Client-Side Web Development

Class 6.1

Today's Topics

- CSS Animation

- **Project:** Web Portfolio

- **Exercise:** Animation Nation

Announcements

Recording

Any Questions?

CSS Animation

CSS Animation make it possible to animate transitions from one CSS style configuration to another with more control than with using transition

CSS Animation consist of two components, a style describing the CSS animation and a set of keyframes that indicate the start and end states of the animation's style, as well as possible intermediate keyframes

@keyframes

The `@keyframes` CSS at-rule controls the intermediate steps in a CSS animation sequence

The `@keyframes` by establishes keyframes along the animation sequence that must be reached by certain points during the animation

The `@keyframes` gives more specific control over the intermediate steps of the animation sequence than just letting the browser handle everything automatically

An `@keyframes` rule is given name that will be used by the `animation-name` property

An `@keyframes` rule contains style list of keyframe selectors, with percentages that represent when in the animation the keyframe occurs

```css
@keyframes fade-in {
  0% { opacity: 0; }
  100% { opacity: 1; }
}


@keyframes spin {
  0% { transform: rotate(0deg); }
  100% {transform: rotate(360deg); }
}
```

```css
@keyframes spin {
  65%  { transform: rotate(0deg); }
  75%  { transform: rotate(-75deg); }
  80%  { transform: rotate(-75deg); }
  100% { transform: rotate(360deg); }
}
```

Animation Properties

```css
.box {
  animation-name: spin;
  animation-duration: 4s;
  animation-iteration-count: 10;
  animation-direction: reverse;
  animation-timing-function: ease-out;
  animation-fill-mode: forwards;
  animation-delay: 2s;
}
```

animation-name

The `animation-name` property to set the `@keyframes` at-rule to use

animation-duration

Sets the length of time the animation should take to complete one cycle in seconds

The default is 0s

animation-iteration-count

Sets the number of times the animation should repeat

The default value is 1

The value `infinite` will set the animation to repeat forever

If multiple values are specified, each time the animation is played the next value in the list is used, cycling back to the first value after the last one is used.

animation-delay

Sets the length of time to wait before the starting the animation the *FIRST* time

The default is 0s

animation-direction

Specifies whether an animation should play forwards, backwards, or alternating back and forth

Animation Direction Values

- normal

- reverse

- alternate

- alternate-reverse

animation-timing-function

Sets the speed curve of the animation

Timing Function Values

- ease (default)

- ease-in

- ease-out

- ease-in-out

- linear

- step-start

- step-end

animation-fill-mode

Sets what values are applied to the element before and after the animation has executed

Fill Mode Values

- none (default)

- forwards

- backwards

- both

Examples

Exercise: Animation Nation

For next class...

- **Review:** Stay on the Grid

- **Project:** Web Portfolio

- **Lab:** Doomsday Button