

COMP4021
Internet Computing

CSS Animations

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CSS Animations

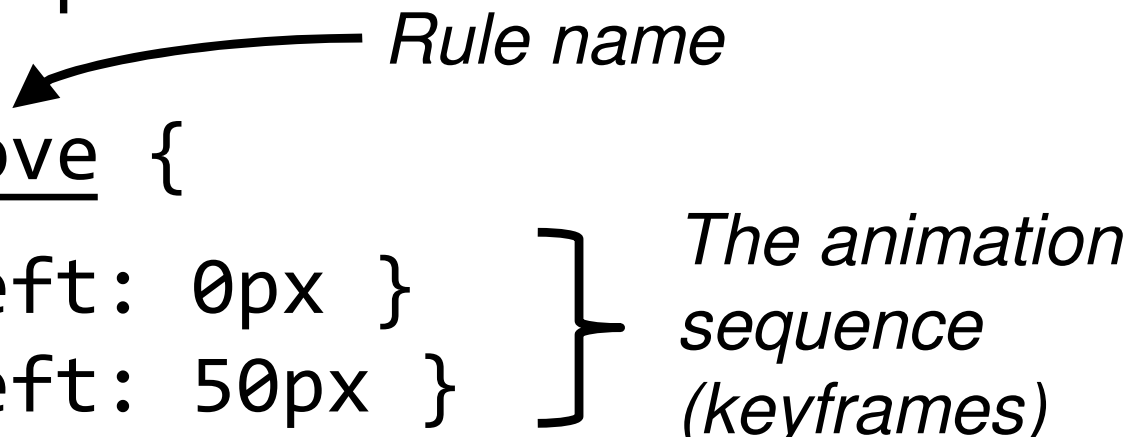
- You know that CSS can change visual styles of HTML
- It is interesting that CSS can also make things move inside HTML, e.g. moving some text from left to right:



- In this presentation, we will look at using CSS animations to do that

The Keyframes Rule

- You use a new style rule, *the keyframes rule*, to make animations
- Here is an example:



```
@keyframes move {  
    from { left: 0px }  
    to   { left: 50px }  
}
```

Rule name

The animation sequence (keyframes)

In this example, this animation rule changes the left property from 0px to 50px

Applying the Rule

- You have created the animation, let's use it on some HTML elements
- For example, you can use it on a header:

`<h1 style="position: relative;
animation: move 2s">`

Make its position adjustable

I am bouncing!

`</h1>`

The keyframes rule to be used

The duration of the animation

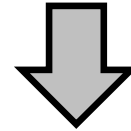
A diagram illustrating the application of a CSS animation rule. The HTML code for an h1 element is shown with the animation rule 'animation: move 2s'. Arrows point from descriptive text to parts of the code: 'Make its position adjustable' points to 'position: relative;', 'The keyframes rule to be used' points to 'move', and 'The duration of the animation' points to '2s'. The text 'I am bouncing!' is placed inside the h1 element's content area.

Moving Text Example

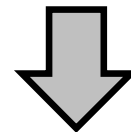
```
<!DOCTYPE html>
<html>
<head>
  <title>Moving Text</title>
  <style>
    @keyframes move {
      from { left: 0px }
      to   { left: 50px }
    }
  </style>
</head>
<body>
  <h1 style="position: relative;
    animation: move 2s">
    I am bouncing!
  </h1>
</body>
</html>
```

Left = 0 at 0 second

I am bouncing!



I am bouncing!



I am bouncing!

Left = 50 at 2 seconds

Freezing the Animation

- In the previous example, you can see the text ‘jumps’ back to the start after the animation finishes
- You may have expected the text to remain on the right hand side in the end
- To do that in CSS, you need an additional property, shown below:

`animation-fill-mode: forwards`

*Telling the browser to ‘freeze’
at the end of the animation*





Animating Multiple Elements

- You can apply a keyframes rule to multiple elements
- For example, you can apply it to two separate `<div>` using different durations:

```
<div id="box1" class="box"></div>  
<div id="box2" class="box"></div>
```

This is box1 →  → 

This is box2 →  → 

```
.box {  
    position: relative;  
    left: 0;  
    width: 50px;  
    height: 50px;  
}  
#box1 {  
    top: 0;  
    background: red;  
    animation: move 2s;  
}  
#box2 {  
    top: 80px;  
    background: blue;  
    animation: move 4s;  
}
```