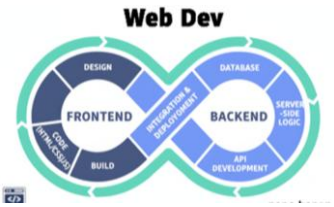
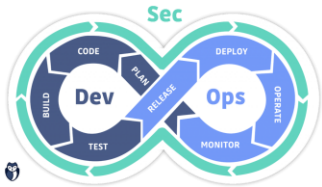




Day 27

"Web Development + Security"

CSS Transforms:

What is transform in CSS?

The transform property lets you visually change the shape, position, and size of an element without affecting surrounding elements.

Example:

div {

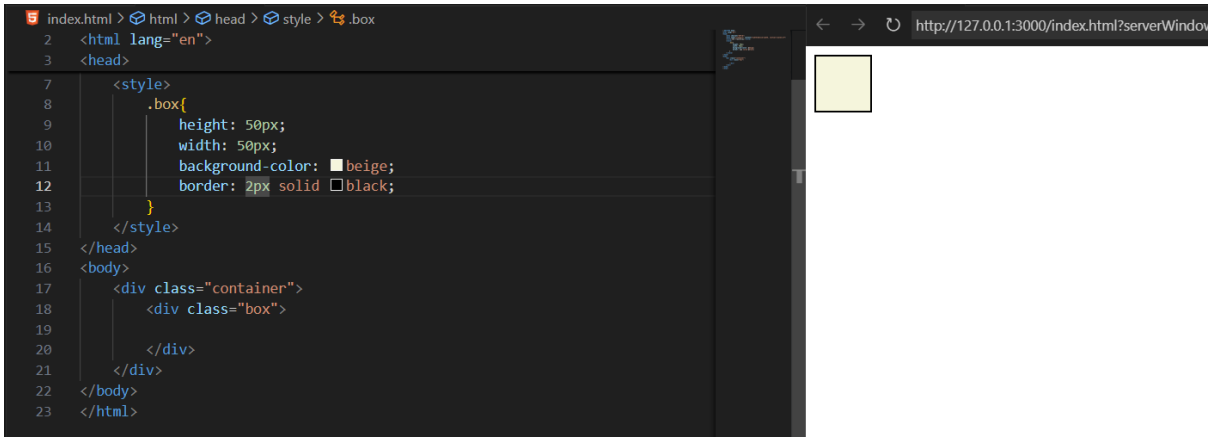
transform: rotate(45deg);

}

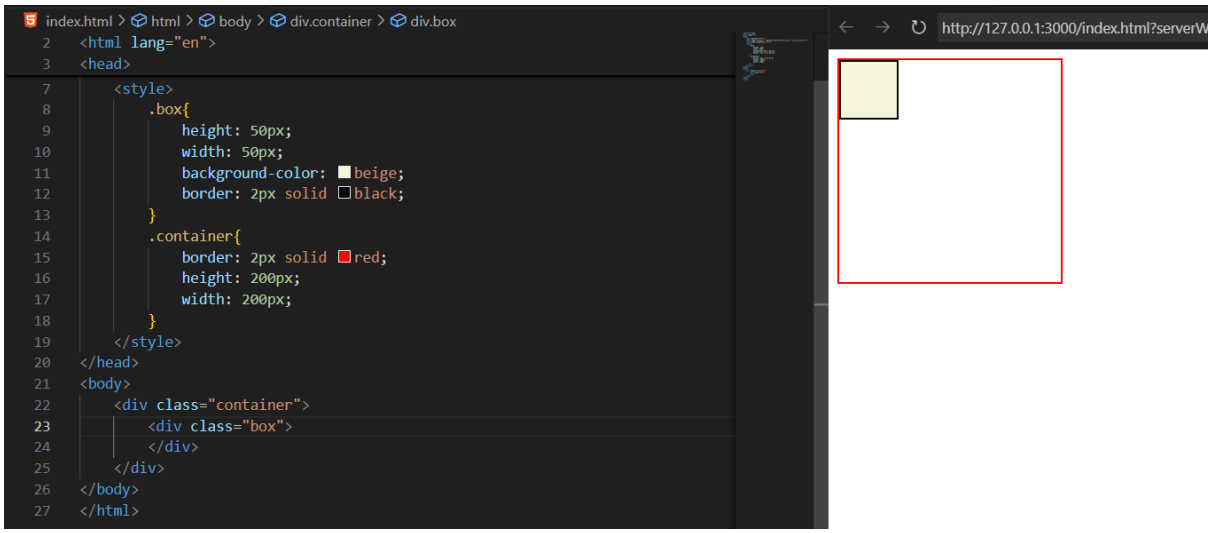
Common Transform Functions:

Function	Description	Example
translate(x, y)	Moves (shifts) the element along X & Y axes	transform: translate(50px, 20px);
rotate(angle)	Rotates the element clockwise or counterclockwise	transform: rotate(45deg);
scale(x, y)	Scales (zooms) the element	transform: scale(1.5, 1.5);
skew(x, y)	Skews (tilts) the element	transform: skew(20deg, 10deg);
matrix(a, b, c, d, e, f)	Advanced 2D combination of all transforms	Rarely used manually

A basic example without any transforms:

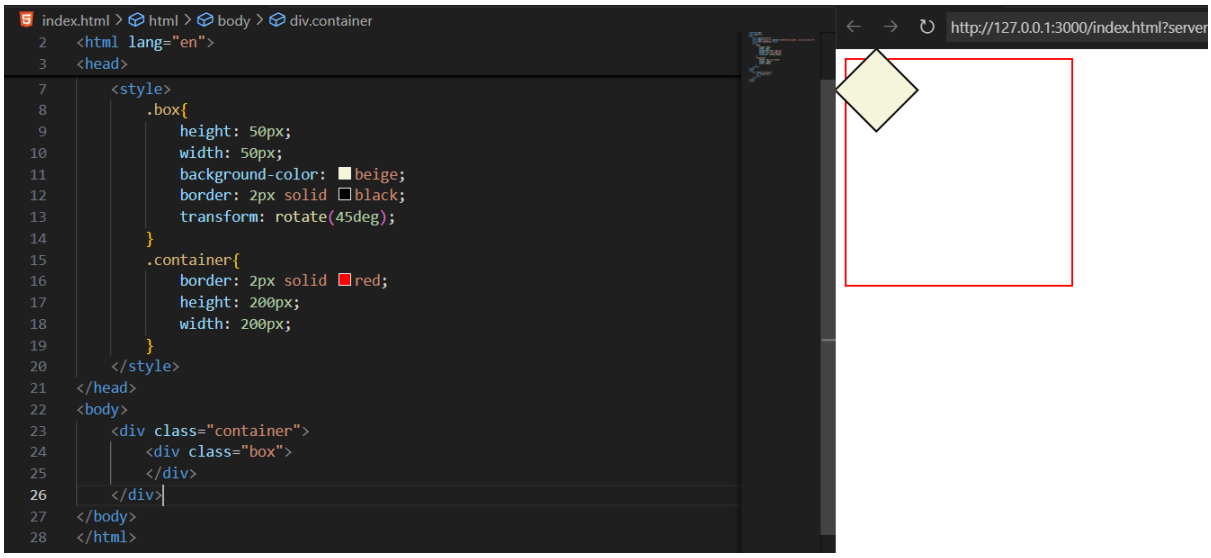


One more basic example: without transform



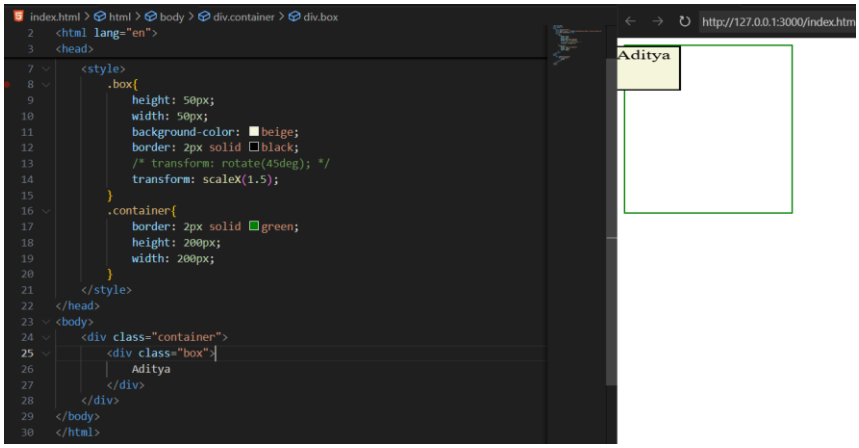
```
<!DOCTYPE html>
<html lang="en">
<head>
    <style>
        .box{
            height: 50px;
            width: 50px;
            background-color: beige;
            border: 2px solid black;
