Client-Side Web Development

Class 4.2

Today's Topics

- **Review:** Increase Your Flexibility

- Responsive Images

- **Lab:** Image Response

Announcements

Recording

CSS Zen Garden

Any Questions?

Review: Increase Your Flexibility

Responsive Images

CSS Sizing

**Using CSS to make an image grow and shrink
as the viewport changes**

```css
img {
    display: block;
    max-width: 100%;
}
```

Resolution/DPI Based Images

Using HTML tags and attributes to provide the best image for the current situation based on resolution, pixel density, and art direction

The `srcset` Attribute

The `srcset` attribute provides the browser with a list of available images, and let the browser choose the best one based on the current window size and pixel density

```html
<img
    src="pelican.jpg"
    alt="A pelican eating">
```

```html
<img
  srcset="pelican-200.jpg 200w,
          pelican-400.jpg 400w,
          pelican-800.jpg 800w"
  src="pelican.jpg"
  alt="A pelican eating">
```

The `sizes` Attribute

The `sizes` attribute gives the browser the display size of the image

```
<img
  srcset="pelican-200.jpg 200w,
          pelican-400.jpg 400w,
          pelican-800.jpg 800w"
  sizes="50vw"
  src="pelican.jpg"
  alt="A pelican eating">
```

If the image display sizes is based on a specific condition, It is possible to add media conditions, to the sizes attribute

```html
<img
  srcset="pelican-200.jpg 200w,
          pelican-400.jpg 400w,
          pelican-800.jpg 800w"
  sizes="(min-width: 1024px) 33vw,
         (min-width: 768px) 50vw,
         100vw"
  src="pelican.jpg"
  alt="A pelican eating">
```

Art Direction

It is sometimes necessary to alter or change an image to better fit a specific situation

The `<picture>` element

The `<picture>` element is a wrapper containing several `<source>` elements that provide several different sources for the browser to choose between, followed by the all-important `<img>` element.

The `<source>` elements include a `media` attribute that contains a media condition, which are tested to decide which image is shown

The first `<source>` with a condition that returns true will be displayed.

```html
<picture>
    <source media="(min-width: 768px)"
      srcset="pelican-portrait.jpg">

    <img
      src="pelican-landscape.jpg"
      alt="A pelican eating">
</picture>
```

The `<source>` can take a `srcset` attribute with multiple images referenced, and a `sizes` attribute too.

```html
<picture>
    <source
      media="(min-width: 768px)"
      sizes="(min-width: 1024px) 33vw, 50vw"
      srcset="pelican-portrait-200.jpg 200w,
              pelican-portrait-400.jpg 400w,
              pelican-portrait-800.jpg 800w">

    <img
      srcset="pelican-landscape-200.jpg 200w,
              pelican-landscape-400.jpg 400w,
              pelican-landscape-800.jpg 800w"
      src="pelican-landscape.jpg"
      alt="A pelican eating">
</picture>
```

It is also possible to use the `<picture>` element to utilize image formats not supported by all browsers

```html
<picture>
    <source
        type="image/webp"
        srcset="pelican.webp">
    <img
        src="pelican.jpg"
        alt="A pelican eating.">
</picture>
```

Lab: Image Response

For next class...

- Web Animation

- **Exercise:** Pseudo Judo