

INTRODUCTION TO WEB DEVELOPMENT

Code: COMP07009

Week 9

Reference: <http://www.w3schools.com>

RESPONSIVE WEB

A web page should look good on any device

<meta> Tag

- Add the <meta> tag to the web page
- <meta name="viewport" content="width=device-width, initial-scale=1.0" />
- This will set the viewport of the page, which will give the browser instructions on how to control the page's dimensions and scaling.

Example

Without the viewport meta tag:



With the viewport meta tag:



Responsive Images

- Responsive images are images that scale nicely to fit any browser size
- Use the width Property
- If the CSS width property is set to 100%, the image will be responsive and scale up and down
- ``
- However, in this example above, the image can be scaled up to be larger than its original size. A better solution, in many cases, will be to use the max-width property
- ``
- The image can be scaled down, but never scaled up

Show Different images

- The <picture> element allows you to define different images for different browser window sizes.
- Example

```
<picture>  
  <source srcset="img_smallflower.jpg" media="(max-width: 600px)">  
  <source srcset="img_flowers.jpg" media="(max-width: 1500px)">  
  <source srcset="flowers.jpg">  
    
</picture>
```

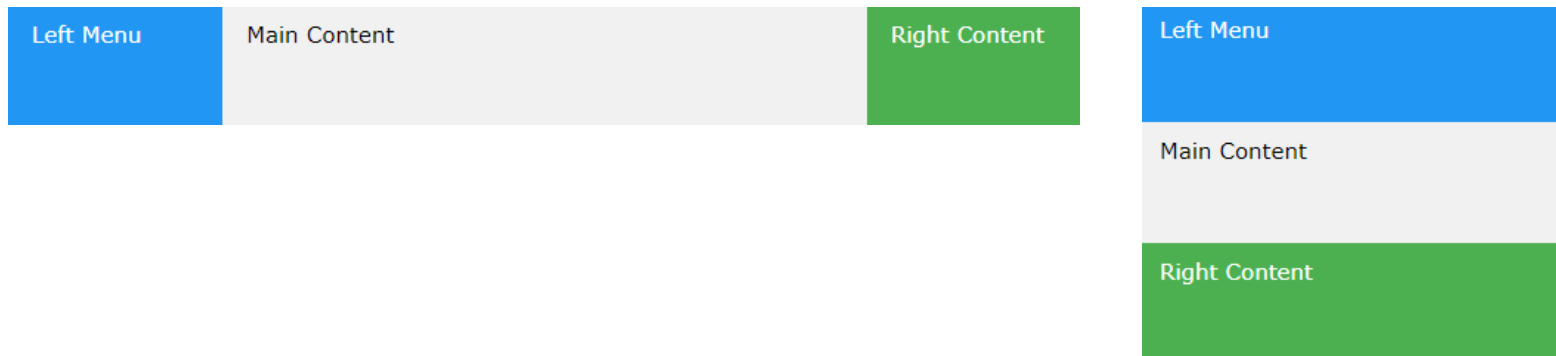
- The image will change when the browser width changes at 600px and 1500px

Responsive Text

- The text size can be set with a "vw" unit, which means the "viewport width"
- That way the text size will follow the size of the browser window
- `<h1 style="font-size:10vw">Hello World</h1>`
- Viewport is the browser window size. 1vw = 1% of viewport width. If the viewport is 50cm wide, 1vw is 0.5cm.

Media Queries

- In addition to resize text and images, it is also common to use media queries in responsive web pages.
- With media queries you can define completely different styles for different browser sizes.
- Example: resize the browser window to see that the three div elements below will display horizontally on large screens and stacked vertically on small screens:



Example code

```
<style>
.left, .right {
  float: left;
  width: 20%; /* The width is 20%, by default */
}

.main {
  float: left;
  width: 60%; /* The width is 60%, by default */
}

/* Use a media query to add a breakpoint at 800px: */
@media screen and (max-width: 800px) {
  .left, .main, .right {
    width: 100%; /* The width is 100%, when the viewport is 800px or smaller */
  }
}
</style>
```

```
<h2>Media Queries</h2>
```

```
<p>Resize the browser window.</p>
```

```
<p>Make sure you reach the breakpoint at 800px when resizing this frame.</p>
```

```
<div class="left">
  <p>Left Menu</p>
</div>
```

```
<div class="main">
  <p>Main Content</p>
</div>
```

```
<div class="right">
  <p>Right Content</p>
</div>
```