

Mobile devices make up well over 60% of mobile web traffic today, with tablet and desktop traffic combining for less than half. For that reason, mobile-first web design is the primary approach used by most sites today.

In this assignment, you will be designing your own *responsive* web site, from the website created in Lab 2. It will need to allow for 3 different viewports: mobile (up to 425px wide), tablets (between 426px and 768 px wide), and desktops (anything over 768px)

We want to develop this site on a server, therefore create a subdirectory called *lab3* for this lab under your webpages directory.

```
$ cd /webpages/your_username  
$ mkdir lab2  
$ cd lab2
```

Your site can be found under your student's webpage URL

http://students.engr.scu.edu/~your_username/coen161/lab3/

Note: If you're still having issues with your webpages directory you can type webpage directly into your terminal. It will bring an interactive utility that you can use to troubleshoot your webpage. Start by entering 5 to see the status of your page.

Part 1 - Use Flexbox (20 pts)

To begin making your page more responsive, start by converting your content to use the Flexbox layout module.

1. Start by styling all divs with the class *row* to use a Flexbox container by setting the display property to flex
2. To keep the same proportions as before, use the *flex-basis* property to make the column on the left 1/4 of the width of the screen
 - Note: *flex-basis* also takes relative sizes, like percentages, to set the initial size of a flex item. (i.e *flex-basis: 25%;*)
3. Use the same method to make the right column 3/4 the width of the screen

You should now have three rows that are Flexbox containers with a left-hand column that is 1/4 of the screen and a right-hand column that is 3/4 of the screen.

Part 2 - Responsive Design (20 pts)

Now that our page has some basic structure, let's start adding some responsive features to it.

1. Set the viewport using a meta tag in the head of your HTML file
2. Set the *box-sizing* property for all elements to *border-box*
3. Use the example from class to define a flex container for your rows
4. Use *@media* queries to define your three breakpoints: < 425px, 425px to 768px, and 768px+

You should now have three distinct breakpoints for your page to *respond* to as the viewport's width changes.

Part 3 - Content Layout (20 pts)

Now that we have defined the breakpoints of our page, we need to define the styles for each viewport.

1. All columns should take up the full width of the screen on a mobile device.
 - In terms of Flexbox, you can think of this as all the flex items in each row being stacked in the *column* direction
2. On tablets, the left column should take up 1/3 of the screen and the right column should take up 2/3 of the screen
 - Refer to the *flex-basis* example above
3. On a desktop, the left column should take up 1/4 of the screen and the right column should take up 3/4 of the screen.

You can check the responsiveness of your page by adjusting the width of your browser (to the webpage this is the same as opening the page on a phone). Since your page Your final result should look something like this:

Desktop

MY PAGE	HOME	PAGE 2	CONTACT
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi elementum arcu et massa pellentesque fermentum. Nam molestie est in pretium finibus. Morbi vitae odio lectus. Integer viverra elementum velit, sed auctor ante feugiat vel. Proin et tortor purus. Donec tincidunt magna eget nulla convallis elementum. Aliquam malesuada massa non velit accumsan pharetra. Suspendisse et nulla tellus.</p>		<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi elementum arcu et massa pellentesque fermentum. Nam molestie est in pretium finibus. Morbi vitae odio lectus. Integer viverra elementum velit, sed auctor ante feugiat vel. Proin et tortor purus. Donec tincidunt magna eget nulla convallis elementum. Aliquam malesuada massa non velit accumsan pharetra. Suspendisse et nulla tellus.</p>	
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<p><i>Written by Alberto Diaz</i> <i>email - adiaztoledo@scu.edu</i></p>			

