WMDD 4835 Summer 2017
Assignment 4: Video, Picture, Srcset, SVG, and WebP

In this assignment, you will have a chance to practice using the HTML5 video element and delivering the appropriate size, format, and shape of image depending on browser and screen size. You will also get additional practice using flexbox, transition animations, 3d transforms, and advanced selectors.

Download the starter files from D2L. There is a video called demo.mov that demonstrates approximately how your finished product should look.

- **[1 mark]** Create a new style sheet for your code.
- **[2 mark]** You will need to modify the HTML and CSS for this assignment. However, only modify the HTML as directed by the instructions.
- **[2 mark]** Create a zip file with your finished product (not a rar or some other kind of archive) and hand it in to D2L. Make sure you have deleted any unnecessary videos from the folder before archiving and handing in. (Particularly the demo video.)

TASK ONE: HEADER

- Use **height** and **min-height** to make the **header** to be as tall as the window, or tall enough to fit all content inside, whichever is larger.
- The **header** contains a **video** element. Use **absolute** positioning as well as the **object-fit** property and **z-index** property to set up the video as a sort of background for the header. You may need to use **overflow:hidden** on the **header** to get this to work in Chrome.
- Set the video to automatically play, loop, have no controls, and be muted.
- Use the **poster** attribute of the **video** tag to make sure there will be a background image if the browser does not support mp4 video. (you may choose any appropriate image.)
- The **header** also contains an **img** tag with a logo in **svg** format. Use a **picture** tag to make sure browsers that do not support **svg** (or the picture tag, for that matter) will display a **png** fallback. (included in the starter files.)
- Use **Flexbox** to set up the layout for the header, including the **nav**. Try to get the header to gracefully adapt to smaller screens without using media queries, and try to get the **nav** to stick to the bottom of the header without using **position**.
- The **header** has, in addition to a background video, **two static backgrounds**: a **linear gradient** and an **image** of a map with transparency. Choose a gradient that looks good to you, and set up the background image so that the **webP** version displays in browsers that support it and the **png** version displays in other browsers. Use a custom **Modernizr** script to do this. (Notice that the webP image has a smaller file size than the png. Think about how to modify the CSS to deliver even smaller images when using smaller screens, but don't worry about implementing this right now.)

- BONUS: as in the demo video, try getting the background video of the header to change to some other video when hovering over one of the nav items. (Use only one video for this to keep your submission file size down!)

TASK 2: BODY IMAGES

- The **main** element of the page has a few images that stretch across the page.
    - Use the **object-fit** property to make sure the images always fit nicely into their allotted space.
    - Use the **object-position** property to make sure we can always see the important part of the image. (like the sunglasses.)
    - Select each image using advanced selectors.
- Use the **picture** element along with the source element, **srcset** attribute, and **media** attribute to make sure that the browser displays the appropriate size of image based on the screen or window size. Basically, the three choices are **big**, **small**, and **cropped**, for screens in order of descending size.

TASK 3: FOOTER ICONS

- Use advanced selectors and Icomoon to set up icons for each **social menu** item. Do not edit the HTML for this.
- Set up the social menu items so that the text is **visually hidden**, but visible to screen readers. (research different ways to do this and try to come up with a way that will work for this particular case.)
- Have the icons do one complete 3d rotation of 360 degrees when hovered over (the direction is up to you). Use the **perspective** property to make parts of the icon that are closer to the viewer look bigger.

Checklist:

- **[4 marks]** Video
  - Scales properly with header
  - Positioned in background
  - Image fallback
  - Correct video tag attributes
- **[4 marks]** Flexbox header
  - Reasonable layout with appropriate behavior upon resizing
  - webP background implemented with png fallback
- **[4 marks]** Images
  - Use of picture and source tags to display correct versions of the image
  - Use of advanced selectors to target images
- **[4 marks]** Rotating icons
  - Icons rotate 360 degrees upon hover
  - Text of links appropriately hidden
  - Perspective used for 3d effect
- **[3 marks]** Bonus
  - Different video displays in header background when hovering over menu item
  - Appropriate animated fade transition when hovering on and off