CSC 170 Lab 13: Mobile Design

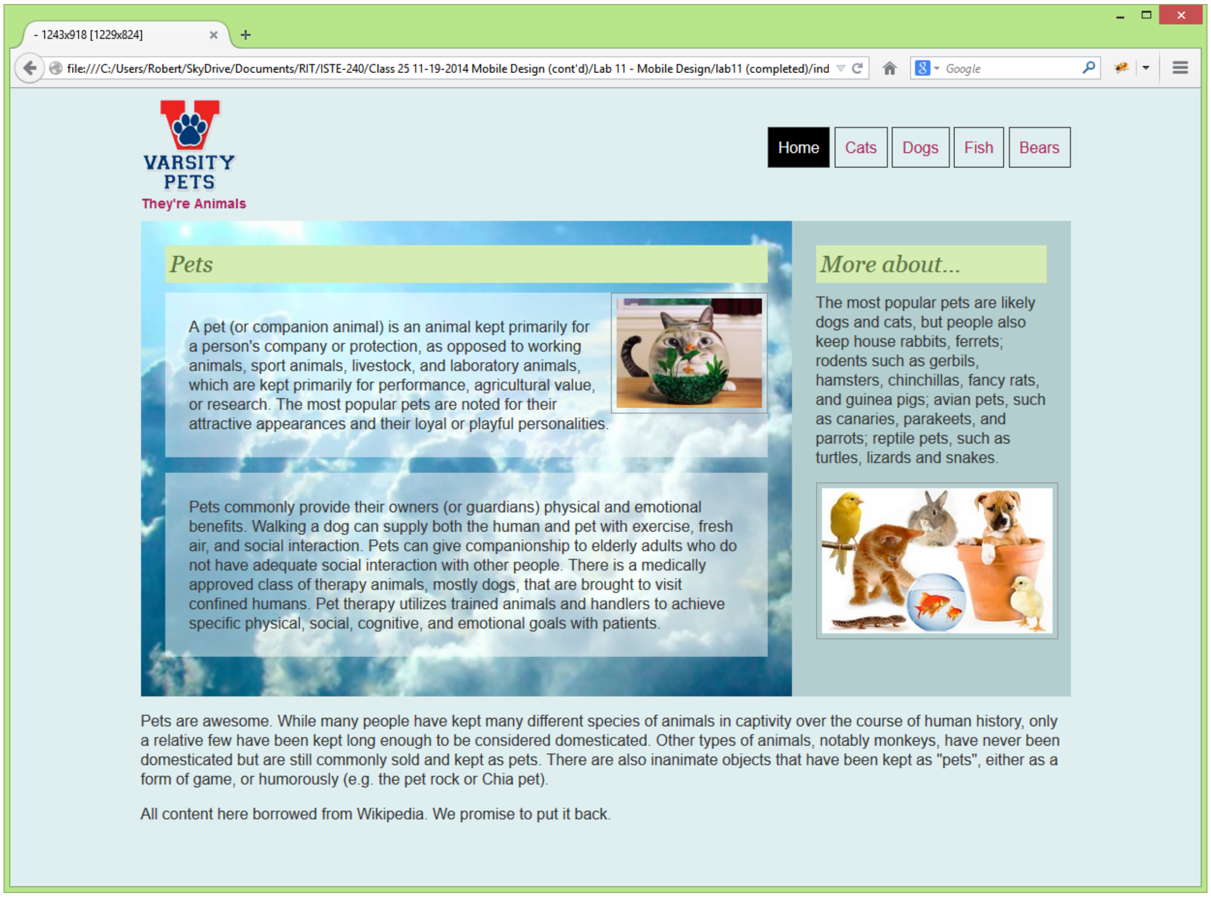
Due: Tuesday, December 6, 2016

Step 0: Setup

- From the Lab13 Lab Assignment in our section in Blackboard, download the file: **starter-files.zip** and extract the folder named **lab13** to your desktop or thumb drive.
- Open the **index.html** file in a web browser.
- Open the **index.html** file in a code editor.
- Open the **css/styles.css** file in a code editor.

The comps in this instruction document show how the provided webpage will look *after* you follow the instructions in this document.

Desktop view (as provided)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Google
VARSITY
PETS
They're Animals
Home
Cats
Dogs
Fish
Bears

Pets

A pet (or companion animal) is an animal kept primarily for a person's company or protection, as opposed to working animals, sport animals, livestock, and laboratory animals, which are kept primarily for performance, agricultural value, or research. The most popular pets are noted for their attractive appearances and their loyal or playful personalities.

