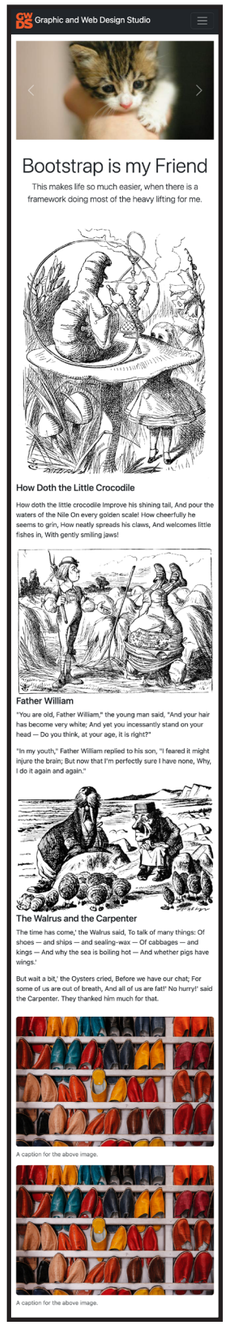
BOOTSTRAP IS YOUR FRIEND

or, How I Stopped Worrying, and Learned to Love Bootstrap5

Today we are making a very straightforward webpage using the cheatsheet section of getbootstrap.com. You will need to download this pdf from github to access the links. This is an intro to how to use getbootstrap.com code support, and how to build a very simple website that responds to different screen sizes. This is literally the tip of the iceburg when it comes to what bootstrap can do. I hope and expect you can use this as a jumping off point.

In order to be successful, **read the step or section first**, then complete the step. It's the only way to be sure.

I am assuming you will create your own repository, you will need to do this for your final project. This is not meant to be rushed through, but completed over a few weeks.



1

I am going to give you an index.html with some starter code via github. It will have a lot of comments in it, but nothing much else. It will have the code ready for bootstrap to take over, but you must copy and paste the css and js folders and past them into your new file directory. Do Not Nest.

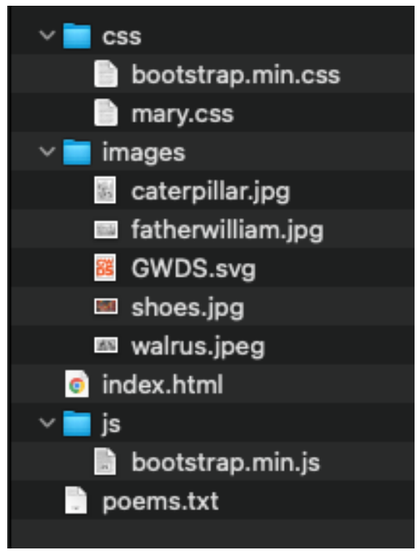
Create a new folder for this worksheet that is **not inside your first bootstrap worksheet folder**. Keep organised. Also as I said before, make a repo, but I'm not going to remind you about this, as it's time for you to start remembering on your own. How you have grown!

index.html ×

Users > ml5-jackson > Desktop > WIPsecond bootstrap worksheet > index.html > html >

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="stylesheet" href="css/bootstrap.min.css">


<!-- TITLE GOES HERE -->

    <title></title>



</head>

<body>

    <h1>is this correct? If it is sans serif, then yes.</h1>

    <!-- this begins the header code -->
```

Your file structure should look like this:

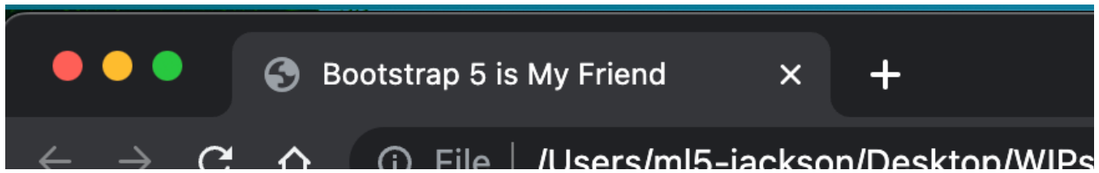


2

If you see the sans serif font in the <h1> provided, you are good to go, if not, stop and make sure that you have brought in all the correct folders. Ready? Ok, remove that <h1> so we have a blank slate.

The next step is to put in the tilte. You of course can put your own in. Do that now. Save. Remember your github training. Next step.

```
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initia
    <link rel="stylesheet" href="css/bootstrap.min.css">


