The z-index property in CSS controls the stacking order of positioned elements. It determines which elements appear on top of others when they overlap. This property only works on elements that have a position value other than static (i.e., relative, absolute, fixed, or sticky).

**Key Points About z-index**

1. **Stacking Context**:
   * **Stacking Context**: An element with a z-index value creates a new stacking context. This means it will be stacked relative to other elements within the same stacking context, not necessarily to the entire document.

**Positive and Negative Values**:

* **Positive Values**: Elements with a higher z-index value will be stacked above those with lower values.
* **Negative Values**: Elements with negative z-index values will be stacked below those with positive values or the default stacking order.

Example

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Z-Index Example</title>

<link rel="stylesheet" href="styles.css">

</head>

<body>

<div class="container">

<div class="box box1">Box 1</div>

<div class="box box2">Box 2</div>

<div class="box box3">Box 3</div>

</div>

</body>

</html>

Styles.css

.container {

position: relative;

width: 200px;

height: 200px;

}

.box {

position: absolute;

width: 100px;

height: 100px;

color: white;

text-align: center;

line-height: 100px; /\* Center text vertically \*/

}

.box1 {

background-color: red;

top: 10px;

left: 10px;

z-index: 1; /\* Stacks above elements with lower z-index \*/

}

.box2 {

background-color: green;

top: 30px;

left: 30px;

z-index: 3; /\* Stacks above box1 \*/

}

.box3 {

background-color: blue;

top: 50px;

left: 50px;

z-index: 2; /\* Stacks above box1 but below box2 \*/

}

How to Create Overlay Effect?

To create an overlay using CSS, follow these steps:

* **Create the Container:** Use a container element to hold the content you want to overlay. A container can be div element, span element or even an image.
* **Set Up the Positioning:** Make the container [**position: relative**](https://www.tutorialspoint.com/css/css_positioning.htm#RelativePositionedElements) so that any absolutely positioned elements inside it will be positioned relative to this container.
* **Add the Overlay Element:** Inside the container, add another element (the overlay) and set [position: absolute](https://www.tutorialspoint.com/css/css_positioning.htm#AbsolutelyPositionedElements) to ensure it covers the entire container. Also make sure the overlay's top, left properties are set to 0 and width, height properties are set to 100%, so it fully covers the container.
* **Style the Overlay:** Set the background color of the overlay using [rgba()](https://www.tutorialspoint.com/html/html_rgb.htm" \t "_blank) function to give a semi-transparent effect. And initially, set the opacity of the overlay to 0 to make it invisible by default.
* **Add Hover Effect:** Use [hover](https://www.tutorialspoint.com/css/css_pseudo_classes.htm#pseudo-class-hover) pseudo-class to the overlay container to change the overlay's opacity from 0 to 1 when user moves mouse over container.

Example

<!DOCTYPE html>

<html lang="en">

<head>

<style>

        .container {

            position: relative;

        }

.overlay {

            position: absolute;

            top: 0;

            left: 0;

            width: 100%;

            height: 100%;

            background-color: rgba(7, 250, 7, 0.5);

            opacity: 0;

            transition: opacity 1s ease;

        }

.overlay-container:hover .overlay {

            opacity: 1;

        }

</style>

</head>

<body>

<div class="container">

<div class="overlay-container">

    <img src="images/moto.jpg" alt="Image">

    <div class="overlay">

     Learn CSS

</div>

</div>

</div>

</body>

</html>

CSS Overlay Top to Bottom Sliding

<!DOCTYPE html>

<html lang="en">

<head>

<style>

img {

width: 200px;

height: 200px;

margin-left: 40%;

}

.overlay-container {

position: relative;

width: 25%;

height: auto;

}

.overlay-container:hover .top-bottom {

opacity: 1;

height: 200px;

}

.top-bottom{

position: absolute;

transition: 0.9s ease;

opacity: 0.3;

width: 200px;

border-radius: 5px;

height: 0;

top: 0;

left: 40%;

background-color: #d346e6;

text-align: center;

color: #ffffff;

}

h2 {

text-align: center;

}

</style>

</head>

<body>

<h2> Hover your cursor over the image.</h2>

<div class="overlay-container">

<imgsrc= "/css/images/tutimg.png">

<div class="top-bottom">

<h2> Top to Bottom Image Overlay </h2>

</div>

</div>

</body>

</html>

Example:

<!DOCTYPE html>

<html lang="en">

<head>

<style>

img {

    width:200px;

    height:200px;

    position:absolute;

}

.overlay-container {

            position: relative;

            width: 25%;

            height: auto;

        }

.overlay-container:hover .top-bottom {

            opacity: 1;

            height: 200px;

        }

.top-bottom{

            position: absolute;

            transition: 0.9s ease;

            opacity: 0;

            width: 200px;

            height: 0;

            background-color: #d346e6;

            text-align: center;

            color:black;

        }

        h2 {

            text-align: center;

        }

</style>

</head>

<body>

<div class="overlay-container">

    <img src="images/kids-banner.avif">

    <div class="top-bottom">

        <h2> Top to Bottom Overlay </h2>

    </div>

</div>

</body>

Example:

<!DOCTYPE html>

<html lang="en">

<head>

<style>

    .overlay-container

    {

        width: 300px;

        height:300px;

        background-color: blue;

        position: relative;

