# Responsive Design Lab

By the end of this lab, you will know how to use viewport, media queries, and breakpoints to create your own mobile responsive designs. While the topic is very deep and we could spend weeks on optimizing for mobile, we will try to start with the building blocks and the most important topics.

## Getting the Code

First, we need to get the latest files from Github. Review the instructions [here](https://github.com/vijayv/IOLab/blob/master/tools_of_the_trade/git_instructions.md).

## Instructions

1. Open the index.html file in Chrome or Firefox
2. View the page in responsive design mode so that you get an idea of the starting point
   1. Try various phones/tablets and resolutions
3. Edit the HTML to change the site title, heading, and footer to different content
4. Create a meta tag for viewport and refresh the page in your browser to see changes
   1. <meta name="viewport" content="width=device-width, initial-scale=1">
5. Next review the three linked CSS files
6. Add a breakpoint with media queries so that the small.css file is only used when the viewport is less than or equal to 500px
7. Add a second breakpoint so that the medium.css file is only used when the viewport is less than or equal to 700px and greater than 500px
8. Design your webpage, starting with the smallest screen design first using the small.css file
   1. Remember that you should not set an absolute width on your divs, instead use percent
   2. Focus on the layout first, then work on styling
   3. Adjust the margin between elements but, be careful not to let your divs overflow from the viewport size
9. Next, work on your styling for a medium sized screens, such as IPads, using the medium.css file
   1. First draw a simple sketch of how your page should look
      1. Think about where you want content and images to go
      2. What needs to move or be resized?
   2. Keep an eye on your mobile design to see if you’ve accidentally made any unintended changes
10. Finally, complete your design for laptops and desktops in main.css
    1. You may want to set a width for the main-container so that your page is more readable
    2. Test all three of your designs on various screen size

### Helpful Tips

* Add CSS rules systematically, make small changes, and view your changes in the browser
* Edit CSS and HTML directly in the browser first, then copy those changes over to your files when you are happy with them
* CSS rules in main.css will be applied always be applied to your page
* CSS rules in small.css and medium.css will only be applied when they satisfy the conditions that you set
* If you don’t know how to do something, Google it… or, better yet, just test different values in the browser and see what happens!