**🔁 Transform Activities**

1. **Flip an Image**: Create an image that flips horizontally using transform: scaleX(-1).

<img src="image.jpg" alt="Flip" class="flip-img">

<style>

.flip-img {

transform: scaleX(-1);

}

</style>

1. **Perspective 3D Box**: Create a box with transform: perspective() and rotate it on hover to demonstrate depth.

<div class="perspective-box">Hover me</div>

<style>

.perspective-box {

width: 150px;

height: 150px;

background: lightblue;

transition: transform 0.5s;

transform-style: preserve-3d;

}

.perspective-box:hover {

transform: perspective(500px) rotateY(30deg);

}

</style>

1. **Rotate with Origin Change**: Create a div that rotates around a custom origin using transform-origin.

<div class="rotate-origin">Rotate Me</div>

<style>

.rotate-origin {

width: 100px;

height: 100px;

background: salmon;

transform-origin: top left;

transition: transform 0.5s;

}

.rotate-origin:hover {

transform: rotate(45deg);

}

</style>

1. **Diagonal Skew Box**: Skew a div diagonally using both skewX() and skewY() together.

<div class="skew-box">Skewed</div>

<style>

.skew-box {

width: 150px;

height: 100px;

background: orange;

transform: skewX(20deg) skewY(10deg);

}

</style>

1. **Rotate on Click (with class toggle)**: rotate an element by 90 degrees using transform: rotate().

<div class="rotate-hover">Hover Me</div>

<style>

.rotate-hover {

width: 100px;

height: 100px;

background: green;

transition: transform 0.3s;

}

.rotate-hover:hover {

transform: rotate(90deg);

}

</style>

**⏳ Transition Activities**

1. **Text Color Transition**: Create a paragraph where the text color changes smoothly on hover.

<p class="color-text">Hover over me</p>

<style>

.color-text {

transition: color 0.5s;

}

.color-text:hover {

color: red;

}

</style>

1. **Height Expansion**: Create a menu bar where sub-items expand smoothly using max-height transition.

<div class="menu">Menu

<div class="submenu">Item 1<br>Item 2</div>

</div>

<style>

.menu {

width: 100px;

background: #ddd;

cursor: pointer;

}

.submenu {

overflow: hidden;

max-height: 0;

transition: max-height 0.5s;

}

.menu:hover .submenu {

max-height: 100px;

}

</style>

1. **Shadow Transition**: Add a box-shadow to a card that appears gradually on hover.

<div class="shadow-card">Card</div>

<style>

.shadow-card {

width: 150px;

height: 100px;

background: #eee;

transition: box-shadow 0.5s;

}

.shadow-card:hover {

box-shadow: 5px 5px 15px rgba(0, 0, 0, 0.3);

}

</style>

1. **Text Highlight Animation**: Animate the background of inline text using transition and background-color.

<span class="highlight-text">Highlight me</span>

<style>

.highlight-text {

background-color: transparent;

transition: background-color 0.4s;

}

.highlight-text:hover {

background-color: yellow;

}

</style>

1. **Font Weight Change**: On hover, smoothly change the font weight of a heading.

<h3 class="weight-change">Hover to Bold</h3>

<style>

.weight-change {

transition: font-weight 0.4s;

}

.weight-change:hover {

font-weight: bold;

}

</style>

**🔄 Combined Transform + Transition Activities**

1. **Bouncing Button**: Create a button that moves slightly up and down using translateY on hover.

<button class="bounce-btn">Bounce</button>

<style>

.bounce-btn {

transition: transform 0.3s;

}

.bounce-btn:hover {

transform: translateY(-10px);

}

</style>

1. **Zoom and Rotate Card**: Create a card that zooms in and rotates slightly when hovered.

<div class="zoom-rotate">Hover Me</div>

<style>

.zoom-rotate {

width: 150px;

height: 100px;

background: lightcoral;

transition: transform 0.4s;

}

.zoom-rotate:hover {

transform: scale(1.1) rotate(10deg);

}

</style>

1. **Skew & Color Shift on Hover**: Skew a block and change its background color simultaneously.

<div class="skew-color">Hover Me</div>

<style>

.skew-color {

width: 120px;

height: 80px;

background: lightgreen;

transition: transform 0.3s, background-color 0.3s;

}

.skew-color:hover {

transform: skew(15deg, 10deg);

background-color: darkgreen;

}

</style>

1. **Flip Card on Hover (3D effect)**: Create a card with front and back sides that flips using rotateY and transitions.

<div class="flip-card">

<div class="flip-inner">

<div class="front">Front</div>

<div class="back">Back</div>

</div>

</div>

<style>

.flip-card {

width: 150px;

height: 100px;

perspective: 1000px;

}

.flip-inner {

width: 100%;

height: 100%;

transition: transform 0.6s;

transform-style: preserve-3d;

position: relative;

}

.front, .back {

position: absolute;

width: 100%;

height: 100%;

backface-visibility: hidden;

display: flex;

align-items: center;

justify-content: center;

}

.front {

background-color: skyblue;

}

.back {

background-color: steelblue;

transform: rotateY(180deg);

}

.flip-card:hover .flip-inner {

transform: rotateY(180deg);

}

</style>

1. **Circle to Square Morph**: Animate a div that changes from a circle to a square on hover.

<div class="circle-square"></div>

<style>

.circle-square {

width: 100px;

height: 100px;

background: purple;

border-radius: 50%;

transition: all 0.4s;

}

.circle-square:hover {

width: 120px;

height: 120px;

border-radius: 0%;

}

</style>