<!-- TITLE GOES HERE -->

    <title>Bootstrap 5 is My Friend</title>



</head>
```

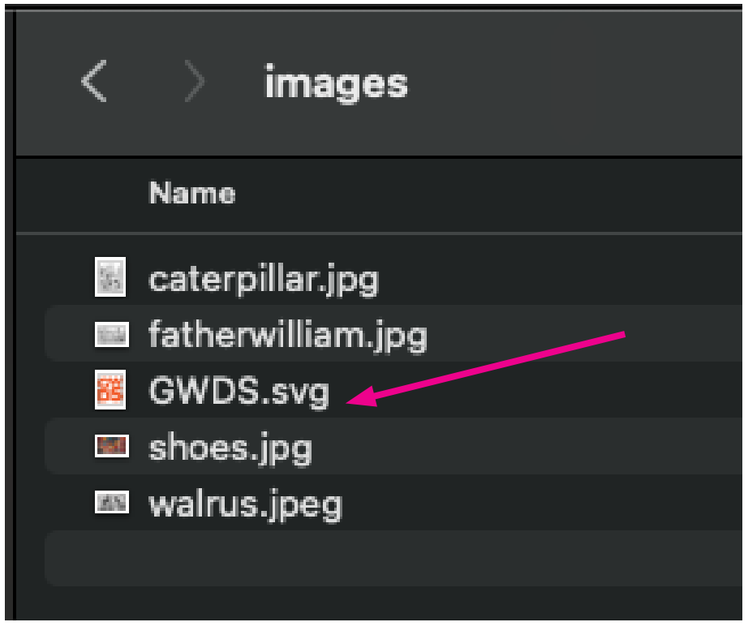


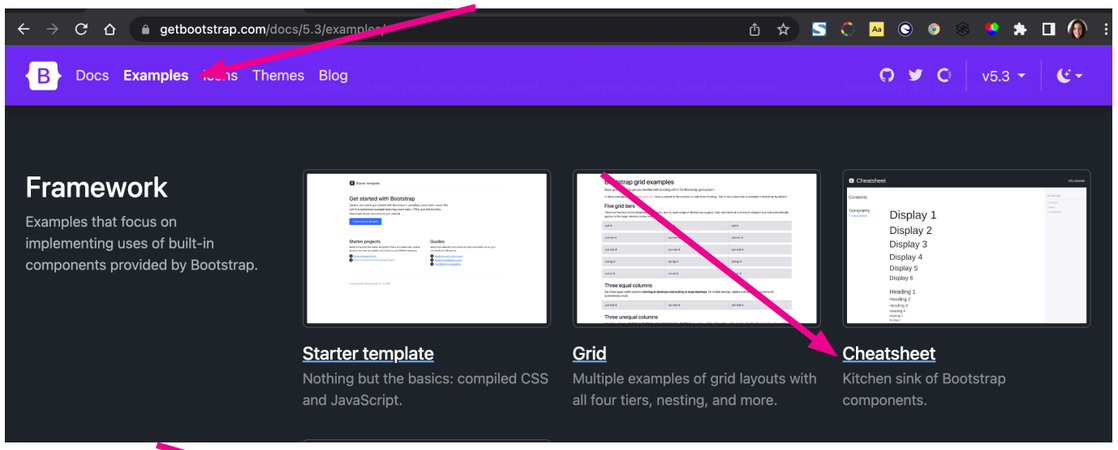
3

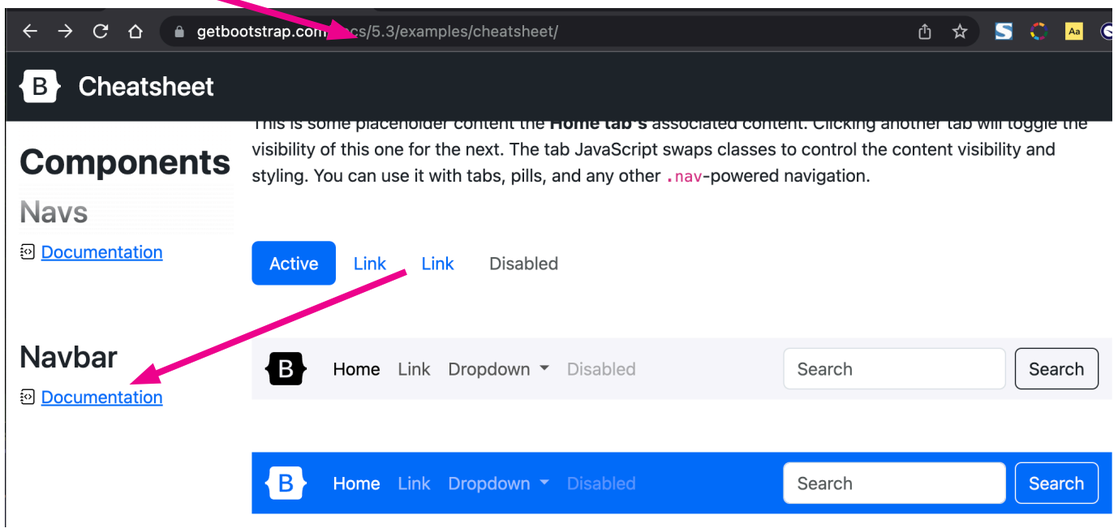
Now we are going to take our first step into grabbing code from getbootstrap.com. We are going to place the nav menu in. I have chosen one that has an **svg** in there, and I provided you with an svg in the images folder that you should have downloaded. it looks like this. We are going to take one step at a time. Read the whole thing, then go back and do the steps.

Go to getbootstrap.com >examples >cheatsheet. Click on Cheatsheet and scroll down to Navbar. Click on the Documentation link.

I am giving you fewer links, because I want you to feel comfortable looking around at the cheatsheet. Also make sure you are looking at version 5.3, and not any earlier versions. If you search up Bootstrap5, your results might take you to an older version of bootstrap. We don't want that.







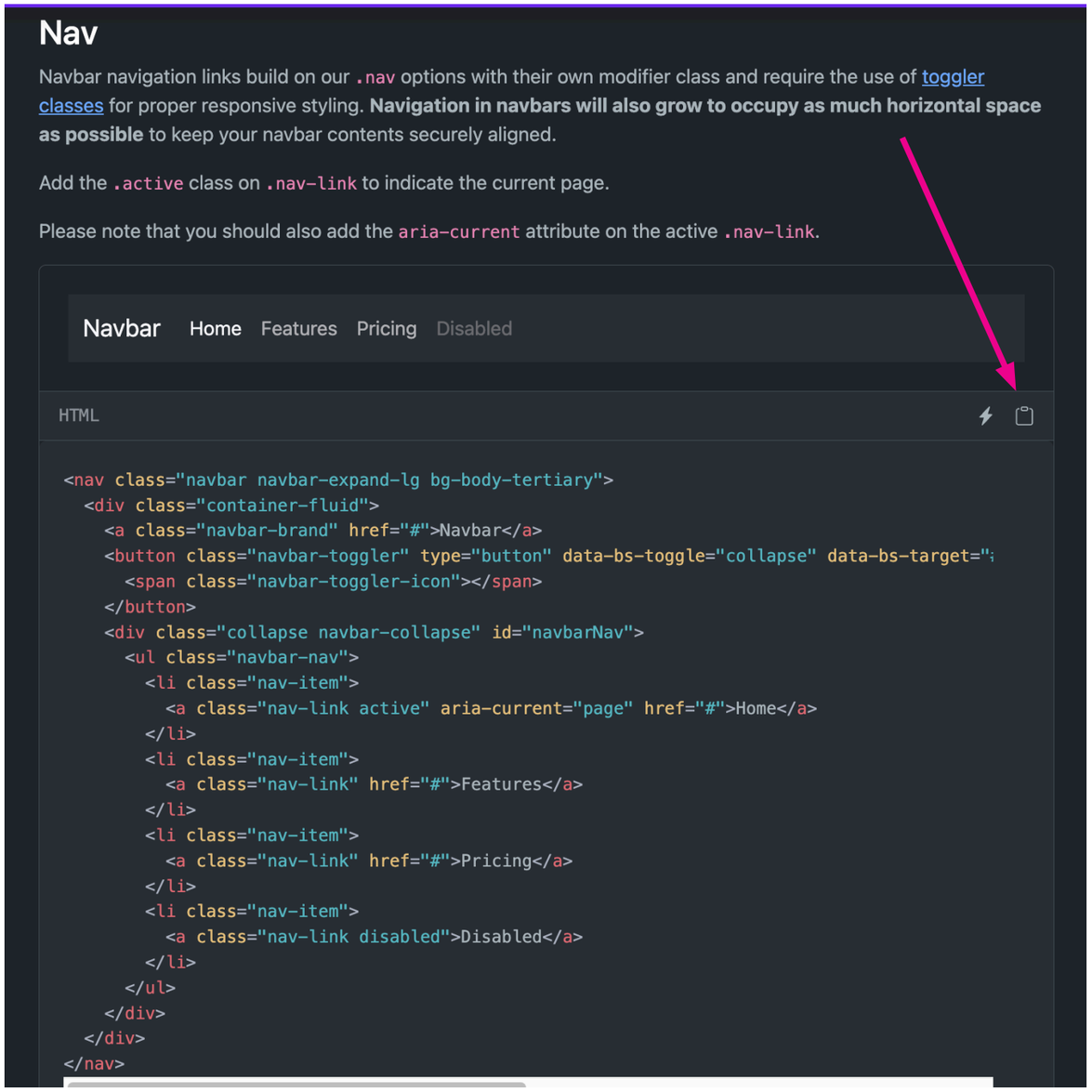
4

Now we are here in the documentation, you can see the information they provide you. They give you the “why” and how to do other things as well. Supported content talks about `navbar-brand`, which is what we will be using for our top navigation. But first we are only going to put in a nav. Then we will add the brand.

Scroll down to Nav. ****I do NOT expect you to hand code this. I DO expect you to click the little clipboard icon (aka copy) then carefully paste the entire piece of code exactly where I have it shown in the image to the right.****

Bootstrap gives you this cheat sheet for a reason. So you can design, wireframe, and go. And that’s what we are doing.

Copy that code using the clipboard icon and head to your html file.



5

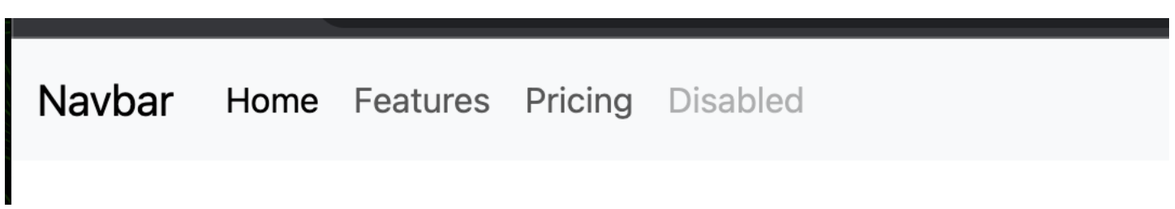
This is the last time I'm going to provide a before and after image. Paste your copied code inbetween the commented out section like so **(nb: your html file will have a** `<header></header>` **paste it inside the** `<header></header>`**)**. Now save your file and look at your index.html as a webpage.

Move the webpage so it is more "mobile format" See how the nav bar collapses into a hamburger menu? Excellent! Hard work done.

On the next page we are going to have a look at what is going on here.

```
19  <body>
20
21
22
23      <!-- this begins the header code -->
24
25
26
27
28
29      <!-- this ends the header code -->
30
```

```
<body>

    <!-- this begins the header code -->

    <nav class="navbar navbar-expand-lg bg-body-tertiary">
        <div class="container-fluid">
          <a class="navbar-brand" href="#">Navbar</a>
          <button class="navbar-toggler" type="button" data-bs-togg
            <span class="navbar-toggler-icon"></span>
          </button>
          <div class="collapse navbar-collapse" id="navbarNav">
            <ul class="navbar-nav">
              <li class="nav-item">
                <a class="nav-link active" aria-current="page" href
              </li>
              <li class="nav-item">
                <a class="nav-link" href="#">Features</a>
              </li>
              <li class="nav-item">
                <a class="nav-link" href="#">Pricing</a>
              </li>
              <li class="nav-item">
                <a class="nav-link disabled">Disabled</a>
              </li>
            </ul>
          </div>
        </div>
      </nav>

    <!-- this ends the header code -->
```



Before I do anything, I want to have a look at what this block of code is doing. And you can learn too. **The images on the right only show "after"** For "before", refer to the image above.

1 There is a nav class in there, it is saying `navbar-expand-lg bg-body-tertiary` This is saying that the navbar expands at the large breakpoint (more on that later) and `bg-body-tertiary` is the colour of the grey. Remove the `bg-body-tertiary` and add the code on image 1. this changes your navbar to dark, and the text so it is readable.

2 There is a `div class="container-fluid"`. This means that the container of the nav bar inside the of the background colour extents from the edge of the webpage. Remove the `-fluid` and see what happens. You will be able to see it better with the darker background. Revert or keep, it's your choice.

3. In the first nav-item there is an `<a class="nav-link active" aria-current="page">`. This is showing that you are on the home page by making it a bit darker. The aria-current attribute shows screen readers where you are. **Cut that bit of code from that nav item, and paste it in Features.** You can use this for making active links. Same with disabled. this makes the link more greyed out. You can remove it, or keep it there or move it somewhere else. You can rename your links if you want. Head here for more info https://www.aditus.io/aria/aria-current/

1

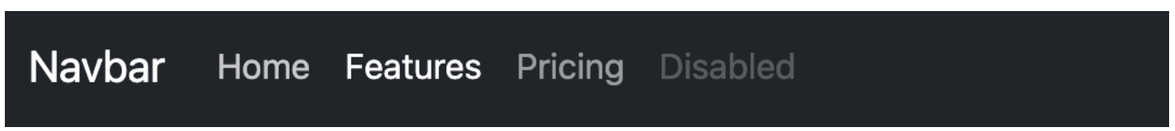
```
<!-- this begins the header code -->

<nav class="navbar navbar-dark bg-dark navbar-expand-lg">
    <div class="container-fluid">
        <a class="navbar-brand" href="#">Navbar</a>
        <button class="navbar-toggler" type="button" data-bs-toggle="col
```

2

```
<!-- this begins the header code -->

<nav class="navbar navbar-dark bg-dark navbar-expand-lg">
    <div class="container">
        <a class="navbar-brand" href="#">Navbar</a>
        <button class="navbar-toggler" type="button" data-bs-
            aria-controls="navbarNav" aria-expanded="false" a
```

3