Pets commonly provide their owners (or guardians) physical and emotional benefits. Walking a dog can supply both the human and pet with exercise, fresh air, and social interaction. Pets can give companionship to elderly adults who do not have adequate social interaction with other people. There is a medically approved class of therapy animals, mostly dogs, that are brought to visit confined humans. Pet therapy utilizes trained animals and handlers to achieve specific physical, social, cognitive, and emotional goals with patients.

More about...

The most popular pets are likely dogs and cats, but people also keep house rabbits, ferrets; rodents such as gerbils, hamsters, chinchillas, fancy rats, and guinea pigs; avian pets, such as canaries, parakeets, and parrots; reptile pets, such as turtles, lizards and snakes.

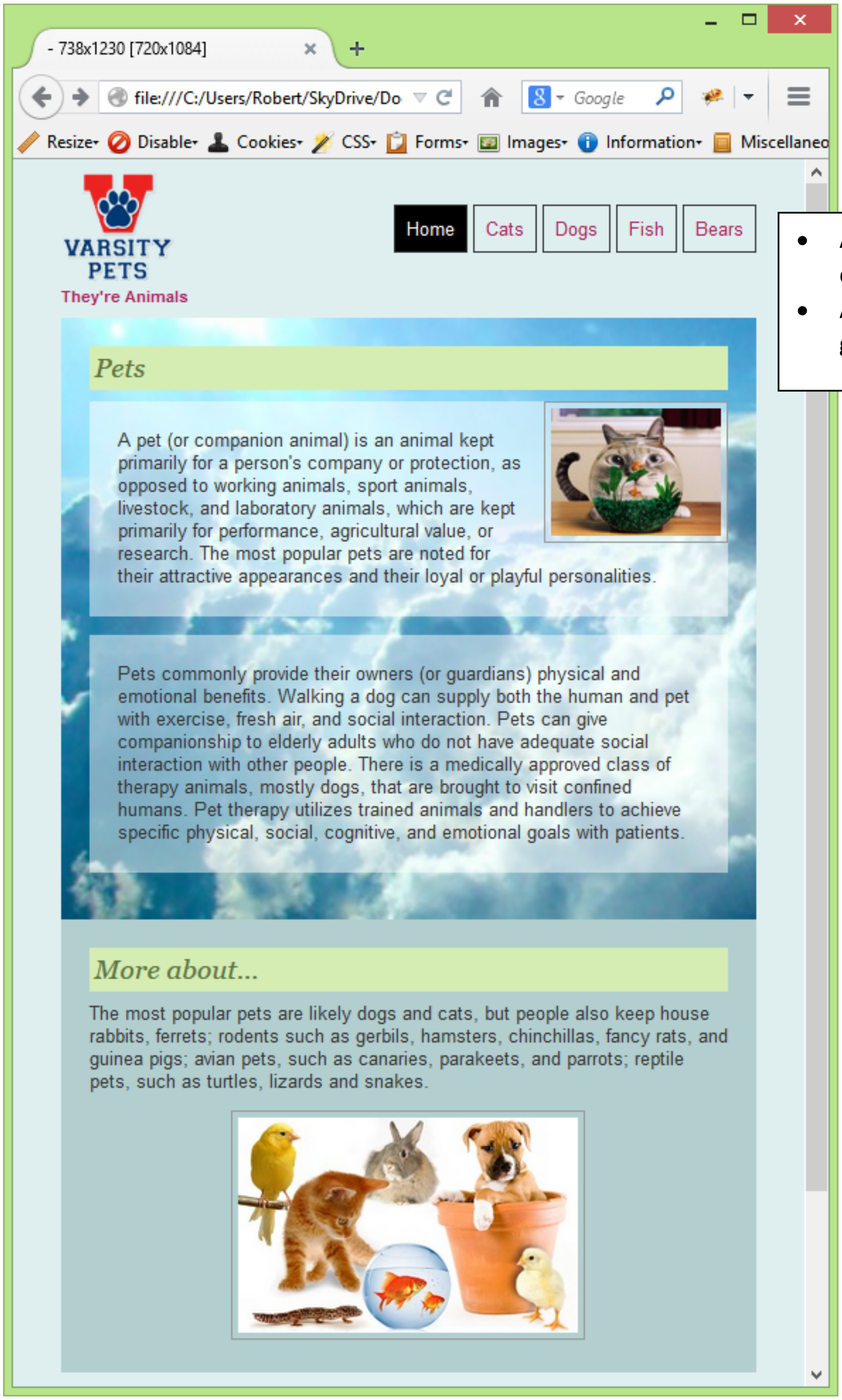
Pets are awesome. While many people have kept many different species of animals in captivity over the course of human history, only a relative few have been kept long enough to be considered domesticated. Other types of animals, notably monkeys, have never been domesticated but are still commonly sold and kept as pets. There are also inanimate objects that have been kept as "pets", either as a form of game, or humorously (e.g. the pet rock or Chia pet).

