Chapter 26: Transitions

Parameter	Details
transition-property	The specific CSS property whose value change needs to be transitioned (or) `all`, if all the transitionable properties need to be transitioned.
transition-duration	The duration (or period) in seconds (`s`) or milliseconds (`ms`) over which the transition must take place.
transition-timing-function	A function that describes how the intermediate values during the transition are calculated. Commonly used values are `ease`, `ease-in`, `ease-out`, `ease-in-out`, `linear`, `cubic-bezier()`, `steps()`. More information about the various timing functions can be found in the W3C specs.
transition-delay	The amount of time that must have elapsed before the transition can start. Can be specified in seconds (`s`) or milliseconds (`ms`)

Section 26.1: Transition shorthand

CSS

```
div{
    width: 150px;
    height:150px;
    background-color: red;
    transition: background-color 1s;
}
div:hover{
    background-color: green;
}
```

HTML

```
<div></div>
```

This example will change the background color when the div is hovered the background-color change will last 1 second.

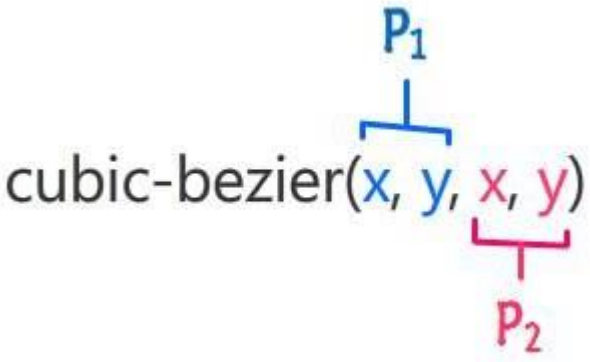
Section 26.2: cubic-bezier

The `cubic-bezier` function is a transition timing function which is often used for custom and smooth transitions.

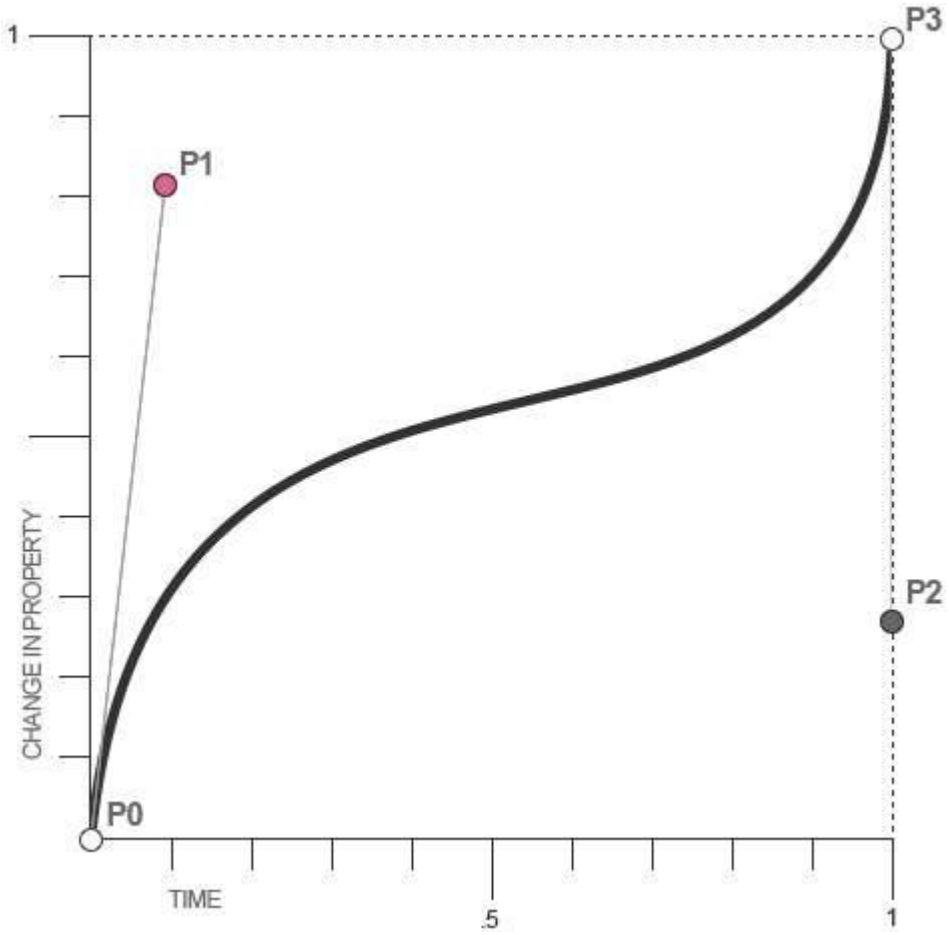
```
transition-timing-function: cubic-bezier(0.1, 0.7, 1.0, 0.1);
```

The function takes four parameters:

```
cubic-bezier(P1_x, P1_y, P2_x, P2_y)
```



These parameters will be mapped to points which are part of a Bézier curve:



For CSS Bézier Curves, P0 and P3 are always in the same spot. P0 is at (0,0) and P3 is at (1,1), which menas that the parameters passed to the cubic-bezier function can only be between 0 and 1.

If you pass parameters which aren't in this interval the function will default to a `linear` transition.

Since cubic-bezier is the most flexible transition in CSS, you can translate all other transition timing function to cubic-bezier functions:

linear: `cubic-bezier(0,0,1,1)`

ease-in: `cubic-bezier(0.42, 0.0, 1.0, 1.0)`

ease-out: `cubic-bezier(0.0, 0.0, 0.58, 1.0)`

ease-in-out: `cubic-bezier(0.42, 0.0, 0.58, 1.0)`

Section 26.3: Transition (longhand)

CSS

```
div {
  height: 100px;
  width: 100px;
  border: 1px solid;
  transition-property: height, width;
  transition-duration: 1s, 500ms;
  transition-timing-function: linear;
  transition-delay: 0s, 1s;
}
div:hover {
  height: 200px;
  width: 200px;
}
```

HTML

```
<div></div>
```

- **transition-property**: Specifies the CSS properties the transition effect is for. In this case, the div will expand both horizontally and vertically when hovered.
- **transition-duration**: Specifies the length of time a transition takes to complete. In the above example, the height and width transitions will take 1 second and 500 milliseconds respectively.
- **transition-timing-function**: Specifies the speed curve of the transition effect. A *linear* value indicates the transition will have the same speed from start to finish.
- **transition-delay**: Specifies the amount of time needed to wait before the transition effect starts. In this case, the height will start transitioning immediately, whereas the width will wait 1 second.