```
</button>
<div class="collapse navbar-collapse" id="navbarNav">
    <ul class="navbar-nav">
        <li class="nav-item">
            <a class="nav-link" href="#">Home</a>
        </li>
        <li class="nav-item">
            <a class="nav-link active" aria-current="page" href="#">Features</a>
        </li>
        <li class="nav-item">
            <a class="nav-link" href="#">Pricing</a>
        </li>
        <li class="nav-item">
            <a class="nav-link disabled">Disabled</a>
        </li>
    </ul>
```



6

Ok, now we are going to get a bit tricky. But this is doable. If I can do this, so can you. We are going to add the svg and change the name of our navbar to Graphic and Web Design Studio.

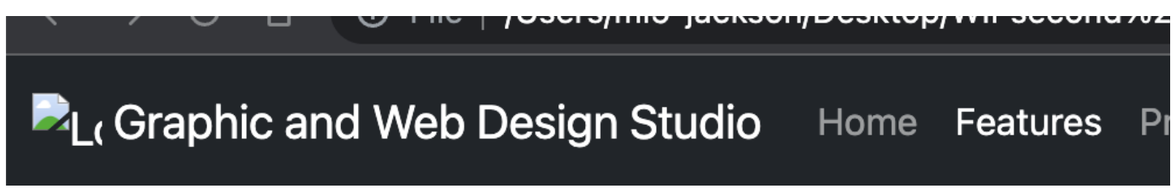
1 Go to https://getbootstrap.com/docs/5.3/components/navbar/#image-and-text **(a) WAIT!** DON'T DO ANYTHING YET. **WE ARE JUST LOOKING.**

2. I want to put my svg into our navbar. So I'm looking at this example **(a)**, to show me where it goes. I see in our code **(b)** that we have a space for our svg to go.

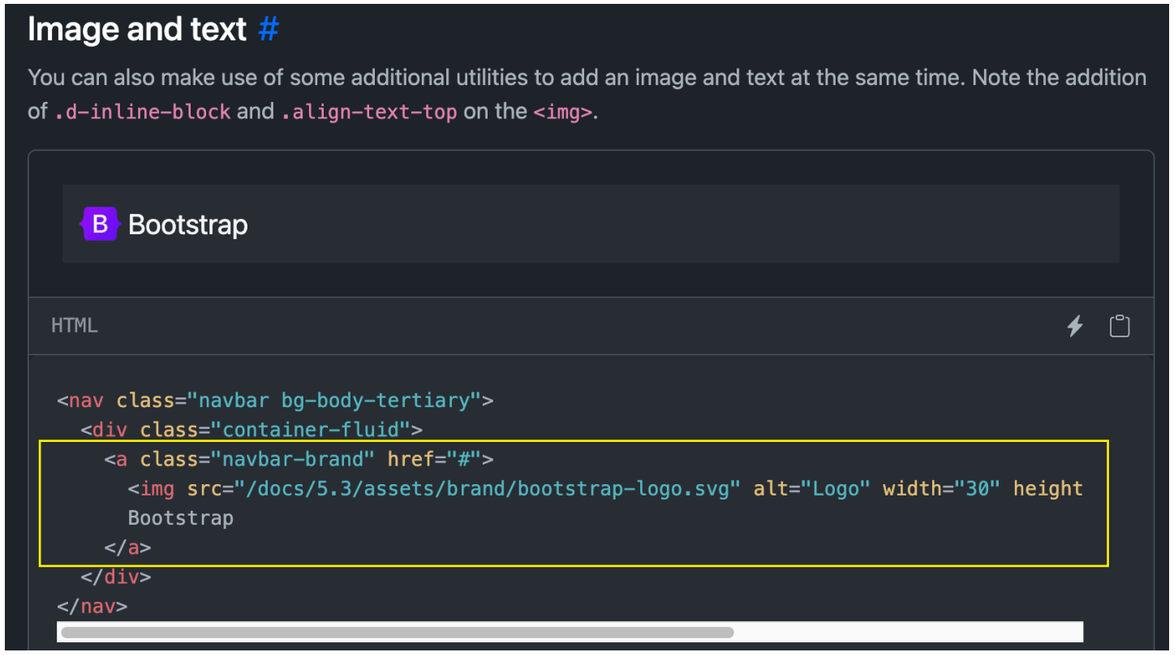
3 Now comes the more complicated part. Copy the entire `<a class>...</a>` from the code snippet **(a)** and paste it where you see the <a class>...</a> in **(b)**. DON'T HAND CODE IT. Use what bootstrap has given you. You should copy like **(c)**. If you are stuck, ask for help, try again, re read. Got it?

4 Now, let's change Bootstrap to Graphic and Web Design Studio. **Save** and refresh.

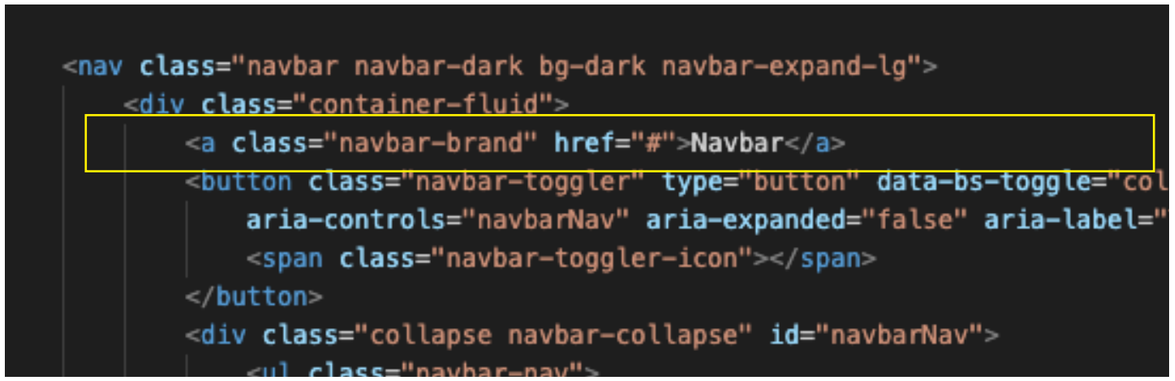
If you are seeing a broken image icon and a bit of the alt text, you are in the right place. Now we will place our svg into the code.



a



b



c

7

I see the <img src...> **(a)** and want to put my svg that is in the images folder provided to you. Here I go. I will also change the width and height to 40, and `align-text` to center.

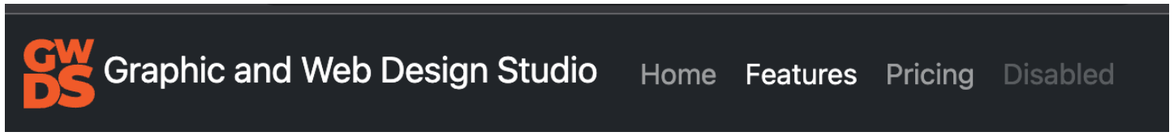
For giggles, change the width and height to 100. Keep or change, your choice.

a

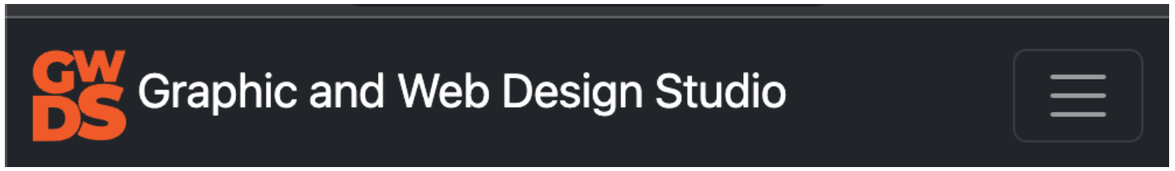
```
<nav class="navbar bg-body-tertiary">
    <div class="container-fluid">
        <a class="navbar-brand" href="#">
            <img src="/docs/5.3/assets/brand/bootstrap-logo.svg"
            alt="Logo" width="30" height="24"
                class="d-inline-block align-text-top">
            Bootstrap
        </a>
    </div>
```