All content here borrowed from Wikipedia. We promise to put it back.

Notable desktop styles:

- Navigation bar: positioned using absolute
- Navigation list items: side-by-side using inline-block
- Article and Aside, side-by-side using table-cell
- Image in Article: floated right.
- Article: background image
- Image in Aside: scales to 100% of the aside's width

Tablet width (720px)



VARSITY PETS

They're Animals

Home | Cats | Dogs | Fish | Bears

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More about...

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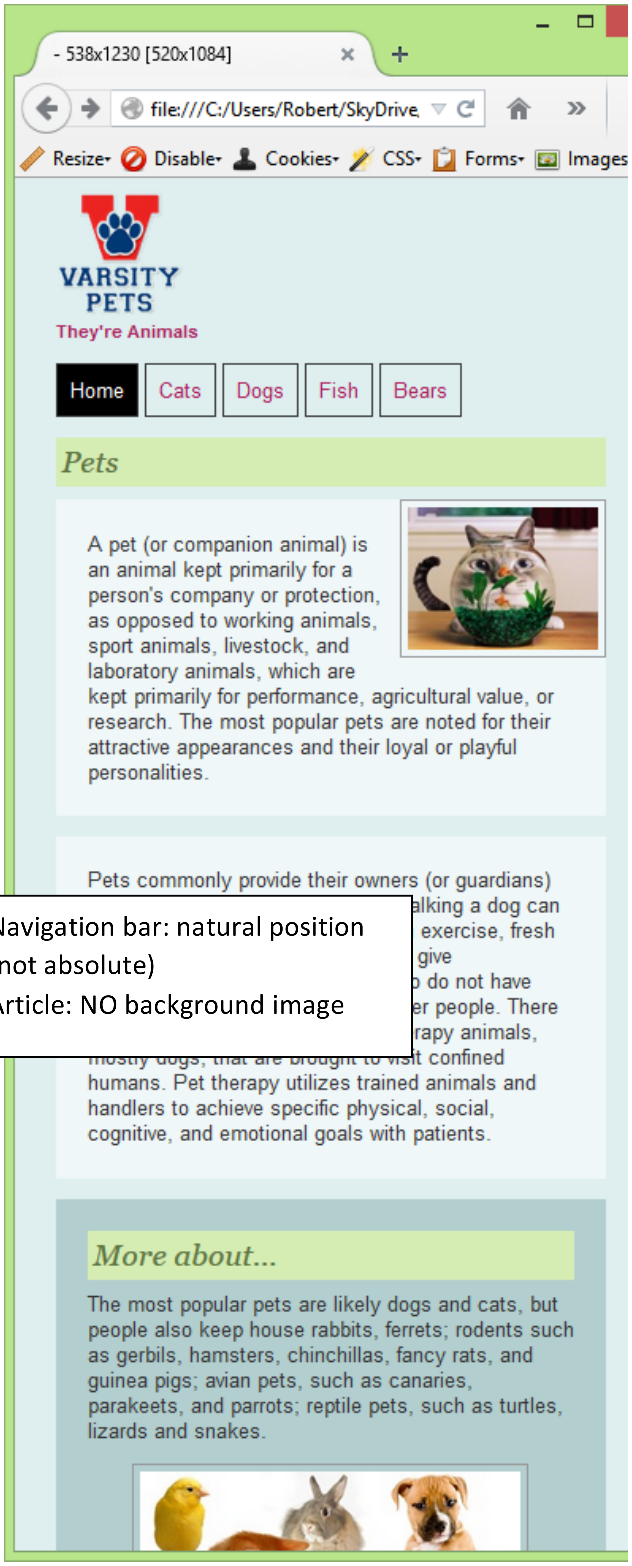
- Article and Aside: natural document flow (block)
- Aside: image centered; does not grow more than 300px

