Chapter 8 - Transforms, Transitions & Animations

Transforms are used to rotate, move, skew or scale elements. They are used to create a 3-D effect

The transform property
Used to apply a 2D or 3D transformation to an element

The transform-origin property
Allows to change the position of transformed elements
2D transforms → Can change x & y axis
3D transforms → Can change Z axis as well

CSS 2D transform methods
You can use the following 2-D transforms in CSS:

1> translate()
2> rotate()
3> ScaleX()
4> ScaleY()
5> Skew()
6> matrix()
7> Scale()

CSS 3D transform methods

1> rotateX()
2> rotateY()
3> rotateZ()

CSS Transitions

Used to change property values smoothly, over a given duration.

The transition property

The transition property is used to add transition in CSS.

Following are the properties used for CSS transition.

1. transition-property → The property you want to transition

2. transition-duration → Time for which you want transition to apply

3. transition-timing-function → How you want the property to transition

4. transition-delay → Specifies the delay for the transition

All these properties can be set using a single shorthand property

② duration   ④ delay

transition : width 3S ease-in 2S;

① property   ③ timing-function
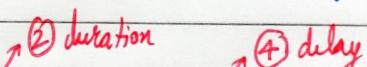
Transitioning multiple properties

We can transition multiple properties as follows:

transition : opacity 1S ease-out 1S, transform 2S ease-in;
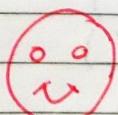
Yes you can skip transition delay here!

CSS Animations

Used to animate CSS properties with more control.
We can use @keyframes rule to change the animation from a given style to a new style.

```
@ keyframes harry {
    from { width: 20px; }   → Can change multiple properties
    to { width: 31px; }
}
```

Properties to add Animations

Following are the properties used to Set animation in CSS:

1> animation-name → name of the animation

2> animation-duration → How long does the animation run?

3> Animation-timing-function → Determines speed curve of the animation

4> animation-delay → Delay for the start of an animation

5> Animation-iteration-count → Number of times an animation shud run

6> animation-direction → Specifies the direction of the animation

The animation shorthand

All the animation properties from 1-6 can be applied like this:

animation: harry 6s linear 1s infinite reverse;

① harry ② 6s ③ linear ④ 1s ⑤ infinite ⑥ reverse

Using percentage value states with animation

We can use % values to indicate what should happen when a certain percent of animation is completed

```
@ Keyframes harry {
    0% {
        width : 20px ;
    }
    50% {
        width : 80px ;
    }
    100% {
        with : 200px ;
    }
}
```

⇒ Can add as many intermediate properties as possible