```
<nav class="navbar navbar-dark bg-dark navbar-expand-lg">
    <div class="container-fluid">
        <a class="navbar-brand" href="#">
            <img src="images/GWDS.svg" alt="Logo" width="40" height="40"
                class="d-inline-block align-text-center">
            Graphic and Web Design Studio
        </a>
```

b



c



Ok, here we are. I'm pretty happy with our navigation. It's not sticky, but we aren't worried about that right now. That's for another worksheet. Save, commit, push. Get a cup of tea, whatever. We are moving on now.

It should look like **(b)** when in a lg format and like **(c)** in a sm or xs format

8

We are now getting into the main part of our website. You can see that the comments show you the main section goes all the way down to where the .js script is, so place your `<main></main>` accordingly, like this image.

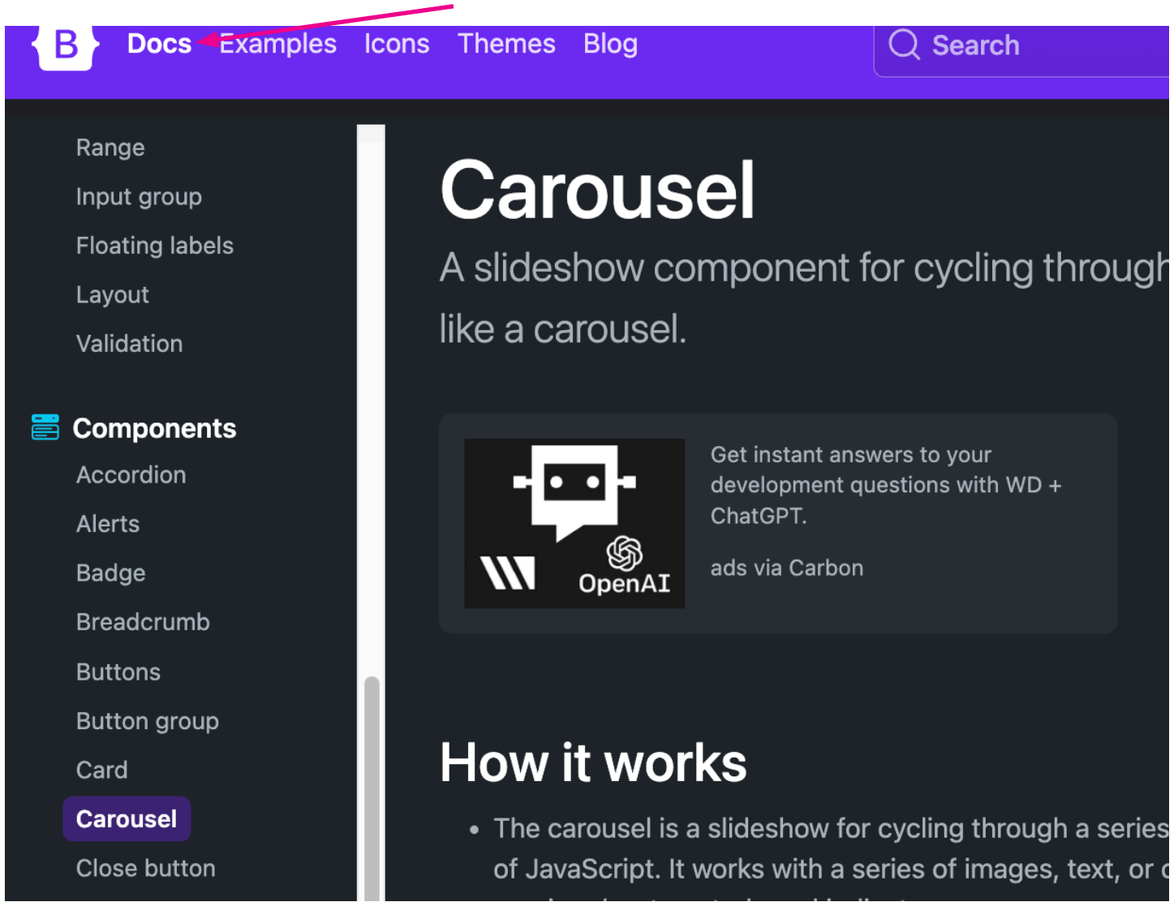
Nothing would have happened with your webpage so let's move onwards and upwards.

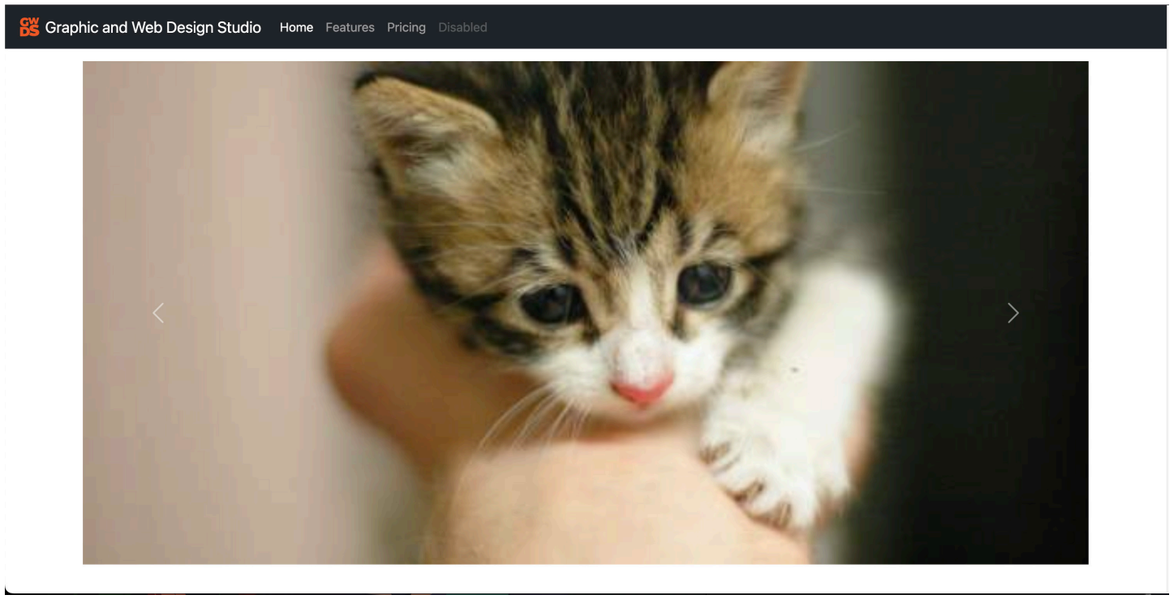
```
<!-- this begins the main code -->

<main>



    <!-- Beginning of row col -->


    <!-- End of row col -->

    <!-- begin caption -->


    <!-- end caption -->

    <!--some horizontal rules  -->



    <!-- this ends some horizonal rules -->

    <!-- and now the footer -->
    <!-- this ends the footer -->



</main>
<!-- this ends the main code -->
```

9

Right. This step is a long one, so take it in pieces.

We are going to put in a carousel. And not just any carousel, one that fades. Fancy. So, I want you to go back to the getbootstrap.com, back into the doucmentation section where we were and find Carousel in the left hand navigation. I'm going to tell you right now for nothing that there is a LOT going on in here to make a carousel. So we are going to, again, copy and paste the code directly from the available snippets bootstrap gives us. So awesome. And like a good chef, below is one I made earlier.

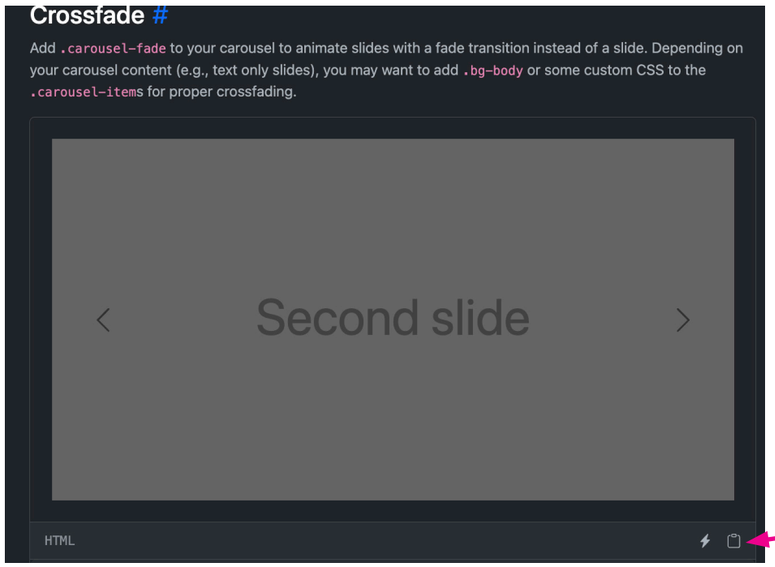




Everything goes into a container. If you remember in our navbar, the container is inside the navbar backbground. So our carousel is no different.
Add a `<div class="container"></div>` under the `<main>`

```
<main>

    <div class="container">


    </div>
```

Now I am going to find the code snippet that is called **Crossfade**. It is inside the Carousel section (see previous page image)



Click that clipboard and head over to your html file. Paste it in right under the <main> but above the `row col` comment.

```
<div class="container">

    <div id="carouselExampleFade" class="carousel slide carousel-fade">
        <div class="carousel-inner">
          <div class="carousel-item active">
            <img src="..." class="d-block w-100" alt="...">
          </div>
          <div class="carousel-item">
            <img src="..." class="d-block w-100" alt="...">
          </div>
          <div class="carousel-item">
            <img src="..." class="d-block w-100" alt="...">
          </div>
        </div>
        <button class="carousel-control-prev" type="button" data-bs-target="#carouselExampleFade
          <span class="carousel-control-prev-icon" aria-hidden="true"></span>
          <span class="visually-hidden">Previous</span>
        </button>
        <button class="carousel-control-next" type="button" data-bs-target="#carouselExampleFade
          <span class="carousel-control-next-icon" aria-hidden="true"></span>
          <span class="visually-hidden">Next</span>
        </button>
      </div>