Large Smart Phone (540px)



VARSITY PETS
They're Animals

Home Cats Dogs Fish Bears

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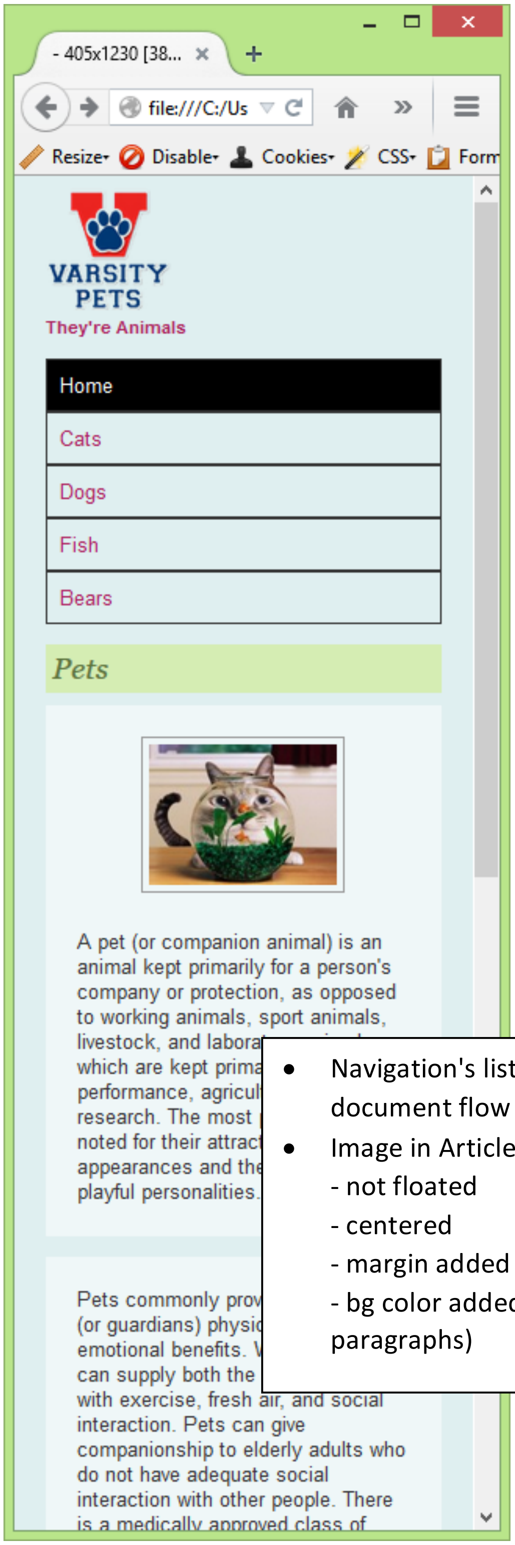
- Navigation bar: natural position (not absolute)
- Article: NO background image

Smart Phone, Portrait (390px)



VARSITY PETS
They're Animals

Home
Cats
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- Navigation's list items: natural document flow (block)
- Image in Article:
  - not floated
  - centered
  - margin added to the top
  - bg color added (to match the paragraphs)

Step 1: Override *Apple Safari for iPhone*'s default viewport

- □ In the **index.html** file, add the appropriate **meta viewport** tag to set the initial scale of the browser to 100% of the default font as determined by the device's width.

Step 2: Set the webpage's overall content container to be responsive

As you work, be sure to check what you're doing in a web browser. Try expanding and contracting the width of the browser to see the effects.

- □ In the **styles.css** file, find the **.container** class and change it from pixel units to a proportional unit (a percentage) that is appropriate for what the container is supposed to do.[1]

- □ Add to the **.container** class, a maximum width that is appropriate to keep the container from growing too wide on wide-screen monitors.[2]

Step 3: Set static elements to be responsive

- □ Look through the CSS. Any CSS that sets a pixel **width** (we don't care about height) to a block element must be changed to use proportional units (like a percentage). Set the units to something appropriate for what it's supposed to do.[3]

Note: there's a limit to what you must set proportional. Only structural blocks need to have proportional units. Dimensions that just add a little "elbow room" side-to-side, usually *don't* need to be made responsive. (Leave any margin or padding as-is.)