        }
        .container{
            border: 2px solid red;
            height: 200px;
            width: 200px;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="box">
        </div>
    </div>
</body>
</html>
```

Now, applying the transform:rotate(45deg):



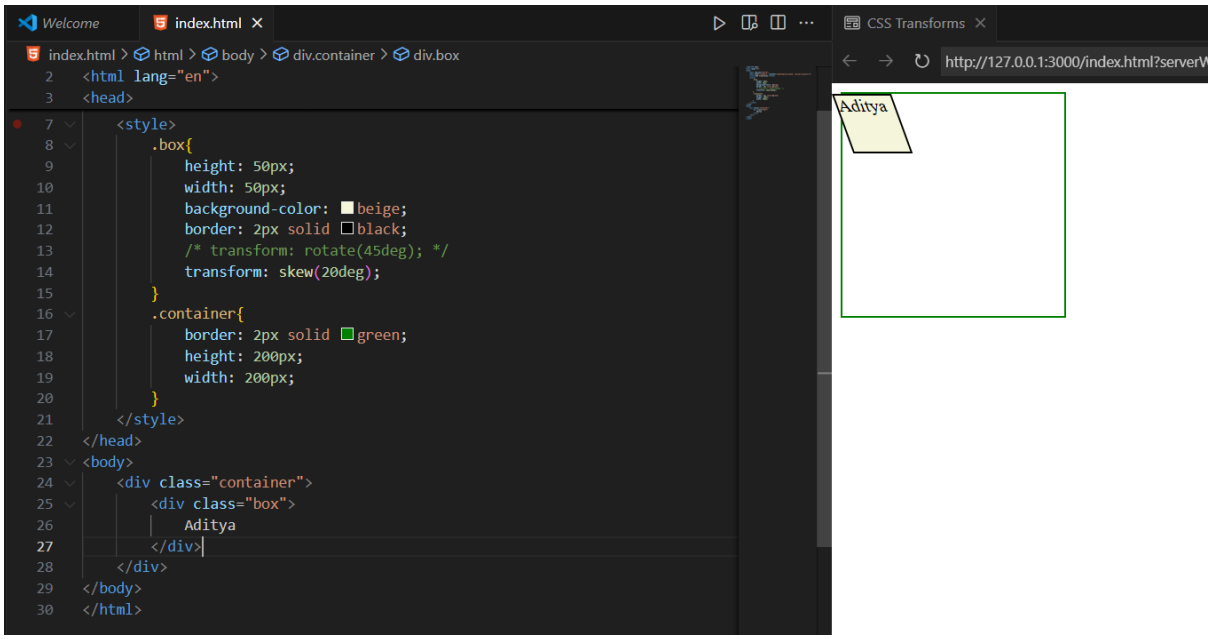
```
<!DOCTYPE html>
<html lang="en">
<head>
    <style>
        .box{
            height: 50px;
            width: 50px;
            background-color: beige;
            border: 2px solid black;
            transform: rotate(45deg);
        }
        .container{
            border: 2px solid red;
            height: 200px;
            width: 200px;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="box">
        </div>
    </div>
</body>
</html>
```