</div>
```

When you save and refresh, you will only see a broken image and ... this is ok. It's because we haven't put any images in yet. We will be looking at what is going on here, and how to put images in using our old friends the place holder images.

First we are going to look at the carousel items.

There's a whole bunch of carousel-fade. We are going to leave the actual mechanics of the carousel alone. It is doing a job, and a pretty good one for our purposes.

What we want to look at is the `<div class="carousel-item...>` stuff. We are going to place three images in this carousel from three placeholder image websites.

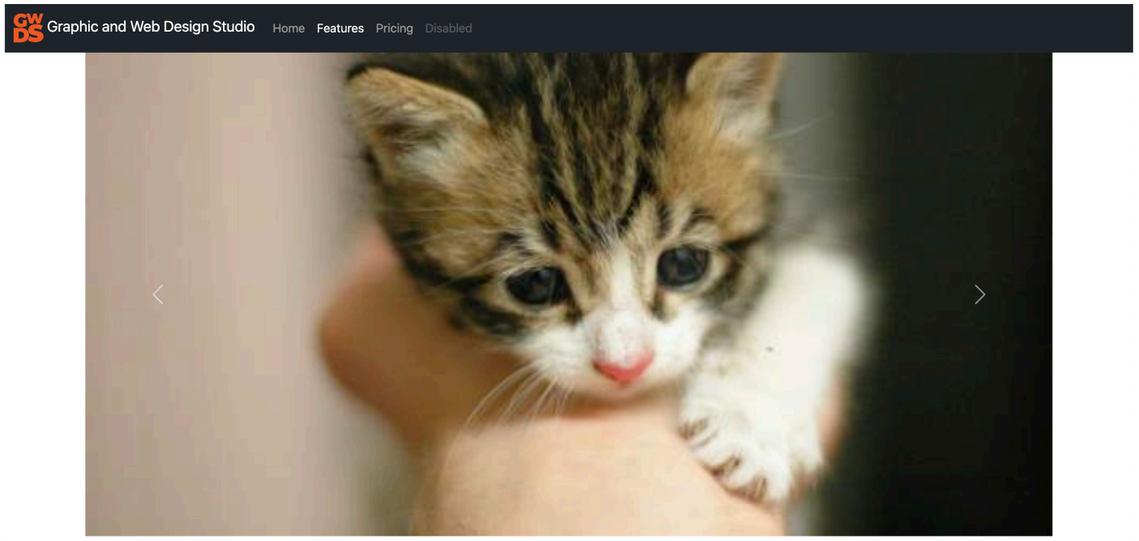
```
<div id="carouselExampleFade" class="carousel slide carousel-fade">
    <div class="carousel-inner">
      <div class="carousel-item active">
        <img src="..." class="d-block w-100" alt="...">
      </div>
      <div class="carousel-item">
        <img src="..." class="d-block w-100" alt="...">
      </div>
      <div class="carousel-item">
        <img src="..." class="d-block w-100" alt="...">
      </div>
```

http://placekitten.com/600/300

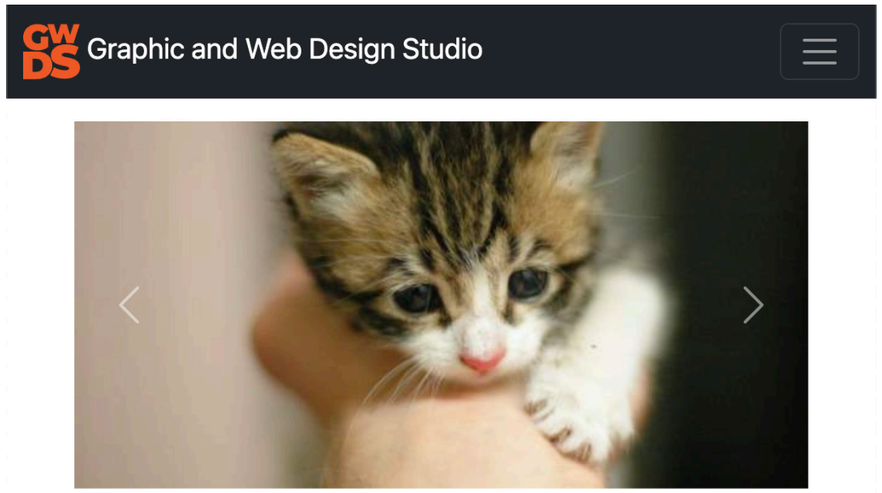
https://placedog.net/600/300

https://placebear.com/600/300

Do you remember where to place them in? If not, refer to the image on the right. (Right inside the `<img src "..."`)



Are you fading? If so, great! Now, there are two things I want to change here, and we will talk about those next. Make your web page in a mobile format. What happens? This! If you don't see this, retrace your steps.



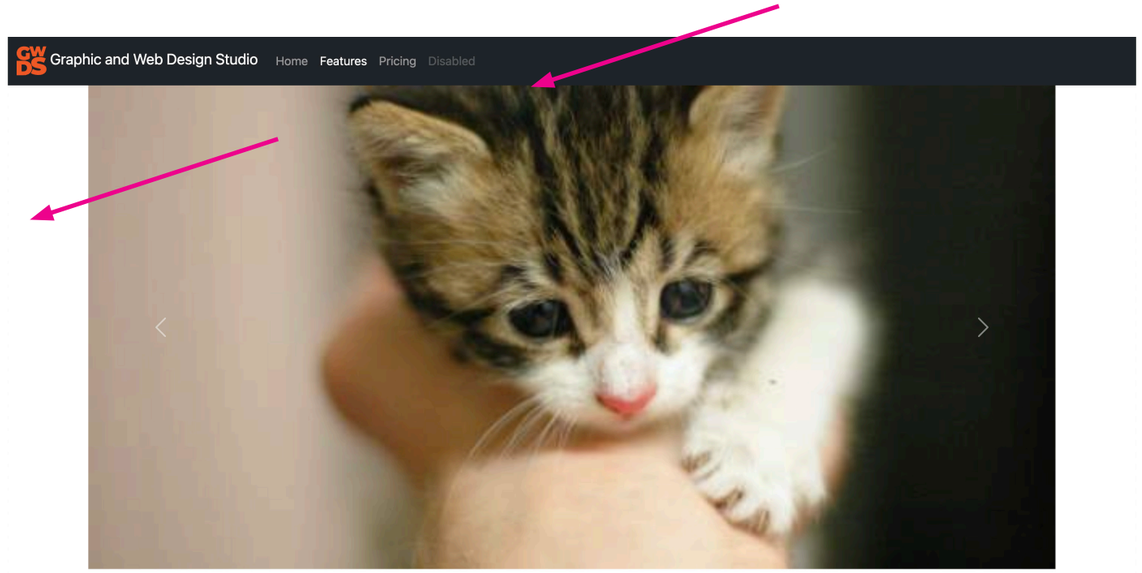
10

Looking at that image again, I want to change two things: there is **no padding** between the nav and the carousel, and the carousel has **whitespace on the edges**. Let's change that. Everything I want to change happens in the `<container>`

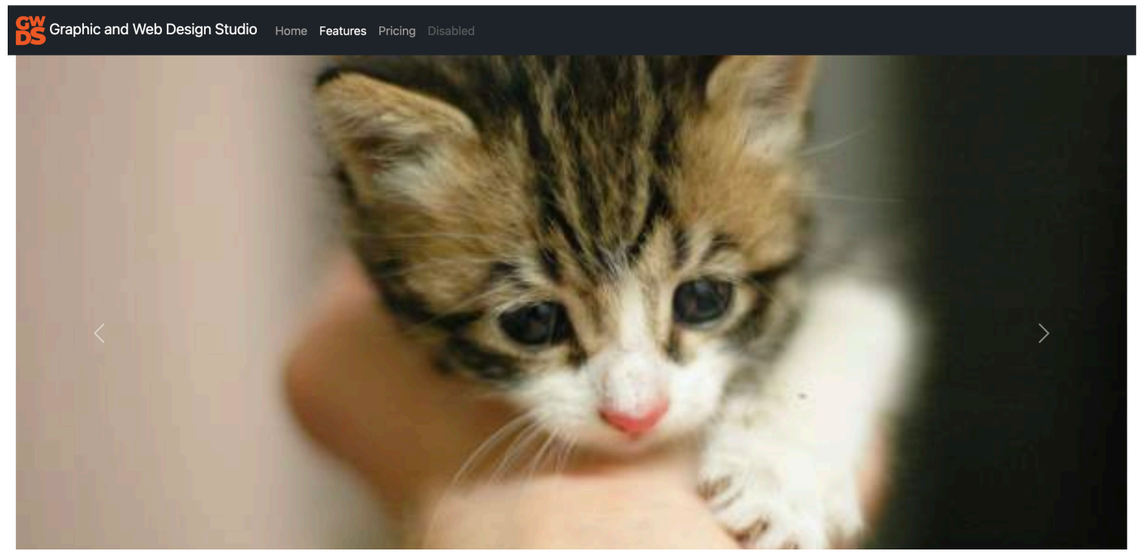
1. The **container** holds all the content for the grid, then comes **row and col** (but that comes in a bit). The first thing I want to do is to make the carousel extend out futher to the edges of the webpage (to have it be completely out we would have it like the nav, where the background is outside of the container). What I am after requires the container to have a `-fluid`. So you will change the container like the image to the right.

2. The second thing I want is to add some padding between the nav and the carousel. If you go to the Margin and padding section under spacing, https://getbootstrap.com/docs/5.3/utilities/spacing/#margin-and-padding you will read that `py` creates padding on the y axis or both top and bottom. (like what we used to do in css). Add **py-3 after fluid**. What if you put py-5? It only goes up to 5, but you can read more about it if you visit the link above. Revert it to py-3 and let's continue.

Ok! Carousel in, next!




```
<main>

    <div class="container-fluid">
```




```
<main>

    <div class="container-fluid py-3">
```

Before we start with the next section, I want to put a giant bit of text in, and center it. This is going to be one of the times we will code it in ourselves, but it's suprisingly straightforward to do.

Underneath the carousel code, you will make a container. I want to add some more padding, so you will add a py-3. It will look like **(a)**. So now we are setting up a new contianer for our text. I want my text centered, and a lead paragraph, like in our first bootstrap worksheet.

Now I want an <h1 class> with a display-1 to make it even better. I want it to be centered. It will code up like **(b)** Save and go have a look. Nice work.

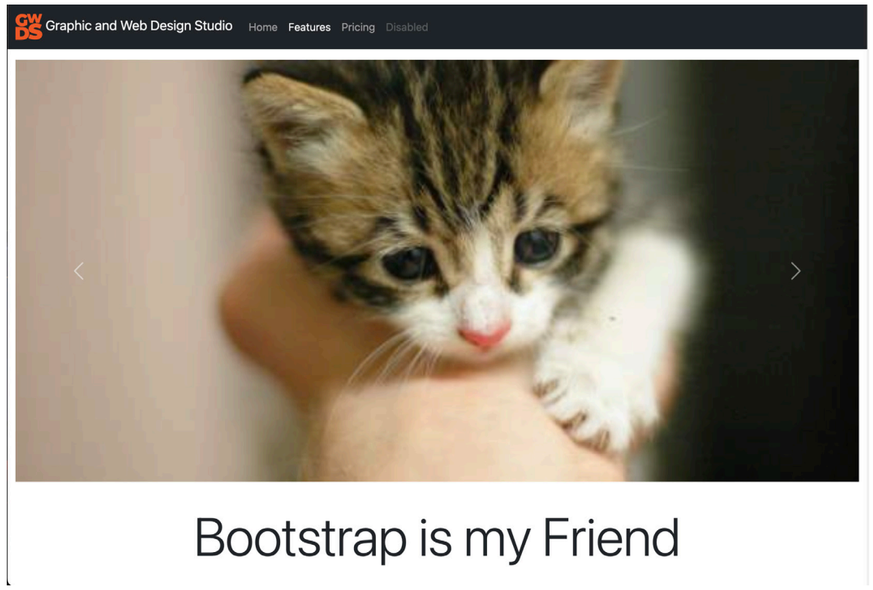
Now I want my lead paragraph. It will be like a <p> but will have a class on it called "lead". I also want that centered. It will code up like this. **(c)** Save and have a look.

a

```
        <span class="visually-hidden">Next</span>
      </button>
    </div>
  </div>

