

Responsive Web Design

Responsive Web Design

- Responsive Web Design (RWD) describes a series of techniques for making web page work better and look better on alternate viewports like mobile and tablet.
- There is not one single "thing" to do to make a page work better in mobile, it is a process.
- The following slides discuss this process.

Three Primary Targets

- There are three primary targets for a web site:
 - Desktop
 - Tablet
 - Phone
- Each typically has a viewport size or range of sizes that apply and help to shape how a page can target each device type.
- Page designs don't care about the exact type of device, but do care about the size of its viewport.
- In other words, don't target a specific device but target how a page should look on a given size screen.

RWD Process

1. Determine mobile first or desktop first
2. Determine Content and Layout
 - Not all content needs to go on a mobile version
 - You may (will) need a different layout for the mobile version versus desktop version
3. Use flexible widths (auto or 100%)
4. Redo nav to be mobile-friendly
5. Profit

Finding Targets

- Determine which sizes to design for is a challenge.
- Generally:
 - Screens less than 480px
 - Between 481 and 768
 - Greater than 768
- <http://viewportsizes.com>

The Mobile Device

- Mobile devices like phones and tablets zoom web pages out.
- This makes the default text or view of a web page very, very small.
- Change how the browser zooms with a meta tag:
`<meta name="viewport" content="width=device-width">`
- This tag should be added to all pages that will be responsively designed.

More on device-width

```
<meta name="viewport" content="width=device-width">
```

- Also initial-scale:

```
<meta name="viewport" content="width=device-width, initial-scale=1"
```

From Process to Implementation

- **Media queries** are used to implement styles based on width and height of the viewport.
- Find out the viewport size and apply a different stylesheet or different styles based on that viewport.
- A few methods for doing this:
 - Standard `<link>` with a media attribute
 - `@import`
 - `@media`
- See <http://www.w3.org/TR/css3-mediaqueries/>

#1: Media Queries with `<link>`

```
<link href="small.css" rel="stylesheet" media="(max-width: 480px)">
```

- Also:
 - width
 - min-width
- Use a logical 'and'
- `media="(min-width:481px) and (max-width:768px)"`
- Drawback: You need to include these `<link>` tags on every page.

#2: Using @import

- The @import directive, included within a stylesheet itself, pulls in additional styles from the specified URL.
- @import url(small.css) (max-width: 480px);
- Drawback: @import directives need to appear first in a stylesheet. Therefore, you may unintentionally override the mobile CSS with "common" styles applied later.

#3: @media

- Use @media within a stylesheet to apply specific styles.
- The @media directive is a container for styles.
- Think of this as an embedded media query.
- @media (max-width: 480px) {
 body { /* some body style */ }
 h1 { /* some h1 style */ }
}
- Can also logically AND these as well (see earlier slide)

RWD Demo

The background of the slide features a series of overlapping, wavy, horizontal bands in various shades of blue and white, creating a sense of depth and movement. The colors transition from a light, almost white blue at the top to a deeper, more saturated blue at the bottom.

Hamburger Menu

- There is a Unicode character, entered as an entity, for representing a "hamburger" menu: `☰`
- There are numerous other ways to create this menu.
- Search for "css hamburger menu" to see others.

RWD Summary

- Responsive Web Design is a process.
- There are several steps involved in the process including adding a viewport meta, choosing the content to display along with a layout, and then applying CSS to create that layout.
- CSS can be added through link elements, through @import directives, or through @media directives.