Example: we used scale() in order to scale the element

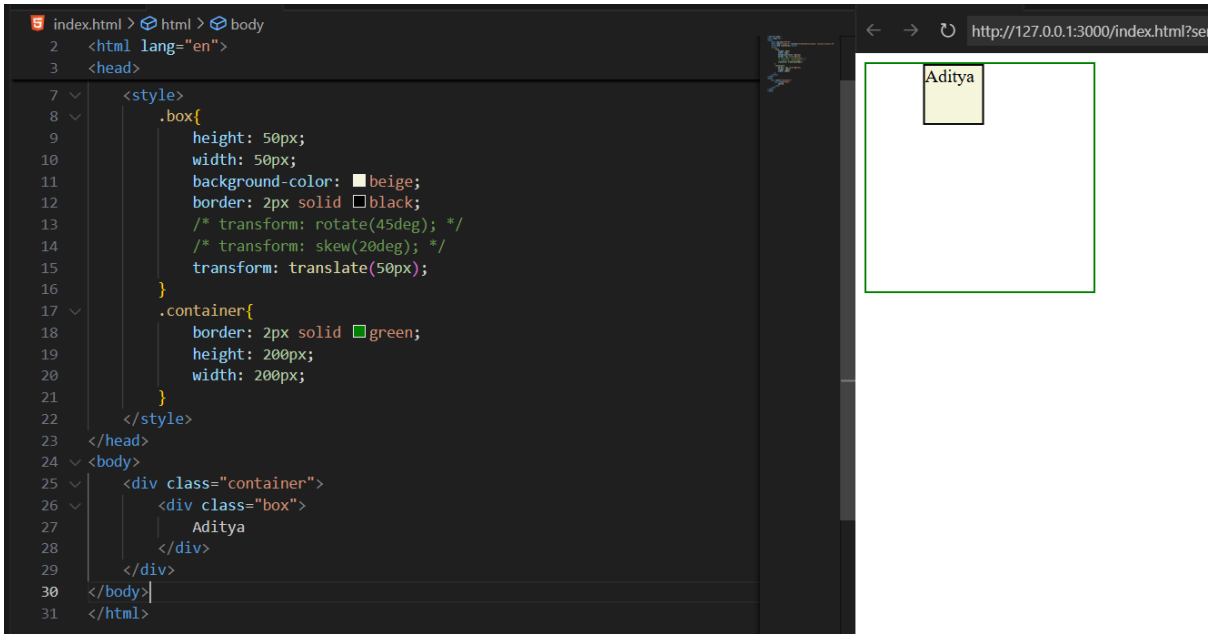


```
<!DOCTYPE html>
<html lang="en">
<head>
    <style>
        .box{
            height: 50px;
            width: 50px;
            background-color: beige;
            border: 2px solid black;
            /* transform: rotate(45deg); */
            transform: scaleX(1.5);
        }
        .container{
            border: 2px solid green;
            height: 200px;
            width: 200px;
        }
    </style>
</head>
<body>
    <div class="container">
        <div class="box">
            Aditya
        </div>
    </div>
</body>
</html>
```

Example: skew()



Example: translate()



CSS Transitions:

What is a CSS Transition?