Step 4: Set images that should be responsive to be responsive

- □ Look through the HTML. REMOVE **height** and **width** attributes from all images. (Generally, you should never use them on any IMG elements.)

Look at the webpage in a web browser. Identify any images that *should be* responsive.

- Only the "pets2.jpg" image needs to be responsive.
- The other "pets" image can remain at its natural size.
- Logos should never be scaled, especially if they have words in them (like this one does).

[1] Typically, anything between say, 80% and 95%

[2] Typically, anything between say 960px and 1200px

[3] Typically, set the main content area (in our case, the ARTICLE) to something like 70%, and the side bar (in our case, the ASIDE) to something like 30%

- □ In the HTML, apply a class named **full** to the image that needs to be responsive like this…

```
<img class="full img-frame" src="images/pets2.jpg" alt="pets">
```

- □ In the CSS, create a class named **.full** and write the CSS to make the image(s) responsive.
  - A good place to put this class in the CSS file would be: at the bottom of the "Modules" section, with the other classes.[4]

Again, as you work, be sure to check what you're doing in a web browser. Try expanding and contracting the width of the browser to see the effects.

The two **pets** images need to be centered when on smaller displays. To do this, they need to be placed into their own container.

- □ In the HTML, add a DIV around each of the two **pets** images like this:

```
<div>
      <img class="right img-frame" src="images/pets.jpg" alt="pets">
</div>
```

…and this:

```
<div>
      <img class="full img-frame" src="images/pets2.jpg" alt="pets">
</div>
```

- □ In the HTML, add a class called **image-holder** to both the new DIVs you created in the step, above like this…

```
<div class="image-holder">
      <img class="right img-frame" src="images/pets.jpg" alt="pets">
</div>
```

…and this:

```
<div class="image-holder">
      <img class="full img-frame" src="images/pets2.jpg" alt="pets">
</div>
```

[4] In addition to using the width=”100%” trick on the images that are supposed to be responsive, be sure to set the max-width to keep the image from growing more than its native size. (BTW – the pets2.jpg image happens to be 300px wide.)

□ In the HTML, add a another class called **light-bg** to *only* the new DIV with the "**pets.jpg**" image (not the **pets2.jpg** image)…

```
<div class="image-holder light-bg">
      <img class="right img-frame" src="images/pets.jpg" alt="pets">
</div>
```

□ In the CSS, create a class named **.image-holder** and write the CSS to make the DIVs centered.

- A good place to put this class in the CSS file would be: at the bottom of the "Modules" section, with the other classes.

```
.image-holder { text-align: center; }
```

Step 5: Set breakpoint(s) using media queries

□ In your CSS, create a media query with a `max-width` breakpoint at `720px`.[5]

□ INSIDE the media query with a breakpoint set at `max-width: 720px`, override the **article** and **aside**'s display property.
Change it to **`display: block;`**
Also, set the width property to: **`width: auto;`**

Check it out in a web browser. Expand and contract the width of the browser to see the effects.

□ Create another media query with a `max-width` breakpoint at `540px`

□ INSIDE the media query with a breakpoint set at `max-width: 540px`, override the **article** and **nav** to set the background image to `none` and padding to `0` (zero).

□ And in the same media query (at 540px), override the **nav** to set the `position` back to the default of `static`

Check it out in a web browser. The ARTICLE and ASIDE will jump top-over-bottom when you reduce the width of the viewport (browser window).

□ Create a third media query with a `max-width` breakpoint at `390px`

[5] A good place to put this media query in the CSS file would be: at the bottom of the file, after all other CSS.

- □ INSIDE the media query with a breakpoint set at `max-width: 390px`, override the **nav li** to set its `display` property back to its default of `block`

- □ And in the same media query (at 390px), override the .right class as follows:

```
.right {
      float: none;
      margin-left: 0;
      margin-top: 25px;
}
```

Step 6: Check and Upload your Work

Save all your work and check to see if it replicates the comps shown at the end of this document as you resize the width of your web browser.

When you are done with your webpage, close everything and use an FTP tool to access your account on **urcsc170.org** and upload your files:

- □ In a web browser (any), go to this address to check your handiwork:
  www.urcsc170.org/*accountname*/lab13
  (where "*accountname*" is your account name)

Step 7: Report your work

- In our Blackboard section, in Lab 13, post a link to your webpage to receive credit for this Lab.