Tablet

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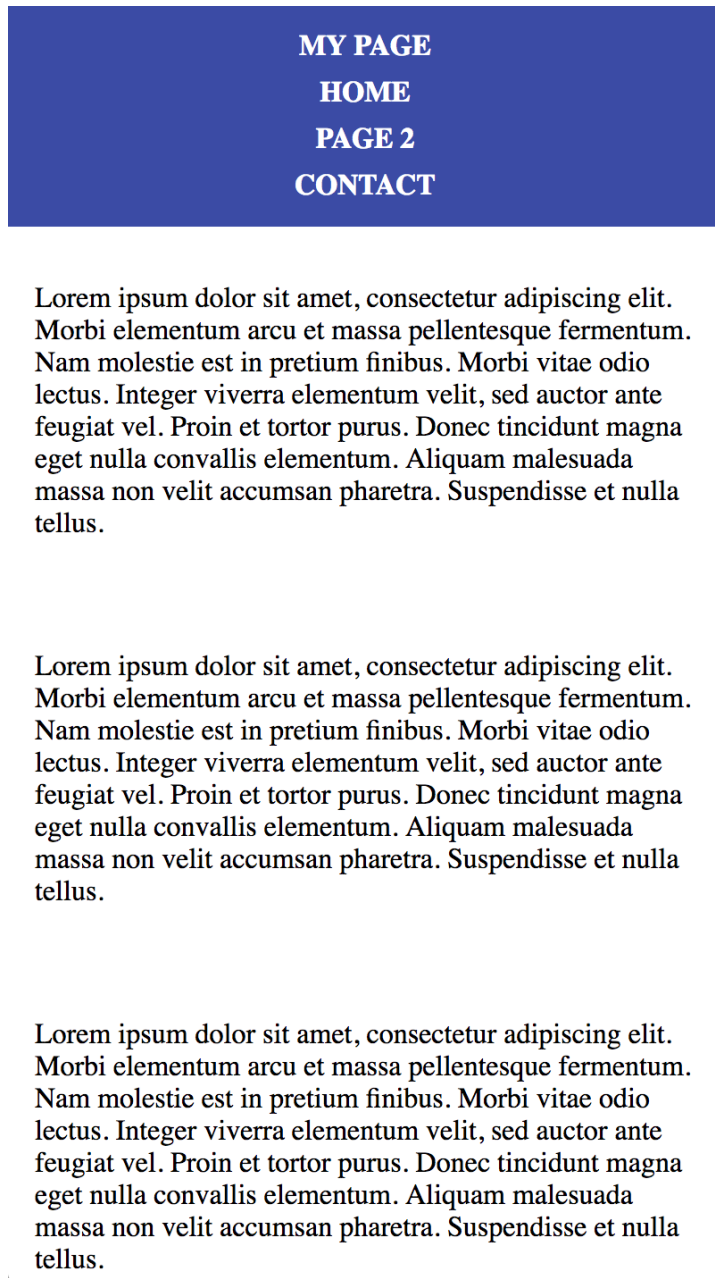
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Part 4 - The Navbar (20 pts)

You may have noticed in the mobile screenshot that the navbar looks different than it does on tablet and desktop views. Depending on how you implemented the navbar in Lab 2, you may need to do something else to get the navbar to stack on mobile. Here are a couple options:

- You can select the nav elements inside your mobile @media query and change the width so that they stack vertically (i.e. make them the full width of the screen on mobile).
- If you would like to leverage the Flexbox module, you can convert your navbar to a flex container, and similarly to the rows, change how the flex items stack using the mobile @media query.

These are not the only two options. Feel free to play around with other CSS properties within the mobile @media query to achieve the vertical nav bar style.

Part 5 - Adding another page (20 pts)

Now that the first page is responsive and has 3 distinct breakpoints, we need to change page 2 to also be responsive. Since page 2 has a different number of columns, it will have slightly different requirements for each breakpoint.

1. On mobile, the columns take up the whole width of the screen
2. On a tablet, each column takes up 1/2 the width of the screen
3. On the desktop, you should see 4 columns across the screen

Page 2 should look something like this:

Desktop

MY PAGE	HOME	PAGE 2	CONTACT
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi elementum arcu et massa pellentesque fermentum. Nam molestie est in pretium finibus. Morbi vitae odio lectus. Integer viverra elementum velit, sed auctor ante feugiat vel. Proin et tortor purus. Donec tincidunt magna eget nulla convallis elementum. Aliquam malesuada massa non velit accumsan pharetra. Suspendisse et nulla tellus.</p>	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi elementum arcu et massa pellentesque fermentum. Nam molestie est in pretium finibus. Morbi vitae odio lectus. Integer viverra elementum velit, sed auctor ante feugiat vel. Proin et tortor purus. Donec tincidunt magna eget nulla convallis elementum. Aliquam malesuada massa non velit accumsan pharetra. Suspendisse et nulla tellus.</p>	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi elementum arcu et massa pellentesque fermentum. Nam molestie est in pretium finibus. Morbi vitae odio lectus. Integer viverra elementum velit, sed auctor ante feugiat vel. Proin et tortor purus. Donec tincidunt magna eget nulla convallis elementum. Aliquam malesuada massa non velit accumsan pharetra. Suspendisse et nulla tellus.</p>	<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi elementum arcu et massa pellentesque fermentum. Nam molestie est in pretium finibus. Morbi vitae odio lectus. Integer viverra elementum velit, sed auctor ante feugiat vel. Proin et tortor purus. Donec tincidunt magna eget nulla convallis elementum. Aliquam malesuada massa non velit accumsan pharetra. Suspendisse et nulla tellus.</p>
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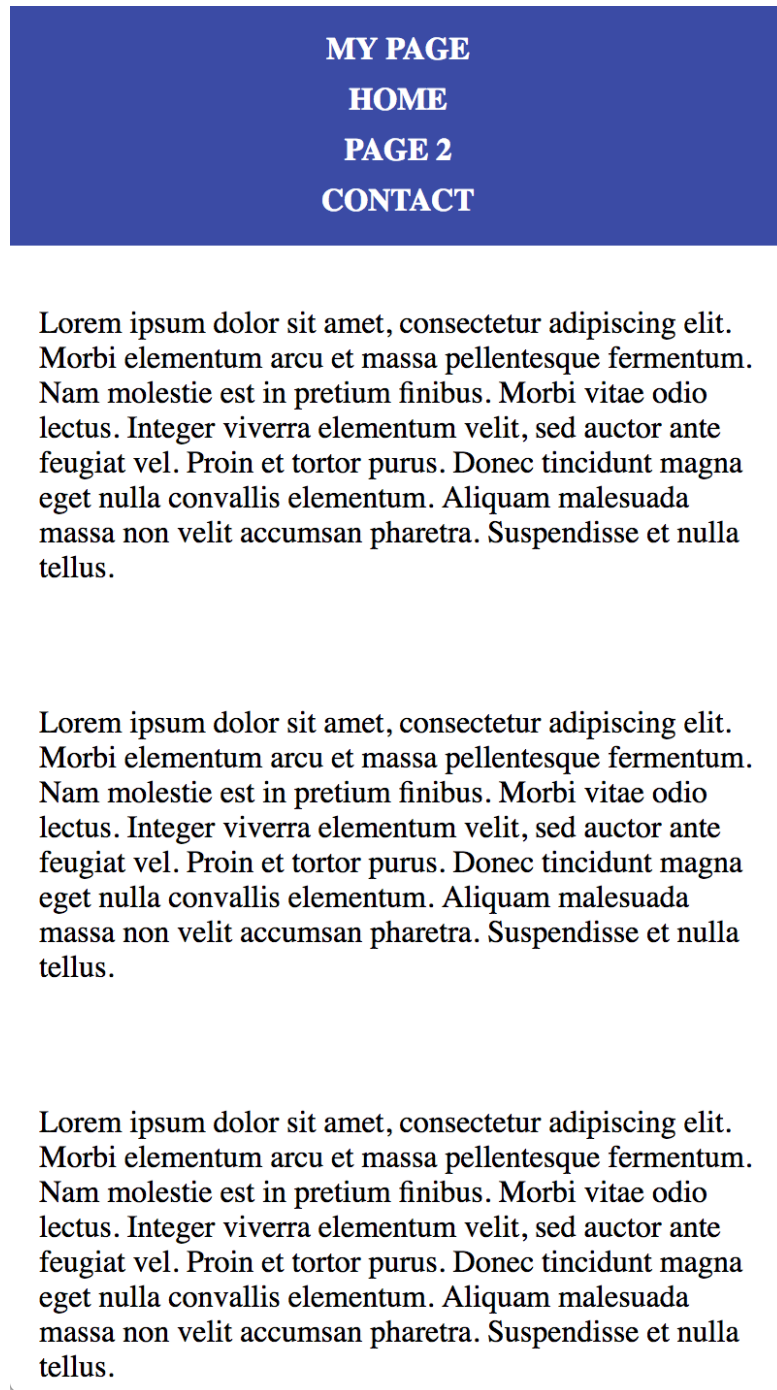
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Submission

Once you have verified that your page is responsive and meets all the criteria, upload your two (2) HTML files and your (1) CSS stylesheet that is shared between the two.