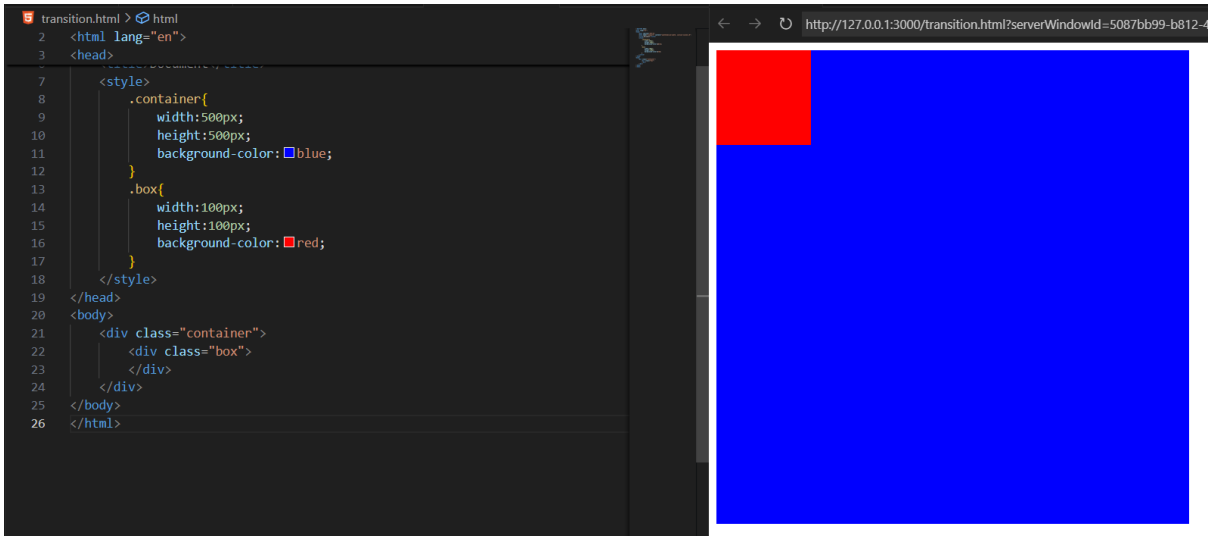
A transition lets you gradually change a CSS property's value over time — instead of changing it instantly.

Basic syntax:

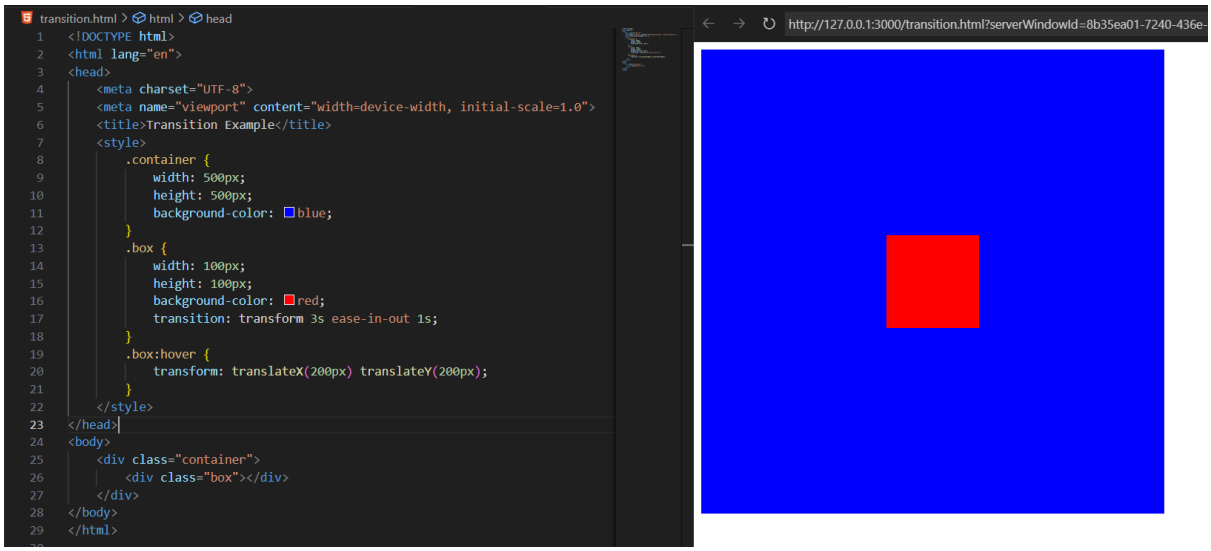
transition: property duration timing-function delay;

Part	Meaning	Example
property	CSS property to animate	width, color, transform, etc.
duration	How long the change takes	1s, 0.5s
timing-function	Speed curve of animation	ease, linear, ease-in, ease-out, ease-in-out
delay	When to start (optional)	0s, 1s

A very basic example: where two without transition are there:



Now, applying the transition property: we will see that red box slowly, moves to 200px in both X and Y axis.



