

WMDD 4835—001 Summer 2017
Midterm Exam part 1

- Open Book
- No electronic devices other than your desktop workstation or laptop are permitted
- Communication with anyone other than the instructor is not permitted
- This exam has 2 pages
- The time for the exam is 1.5 hours
- When you are finished, create a zip file with all necessary materials and hand it in to D2L. Make sure to delete demo videos before handing in your zip file.
- The instructor will announce the deadline for the exam when the exam starts. All files must be submitted before the deadline.

*Watch the demo videos closely to make sure you are implementing the correct functionality and layout.

Download the midterm materials from D2L. The file we will be working with is called midterm.html. Do not edit the HTML except where instructed. Create a new CSS file for your styles.

Task 1: Flexbox, <picture>, srcset
[10 marks total]

- [5 marks] Use the Firefox browser for this part. Set up a responsive image by doing the following:
 - o Set up an image that will be responsive to screen resolution and window size. The browser should automatically choose the best image for the given screen and window size and device pixel ratio.
 - o Create an **img** tag at the place in the html where it says “responsive image goes here”:
 - Create an **srcset** attribute in the **img** tag and put in the three images from the **images** folder, along with their **widths** (using the **w** unit). Remember to check the actual widths of the images.
 - Create an **src** attribute and set its value to one of the images in the **images** folder.
 - Set the **alt** attribute to something appropriate.
 - Set the value of the **sizes** attribute to be **60vw** when the window is above 800px and **100vw** below 800px. The **course notes** on this topic, found in the course content section of D2L, will be helpful for this.
- [5 marks] Recreate the layout from the demo movie using flexbox.

Task 2: Transitions and Animations

[6 marks]

- **@keyframes:** Use the **@keyframes** rule to create a rotation animation for the link. The animation should play when the user moves the mouse pointer onto the link and should continue playing as long as the pointer is on the link. (**hint:** one full rotation corresponds to 360 degrees.)
- **Transition:** Use the transition property for the following hover animation:
 - o The **color** of the text should change to **deeppink** over **1s**.
 - o After the **color** has finished changing, the **border-width** of the link should change to **1px** over **1s**. (**hint:** check the syntax for adding a **delay** to a transition animation: <https://css-tricks.com/almanac/properties/t/transition/>)

Task 3: Advanced Image/Video Properties

[4 marks]

- There is a video container div set up in the HTML. Create a **video** element that is **800px** wide and **100px** tall using the cow video. It should have the **controls hidden**, **loop** indefinitely when played, and have the sound **muted**.
 - o Using only CSS and **without using the position** property, fit the video of the cow to its frame so that it is not distorted or stretched. Make sure that the cow's face is visible in the frame throughout most of the video. (It does not have to be positioned exactly the same as the demo, but it should be close.) To get this to work in Chrome, you may need to use **overflow:hidden** on the container **div**.

Bonus Task

[+7 marks]

- **You will have to write your own HTML for this part.**
- Create an **img** tag that is **700px** wide and **350px** tall using the Nathan Fertig cow image.
- Apply two **backgrounds** to the div: a **linear-gradient** from **transparent** to **pink**, and the cow.png/cow.webp image. Make sure the gradient is on top of the image. The cow pattern should be displayed at size **64px X 64px**.
- Use **Modernizr** to make sure the **webp** background image displays in Chrome and the **png** background image displays in Firefox.
- Use the **transition** property to have the video rotate along the **Y-axis** when hovering over the container div. Use the **perspective** property to make the part of the element that is "closer" become larger as the rotation occurs.

TOTAL: 20 marks

MAXIMUM: 27/20 marks