

Developing Mobile Websites

Framework: Foundation

Lesson 1, Activity 2: Foundation: A Responsive Grid Framework

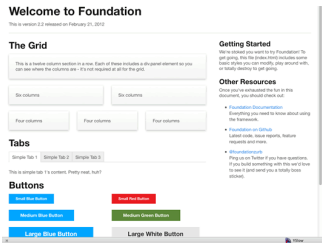
Wouldn't it be nice if we could avoid the specifics of all of those grid layout percentage widths and media queries, and concentrate on higher level layout considerations? If typography, buttons, forms, and other UI elements started from some good-looking CSS styles, but were easy to modify? With the advent of responsive design has come the welcome arrival of frameworks - self-consistent HTML/CSS/JavaScript systems for quickly and easily building responsive sites.

Downloadable for free from California-based design company ZURB, Foundation takes away a fair amount of the low-level implementation details when building a responsive site: flexible grids, media queries, flexible images, and other familiar aspects of responsive sites are baked in. You can (and will) exert fine-level control over CSS, JavaScript, and other aspects of sites you build with Foundation.

A First Look at Foundation

To use Foundation, download the most-recent version from foundation.zurb.com. We've done so already - the example files (demos, exercises, and solutions) in the FrameworkFoundation directory all reference the 2.2 version.

Open FrameworkFoundation/Demos/index.html both in a browser and in a file editor. This is the default demo file one gets when downloading Foundation.



Code Sample:

FrameworkFoundation/Demos/index.html

```

Welcome to Foundation

<-- this row will span the full 12 columns: -->
Welcome to Foundation
This is version 2.2 released on February 21, 2012

The Grid

This is a twelve column section in a row. Each of these includes a div.panel element so you can see where the columns are - it's not required

Six columns

Six columns

<-- this row is split into 3 columns: -->

Four columns

Four columns

Four columns

Tabs

Simple Tab 1
Simple Tab 2
Simple Tab 3

•This is simple tab 1's content. Pretty neat, huh?

•This is simple tab 2's content. Now you see it!

•This is simple tab 3's content. It's, you know...okay.

Buttons

Large Blue Button
Nice Blue Button
Large White Button
Nice White Button
```

```

Getting Started
We're stoked you want to try Foundation! To get going, this file (index.html) includes some basic styles you can modify, play around with, or to
Other Resources
Once you've exhausted the fun in this document, you should check out:

• Foundation Documentation
  Everything you need to know about using the framework.

• Foundation on Github
  Latest code, issue reports, feature requests and more.

• @foundationapp
  Ping us on Twitter if you have questions. If you build something with this we'd love to see it (and send you a totally boss sticker).

```

Let's review the file in detail. At the top of the file are a series of browser checks, adding a class, conditionally, if the browser in use is Internet Explorer of version 8 or less; this allows browser-specific CSS (via a rule like `!lt-ie7 div`).

In the head, we see the `viewport` tag, setting `width` to `device-width`. Also in the head are included three stylesheets, one of which is IE9 specific; `app.css` is one where we'll add our custom CSS rules. Note also the inclusion of <http://html5shiv.googlecode.com/svn/trunk/html5.js> - a small JavaScript shiv file which prevents non-html5 browsers, such as IE 7 and 8, from throwing errors when referencing html5-specific elements.

We next look at the body of the document. A familiar pattern in Foundation is:

```

Welcome to Foundation
This is version 2.2 released on February 21, 2012

```

From the [Foundation docs](#): "The grid is built around three key elements: containers, rows, and columns. Containers create base padding for the page; rows create a max-width and contain the columns; and columns create the final structure." Conveniently, we can class any div inside of a row with "X columns", where "X" is a number one through twelve, spelled out as a word; this will render a column that takes up X of 12 columns in the given row. (Use "one column", not "one columns", for single-column divs.)

We can nest rows to achieve almost any level of complexity:

```

The Grid

    This is a twelve column section in a row...

```



Columns are flexible in width, narrowing, and widening to respond to the width of the viewing environment. Foundation defaults to a few logical breakpoints in browser/device size; drag your browser narrower when viewing this page and see the right column slide under the main column at 768px.

`hide-on-X` and `show-on-X` classes hook in to pre-built media queries, offering an easy way to selectively show or hide elements when viewed on a tablet, phone, or desktop. The first of the following paragraph tags would show on a desktop but not a phone or tablet; the second of the following paragraph tags would show only on phones and tablets:

```

show me on desktop
hide me on desktop

```

Foundation allows you to offset columns (with classes such as `offset-by-four`) - so that a four-column layout can sit flush right, without columns to the left to push it right - and to lay out columns independent of the order of the source code (so that elements listed later in code can display to the left of elements listed earlier).

Foundation makes available some excellent styling for buttons, tabs, forms, and other elements; check out the [Foundation docs](#) for more info.

The bottom of the `index.html` includes the needed JavaScript files; `app.js` is where you would write your own custom JavaScript code.