CSS Animations:

What is a CSS Animation?

CSS animations let you move, change, or transform elements automatically over time, without user interaction. Unlike transitions, animations don't need hover or click — they can start on page load, repeat, and have multiple stages.

Basic syntax:

selector {

animation-name: myAnimation;

animation-duration: 2s;

animation-timing-function: ease-in-out;

animation-delay: 0s;

animation-iteration-count: infinite;

animation-direction: alternate;

}

Then define the animation using @keyframes 👇

@keyframes myAnimation {

from { background-color: red; }

to { background-color: blue; }

}

Or with percentage stages:

@keyframes myAnimation {

0% { transform: translateX(0); }

50% { transform: translateX(100px); }

100% { transform: translateX(0); }

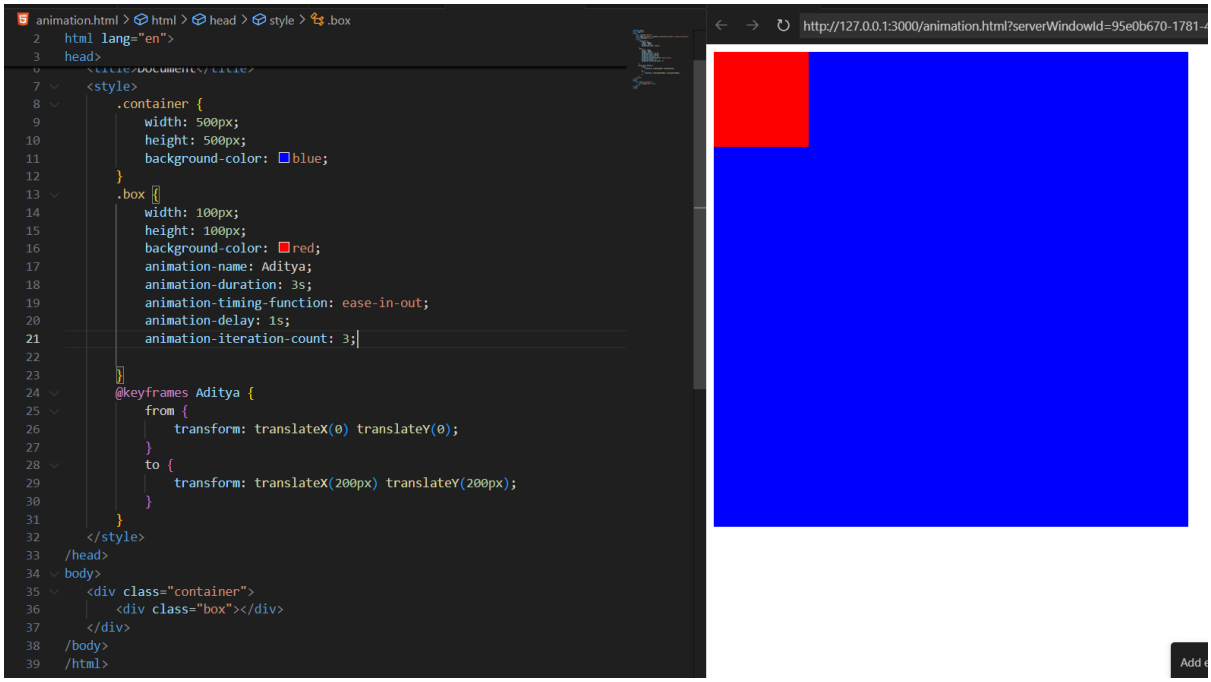
}

Main animation properties:

Property	**Description**	**Example**
animation-name	Name of @keyframes	slide
animation-duration	How long it lasts	2s
animation-timing-function	Speed curve	ease, linear, etc.
animation-delay	Wait before start	1s
animation-iteration-count	How many times	infinite, 3
animation-direction	normal, reverse, alternate	alternate = forward then backward
animation-fill-mode	Keeps end state	forwards
animation-play-state	running or paused	pause/resume control

A basic example without any animation:

Now, adding the animation:



--The End--