  <div class="container py-3">


  </div>
```

b

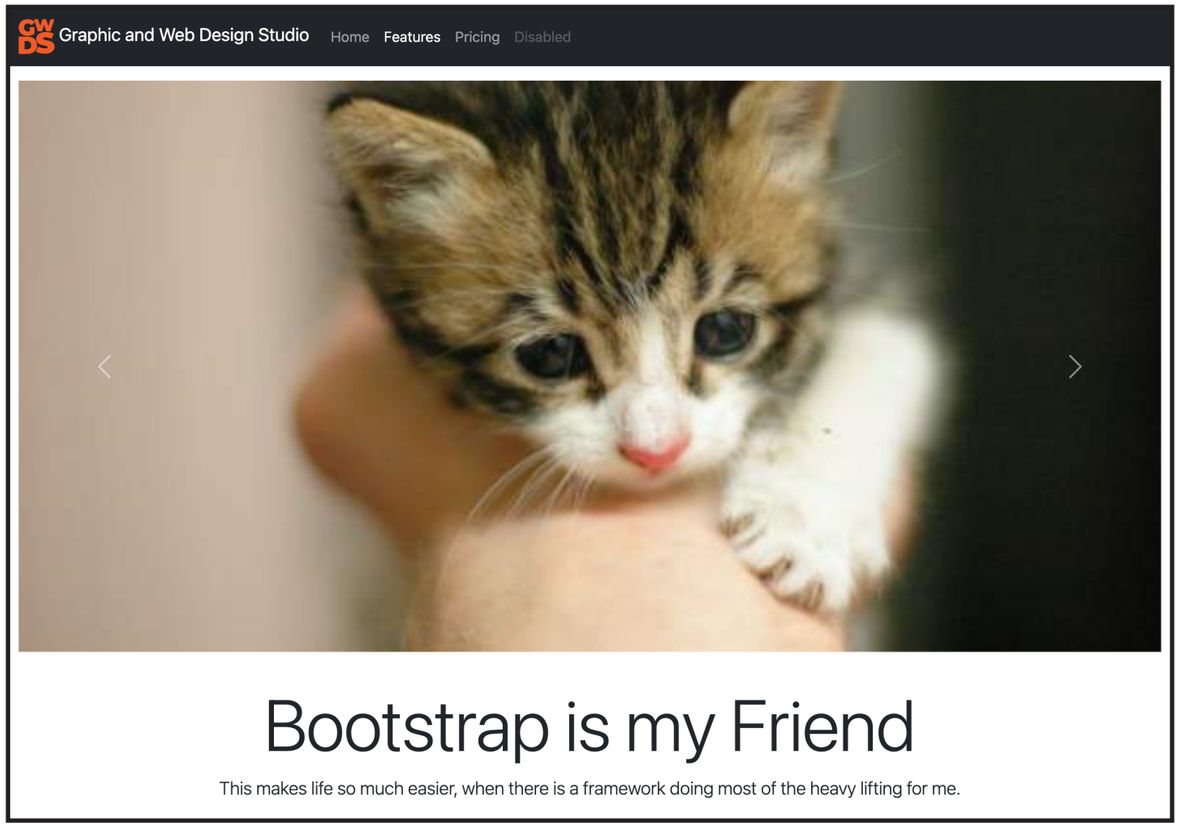
```
<div class="container py-3">
    <h1 class="display-1 text-center">Bootstrap is my Friend</h1>


</div>
```

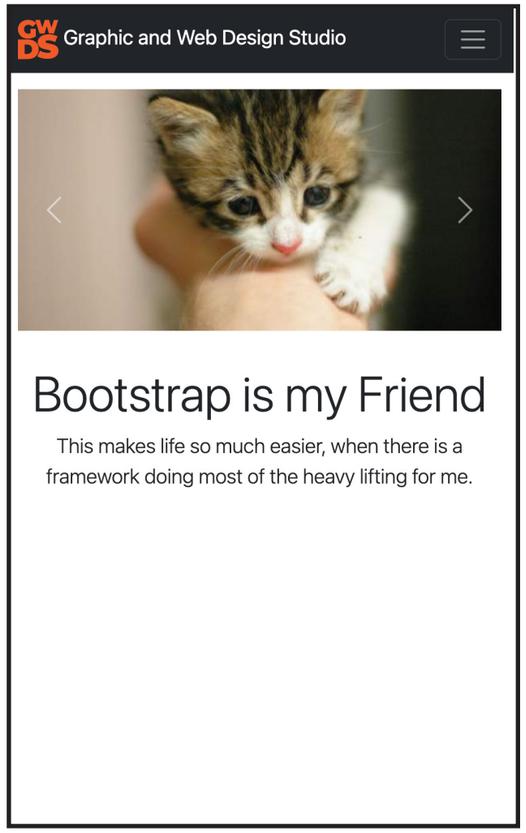


c

```
<div class="container py-3">
    <h1 class="display-1 text-center">Bootstrap is my Friend</h1>
    <p class="lead text-center">This makes life so much easier, when there is a
    framework doing most of the heavy lifting for me.</p>


</div>
```

Looking about like this? Cool. If not, stop and retrace your steps before you go forward. Next is row col.





And we're back.

12

We are going to look at putting some images in a column, with text underneath the images (see cover page), similar to how we did in the first semester, but now bootstrap is going to do all the hard work for us. We are going to do a bit more looking at what the components have to offer.

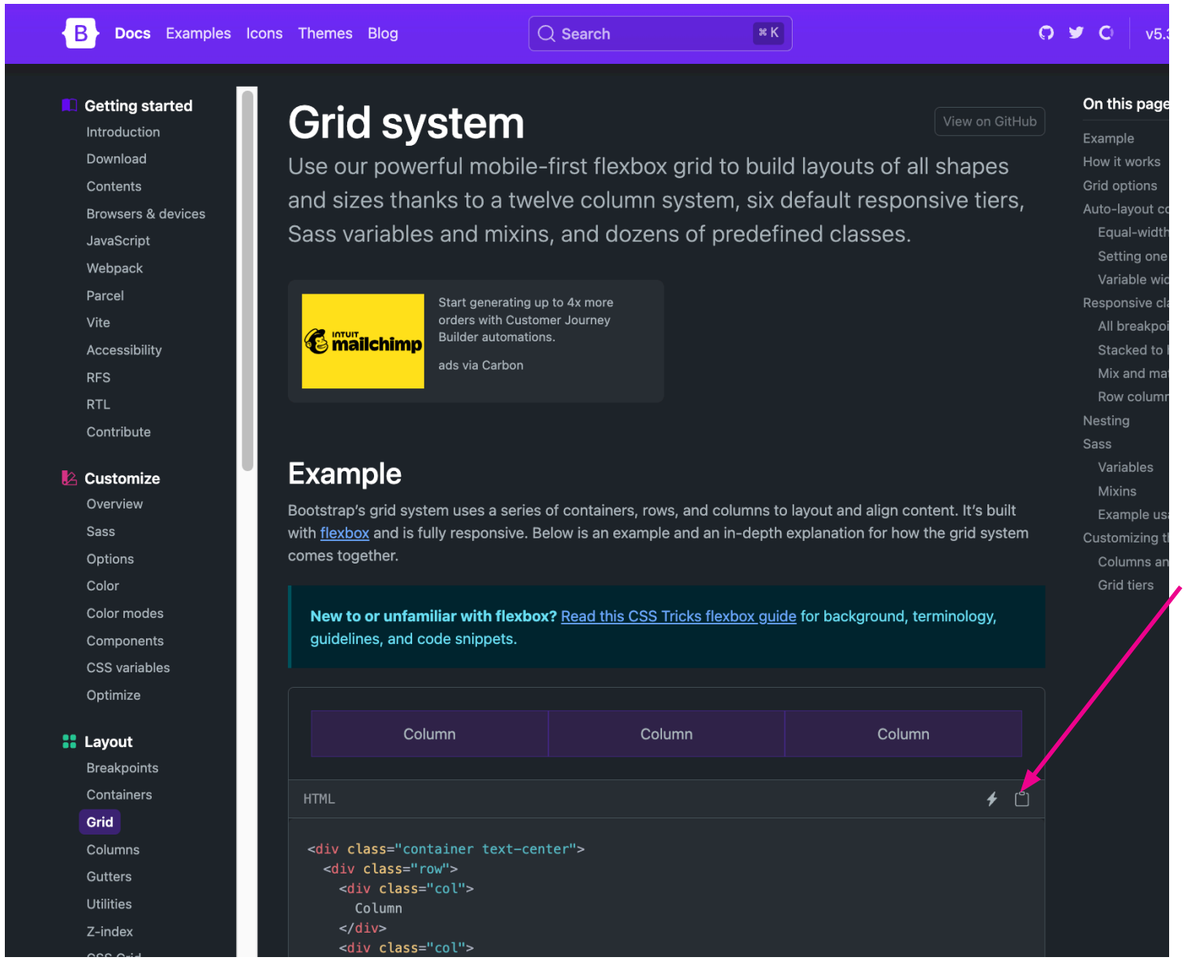
Everything in bootstrap is in a container. Then it can go into a grid. The grid has rows and columns. They are expressed by a **row col**. I will talk about this in class and I urge you to have a look at the documentation on getbootstrap.com found here. https://getbootstrap.com/docs/5.3/examples/grid/ We are going to start easy, and then build up on it. Finally, we will incorporate breakpoints into our container.

We are going to look at a three column grid. Find the Grid under layout and the first Example is what you want to copy and paste inside the `'Beginning of row col'.`

We have:

a container with the text-center
a row class
three complete col classes.

By bootstrap rules, we are set up.



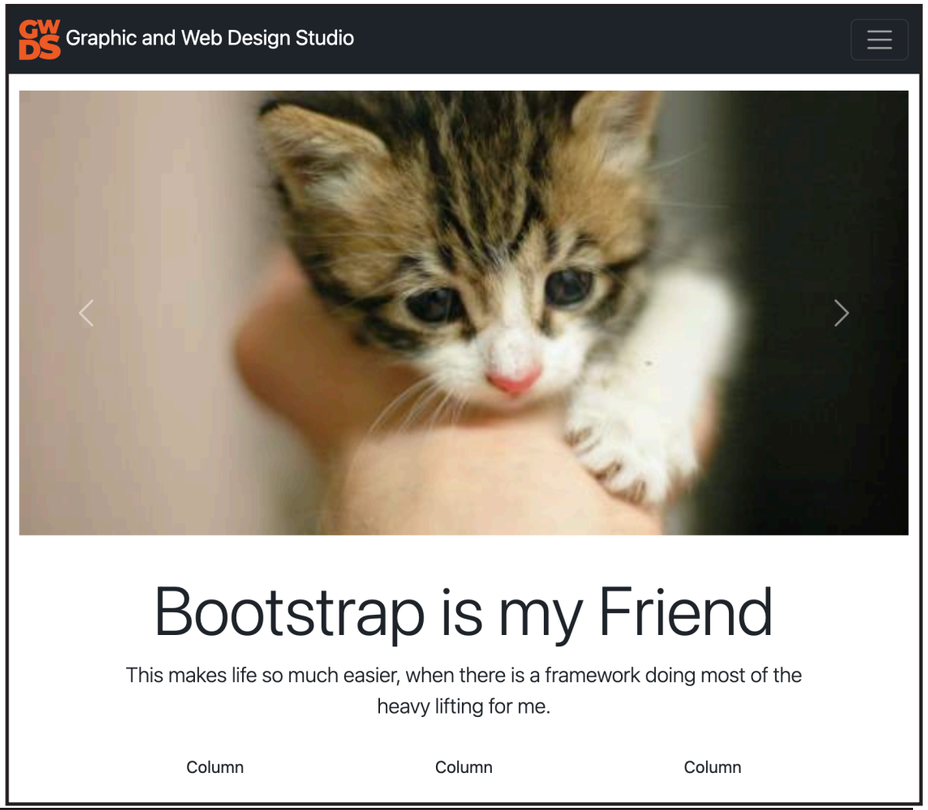

