus
      pulvinar nibh tempor porta. Cras ac leo purus. Mauris quis diam velit.
    </p>
  </section>
</body>
```

```
.three-column {
  padding: 1em;
  -moz-column-count: 3;
  -moz-column-gap: 1em;
  -webkit-column-count: 3;
  -webkit-column-gap: 1em;
  column-count: 3;
  column-gap: 1em;
}
```

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