# CSS Animation

## psudoclass

* **“:hover**” : react when user pointing at the component specified
* **“:focus”** : triggered the state of object focus.(focus by tab the webpage until focus on component or click the object)
* **“:active”**: triggered when element activated by user (Ex. The active element will be triggered by hold the click on that element)

## Transform

* Let you manipulate space of CSS formatting model (move, warp, rotate, scale)
* **“translate”**: shift element across the screen using x and y (transform:translateX(10px), transform:translateY(10px), translate(20px, 20px))
* **“scale”**: increase or decrease size of element(transform:scale(2), transform:scaleX(2), transform:scaleY(2), transform:scale(2,0.5))
* **“transform-origin”**: change in initial origin point (transform-origin: 0 0; transform-origin: left;) this will specify the point or direction where the scale will not change. Read more: <https://developer.mozilla.org/en-US/docs/Web/CSS/transform-origin>
* **“Rotate”**: rotate element on page (transform: rotate(45deg))
* **Let more at** : <https://developer.mozilla.org/en-US/docs/Web/CSS/transform>
* To apply multiple scale feature, include “transform:” only once before function (transform: scale(2) rotate(45deg))

## Extra: Vendor prefix

* This is the syntax need to be added in the css code in order to make the style-sheet work on every browser. More info: <https://developer.mozilla.org/en-US/docs/Glossary/Vendor_Prefix>
* To make it easier, use autoprefixer or sublime prefixer

## Transition

* Transition allow to control animation speed when changing CSS
* **Transition-duration :** how long transition should last (transition-duration:1s, transition-duration:1s,2s [this is for multiple property duration specification])
* **Transition-property**: what property should be transitioned?(transition-property: background, transition-property: background,border)
* **Transition**-**delay:** specify the time before transition start (transition-delay: 2ms, transition-delay: 2ms,3ms[this is for multiple property duration specification])
* **Transition-timing-function** : control acceleration of animation. More info: <https://developer.mozilla.org/en-US/docs/Web/CSS/transition-timing-function>

**Ex.** transition-timing-function: ease

* All property can be combined into 1 command (transition: background 1.5s ease-in 1;)
* **What should be transition:** transform:translate() ,transform:rotate() ,transform:scale() ,opacity (does not affect browser render speed for website)

## Keyframe

* Allow to make multi-state animation
* **Step to add keyframe**
  1. Specify the animation inside keyframe

|  |
| --- |
| @keyframes hello{  0%{  color:yellow;  font-size: 20px;  }  20%{  color:orange;  font-size: 30px;  }  40%{  color:red;  font-size: 40px;  }  60%{  color:pink;  font-size: 50px;  }  80%{  color:blue;  font-size: 40px;  }  100%{  color:green;  font-size: 30px  }  } |

* 1. Specify animation in CSS syntax

|  |
| --- |
| p{  animation-name: hello;  animation-duration: 3s;  animation-timing-function: linear;  animation-delay:0s;  animation-iteration-count: infinite;  } |

* 1. These are animation command
     + Animation-name
     + Animation-duration
     + Animation-timing-function
     + Animation-delay
     + Animation-iteration-count: specify count which animation run
     + Animation-fill-mode: specify how the animation should style before or after the animation duration (during animation delay) (forward, backward, both, none)
     + Animation-direction: select the state forward,backward or alternate
     + Animation-play-state: running or pause the state

## Flexbox

* The layout module for CSS
* It is efficient way to layout, align and distribute space between items in container