```
<!-- Beginning of row col -->

<div class="container text-center">
    <div class="row">
      <div class="col">
        Column
      </div>
      <div class="col">
        Column
      </div>
      <div class="col">
        Column
      </div>
    </div>
  </div>


<!-- End of row col -->
```

So we know what we are looking at, I now want you to access the poems.txt file in the downloaded files provided. It contains three poems. Place them in where the three `col` are located.

Make the titles of the poems `<h4>` and add some `<p>` for the paragraphs.

I am not digging the centered text so let's get rid of the `text-center` and turn it into a `container-fluid`

We are going to add images next. Responsive images!

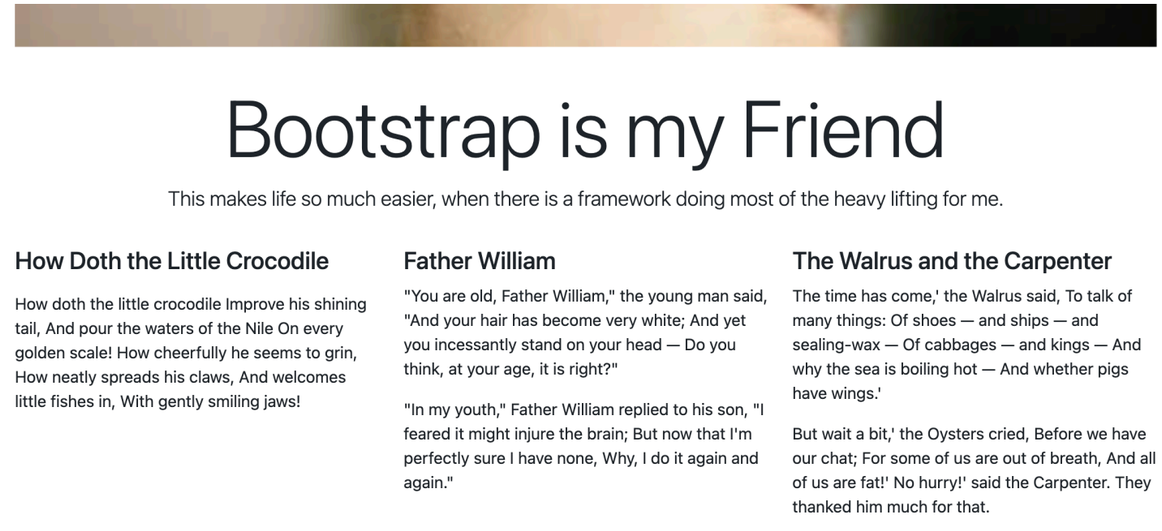



```
<!-- Beginning of row col -->

<div class="container text-center">
    <div class="row">
        <div class="col">
            <h4>How Doth the Little Crocodile</h4>
            <p></p>How doth the little crocodile Improve his shining tail, And pour the waters of
            the Nile On every
            golden scale! How cheerfully he seems to grin, How neatly spreads his claws, And
            welcomes little
            fishes in, With gently smiling jaws!</p>
        </div>
        <div class="col">
            <h4>Father William</h4>
            <p>"You are old, Father William," the young man said, "And your hair has become very
            white; And yet you
            incessantly stand on your head — Do you think, at your age, it is right?"</p>

            <p>"In my youth," Father William replied to his son, "I feared it might injure the
            brain; But now that
            I'm perfectly sure I have none, Why, I do it again and again."</p>
        </div>
        <div class="col">
            <h4>The Walrus and the Carpenter</h4>
            <p>The time has come,' the Walrus said, To talk of many things: Of shoes — and ships —
            and sealing-wax
            — Of cabbages — and kings — And why the sea is boiling hot — And whether pigs have
            wings.'</p>

           <p> But wait a bit,' the Oysters cried, Before we have our chat; For some of us are out
           of breath, And
            all of us are fat!' No hurry!' said the Carpenter. They thanked him much for that.</p>
        </div>
    </div>
</div>
<!-- End of row col -->
```

14

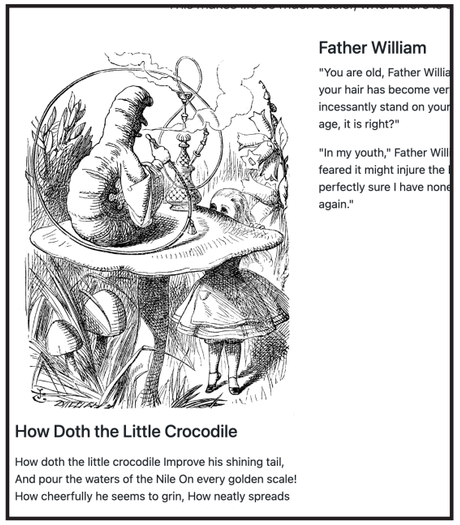
Let's add these images. Like we did last sesmester, the images go above the text. At least that's where we want it. We already have everything in columns, and it is flexing, so we need to place an `<img src="...">` inside each `col`. There are three images: **caterpillar.jpg / father william.jpg / walrus.jpg** Place them in the correct columns like **(a)** I am going to make them a fluid class, so they are across the column. You do the same. I will show you one, and you do the other two.

Now this is good, and it looks great on a desktop, but... it flexes weird. It's not stacking. This is where the row col really starts to shine.

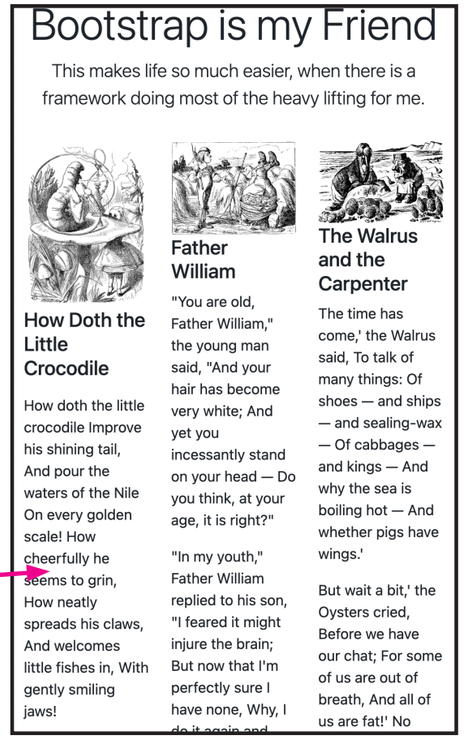


a