    }

    .overlay-container:hover .overlay{

        opacity: 1;

        height: 300px;

    }

    .overlay {

        transition: 1s ease;

        width:300px;

        height:0px;

        position: absolute;

        background-color: brown;

        opacity: 0;

    }

</style>

</head>

<body>

    <div class="overlay-container">

        <div class="overlay">

            <h2>Overlay</h2>

        </div>

    </div>

</body>

CSS Overlay Bottom to Top Sliding

<!DOCTYPE html>

<html lang="en">

<head>

<style>

img {

width: 200px;

height: 200px;

}

.overlay-container {

position: relative;

width: 25%;

height: auto;

}

.overlay-container:hover .bottom-top {

opacity: 1;

height: 200px;

}

.bottom-top {

position: absolute;

transition: 0.9s ease;

opacity: 0.3;

width: 200px;

border-radius: 5px;

height: 0;

bottom: 0;

background-color: #d346e6;

text-align: center;

color: #ffffff;

}

h2 {

text-align: center;

}

</style>

</head>

<body>

<h2>Hover your cursor over the image.</h2>

<div class="overlay-container">

<imgsrc= "/css/images/tutimg.png">

<div class="bottom-top">

<h2>Bottom to Top Image Overlay</h2>

</div>

</div>

</body>

</html>

<!DOCTYPE html>

<html lang="en">

<head>

<style>

    .overlay-container

    {

        width: 300px;

        height:300px;

        background-color: blue;

        position: relative;

    }

    .overlay-container:hover img{

        opacity: 1;

        height: 300px;

    }

    img {

        width:300px;

        height:0px;

        position: absolute;

        opacity: 0;

        bottom:0px;

        transition: 1s ease;

    }

</style>

</head>

<body>

    <div class="overlay-container">

        <img src="images/kids-banner.avif">

    </div>

</body>

CSS Overlay Left to Right Sliding

<!DOCTYPE html>

<html lang="en">

<head>

<style>

img {

width: 200px;

height: 200px;

}

.overlay-container {

position: relative;

width: 25%;

height: auto;

}

.overlay-container:hover .left-right {

opacity: 1;

width: 200px;

}

.left-right {

position: absolute;

transition: 0.9s ease;

opacity: 0.3;

width: 0;

border-radius: 5px;

height: 200px;

top: 0;

left: 0;

background-color: #d346e6;

text-align: center;

color: #ffffff;

}

h2 {

text-align: center;

}

</style>

</head>

<body>

<h2>Hover your cursor over the image.</h2>

<div class="overlay-container">

<imgsrc="/css/images/tutimg.png">

<div class="left-right">

<h2>Left to Right Image Overlay</h2>

</div>

</div>

</body>

</html>

Example:

<!DOCTYPE html>

<html lang="en">

<head>

<style>

    .overlay-container

    {

        width:300px;

        height:300px;

        position: relative;

        background-color: blueviolet;

    }

    .overlay-container:hover .overlay {

        width:300px;

        opacity: 1;

    }

    .overlay

    {

        height:300px;

        position: absolute;

        left:0px;

        width:0px;

        background-color:brown;

        transition: 1s ease;

        opacity: 0;

    }

</style>

</head>

<body>

    <div class="overlay-container">

        <div class="overlay">

            <h2>Left to Right</h2>

        </div>

    </div>

</body>

Example of right to left

<!DOCTYPE html>

<html lang="en">

<head>

<style>

    .overlay-container

    {

        width:300px;

        height:300px;

        position: relative;

        background-color: blueviolet;

    }

    .overlay-container:hover .overlay {

        width:300px;

        opacity: 1;

    }

    .overlay

    {

        height:300px;

        position: absolute;

        right:0px;

        width:0px;

        background-color:brown;

        transition: 1s ease;

        opacity: 0;

    }

</style>

</head>

<body>

    <div class="overlay-container">

        <div class="overlay">

            <h2>Left to Right</h2>

        </div>

    </div>

</body>

Example:

<!DOCTYPE html>

<html lang="en">

<head>

<style>

    .overlay-container

    {

        width:300px;

        height:300px;

        position: relative;

        background-color: blueviolet;

    }

    .overlay-container:hover .overlay{

        transition:2s ease;

        transform: rotate(360deg);

        opacity: 1;

    }

    .overlay

    {

        width:300px;

        height:300px;

        position: absolute;

        background-color: brown;

        opacity: 0;

    }

</style>

</head>

<body>

    <div class="overlay-container">

        <div class="overlay">

            <h2>Left to Right</h2>

        </div>

    </div>

</body>

Example:

<!DOCTYPE html>

<html lang="en">

<head>

<style>

.overlay-container

{

    width:300px;

    height:300px;

    position:relative;

    background-color: rgb(251, 255, 0);

}

img {

    position: absolute;

    top:50px;

    left:100px;

    width:100px;

    height:100px;

}

h2

{

    position: absolute;

    bottom: 50px;

    left: 30px;

}

.overlay

{

    opacity: 0;

    background-color: bisque;

    width:300px;

    height:300px;

}

.overlay-container:hover .overlay {

    opacity: 1;

    transition: 0.1s ease;

}

</style>

</head>

<body>

<div class="overlay-container">

    <img src="images/chennai.png">

    <h2> Chennai Super Kings</h2>

    <div class="overlay">

        <img src="images/iplcup.jpg">

    </div>

</div>

</body>