```
<div class="container-fluid">
    <div class="row">
        <div class="col">
            <img src="images/caterpillar.jpg" class="img-fluid" alt="...">
            <h4>How Doth the Little Crocodile</h4>
            <p></p>How doth the little crocodile Improve his shining tail, And
            On every
            golden scale! How cheerfully he seems to grin, How neatly spreads h
            little
            fishes in, With gently smiling jaws!</p>
```



not pretty



I could spend a ton of time in here typing out the theory, but I'm going to try to make it easy, as we will be talking about the grid in class too.

In the grid examples we are looking at the "three equal columns". Found here. https://getbootstrap.com/docs/5.3/examples/grid/

Three equal columns

Get three equal-width columns **starting at desktops and scaling to large desktops**. On mobile devices, tablets and below, the columns will automatically stack.

.col-md-4	.col-md-4	.col-md-4

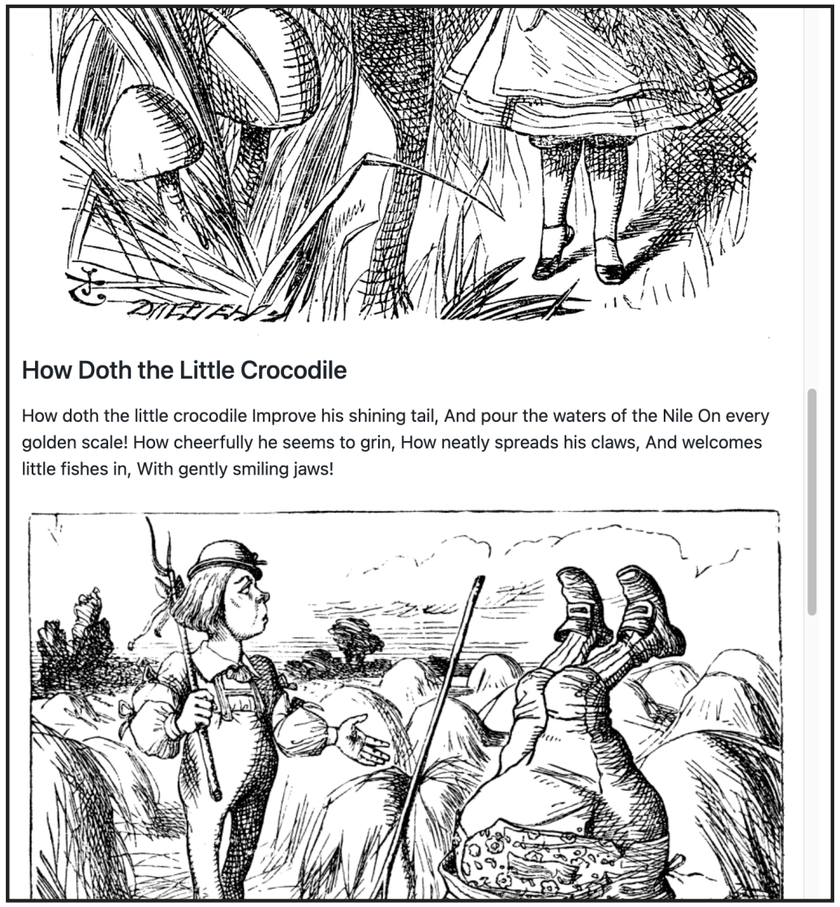
It is giving you a GIANT hint. **col-md-4** this means column, medium, 4 of 12. Because Bootstrap has a **grid-system** of 12 and we want 3 columns, 12/3=4. (And this is the extent of the math I require you to understand in this class). This is telling you that of the 12 columns available, you want 4 of those 12 grouped together, to make 3 columns total. When it hits the **md** breakpoint, it will start stacking. Let's see how that works.

So, let's start by putting the col-md-4 in our three `<div class="col">` make sure you do it to all three

So much better! We are stacking now at the medium breakpoint! The options are literally endless. But now, no messy mobile first columns for your final project. You have the key to a pretty mobile first website right here.

The last thing I'm going to do, is add some `mb-3` to the row. That is margin bottom 3. It will add a bit of padding to make it look nicer.

```
<div class="container-fluid">
    <div class="row">
        <div class="col-md-4">
            <img src="images/caterpillar.jpg" class="img-fluid" alt="
            <h4>How Doth the Little Crocodile</h4>
            <p></p>How doth the little crocodile Improve his shining t
            On every
            golden scale! How cheerfully he seems to grin, How neatly
            little
            fishes in, With gently smiling jaws!</p>
        </div>
        <div class="col-md-4">
            <img src="images/fatherwilliam.jpg" class="img-fluid" alt=
```




```
<div class="container-fluid">
    <div class="row mb-3">
        <div class="col-md-4">
```

Our first row col is done. Now for our second. This time we will be making **unequal** columns to make 12.

I want to add caption code. This snippet will automatically add a `figcaption` class when you paste it in. I ran out of inspiration, so we are going to use our old friend the shoes.jpg and that' also available in the images folder.

Find figures in the bootstrap docs, and we'll grab the first one. But before we get that, let's set up our container.

I want a **fluid container** (remember?) and I want the **row to have a margin bottom of 3** (also remember?) I want **two cols**. Let's start there. Look on the next page to see if you have set that up right.

Did you remember? If not, that's ok. Just copy this image over here

Now copy the figure snippet. Paste in inside the two `col` divs. Broken images and some caption text? Great! Let's add our shoes.jpg

This is great, but we are still having the same issue. We aren't stacking, and I want something that isn't equal columns. Let's have a look at what the cols can do.

Two columns

Get two columns **starting at desktops and scaling to large desktops**.

.col-md-8	.col-md-4

This is our goal. I want one `col-md-8` and one `col-md-4`. Let's do that. Remember where that goes?

nb: these images have rounded corners, can you see in the code where it specifies that?

```
<!-- begin caption -->

<div class="container-fluid">
    <div class="row mb-3">
        <div class="col">


        </div>

        <div class="col">


        </div>

    </div>

</div>



<!-- end caption -->
```

...

A caption for the above image.

...

A caption for the above image.

```
<div class="container-fluid">
    <div class="row mb-3">
        <div class="col">
            <figure class="figure">
                <img src="images/" class="figure-img img-fluid rounded" alt="...">
                <figcaption class
            </figure>

        </div>

        <div class="col">
```

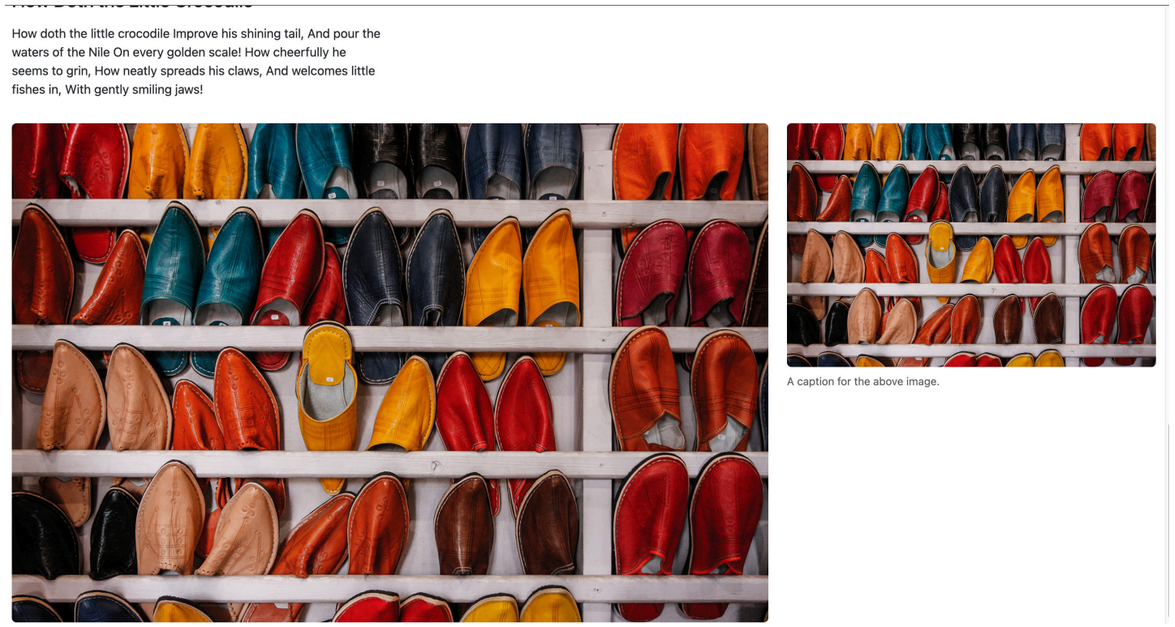
- caterpillar.jpg
- fatherwilliam.jpg
- GWDS.svg
- shoes.jpg
- walrus.jpeg

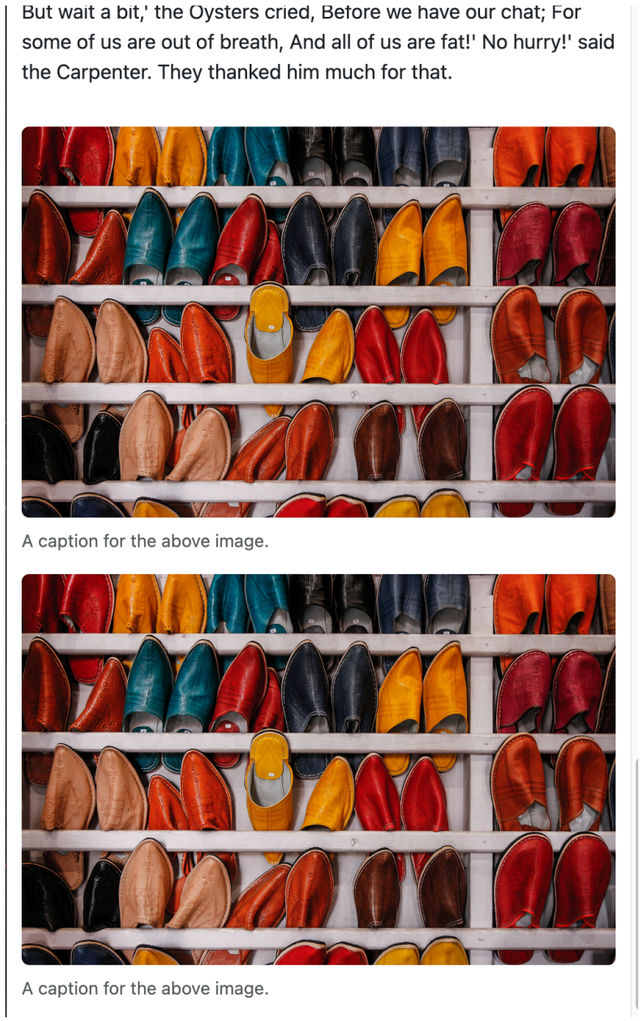
A caption for the above image.

A caption for the above image.

The first thing we see in desktop layout is two images and one is taking up 8/12 of the available grid and one is taking up 4/12 of the available grid. Now lets look at it stacked.

Do you stack?





Swap the col numbers and it will flip. Remove the smaller image and you ahve a nice section for some copy about your image on the left. Give these things a try to better understand what is going on. It will help you when you make your mobile first website.

That's it for today. I actually think that's enough. We made a responsive website that is similar to how flexbox works by just using the docs online. One last thing: at the very top. Put this code in.

```
<!DOCTYPE html>
<html lang="en" data-bs-theme="dark">

<head>
```

Bootstrap truly is your friend.