

[笔记][LIKE-H5][22-3D转换模块]

前端

[笔记][LIKE-H5][22-3D转换模块]

- 182. 3D转换模块(掌握)
- 183. 3D转换模块-正方体上(理解)
- 184. 3D转换模块-正方体下(理解)
- 185. 3D转换模块-长方体(理解)
- 186. 3D转换模块-练习(理解)
- 187. 3D播放器上(理解)
- 188. 3D播放器下(理解)

182. 3D转换模块(掌握)

2D 没有厚度，只有宽度和高度，就是一个平面。

3D 有厚度，也有宽度和高度，是一个立体。

默认情况下所有元素都呈 **2D** 展现。

`transform-style: preserve-3d;` 该元素所有的子元素都要呈 **3D** 展现。

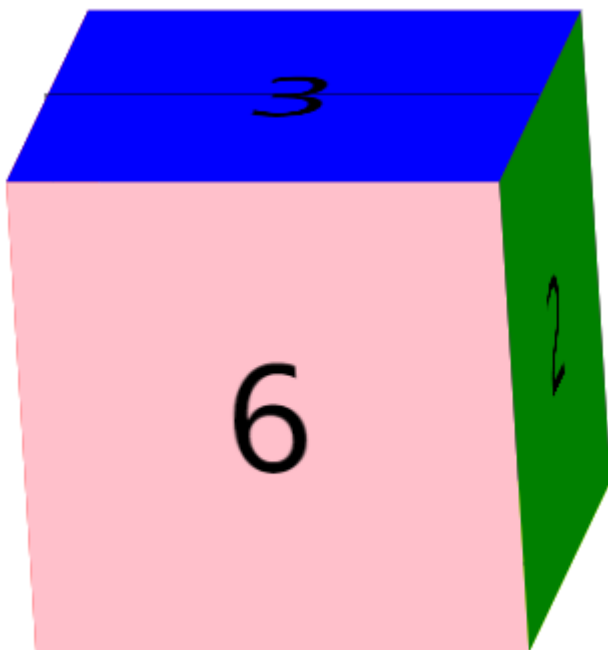
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>3D转换模块</title>
  <style>
    *{
      margin: 0;
      padding: 0;
    }
    .father{
      width: 200px;
      height: 200px;
      background-color: red;
      border: 1px solid #000;
      margin: 100px auto;
      perspective: 500px;
      /* 转到 90deg 就不见了，没有厚度 */
      transform: rotateY(0deg);
      transform-style: preserve-3d;
    }
  </style>
</head>
</html>
```

```

        .son{
            width: 100px;
            height: 100px;
            background-color: blue;
            border: 1px solid #000;
            margin: 0 auto;
            margin-top: 50px;
            transform: rotateY(45deg)
        }
    </style>
</head>
<body>
<div class="father">
    <div class="son"></div>
</div>
</body>
</html>

```

183. 3D转换模块-正方体上(理解)



快捷键： `ul>li{$}*6`

```

<!DOCTYPE html>
<html lang="en">
<head>

```

```
<meta charset="UTF-8">
<title>3D转换模块之正方体</title>
<style>
  *{
    margin: 0;
    padding: 0;
  }
  ul{
    width: 200px;
    height: 200px;
    margin: 100px auto;
    position: relative;
    transform: rotateY(0deg) rotateX(0deg);
    transform-style: preserve-3d;
  }
  ul li{
    width: 200px;
    height: 200px;
    list-style: none;
    font-size: 60px;
    text-align: center;
    line-height: 200px;
    position: absolute;
    left: 0;
    top: 0;
  }
  ul li:nth-child(1){
    background-color: red;
    transform: translate(-100px) rotateY(90deg);
  }
  ul li:nth-child(2){
    background-color: green;
    transform: translate(100px) rotateY(90deg);
  }
  ul li:nth-child(3){
    background-color: blue;
    transform: translateY(-100px) rotateX(90deg);
  }
  ul li:nth-child(4){
    background-color: yellow;
    transform: translateY(100px) rotateX(90deg);
  }
  ul li:nth-child(5){
    background-color: purple;
    transform: translateZ(-100px);
  }
  ul li:nth-child(6){
    background-color: pink;
    transform: translateZ(100px);
  }
</style>
</head>
```

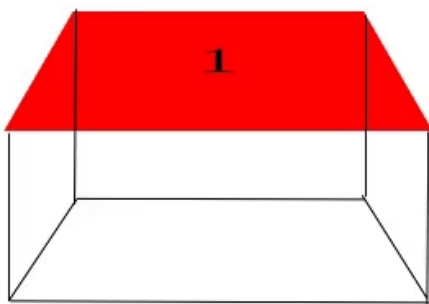
```
<body>
<ul>
  <li>1</li>
  <li>2</li>
  <li>3</li>
  <li>4</li>
  <li>5</li>
  <li>6</li>
</ul>
</body>
</html>
```

184. 3D转换模块-正方体下(理解)

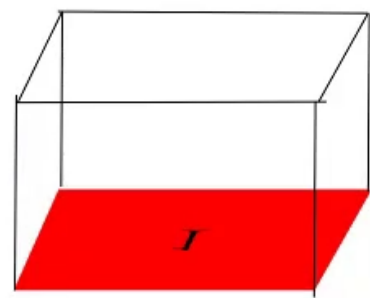
上节课：先平移，再旋转

这节课：先旋转，再平移

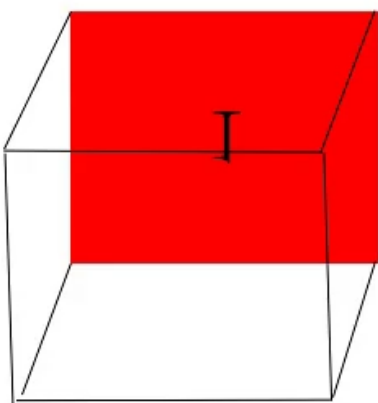
首先做最上面的那张图：



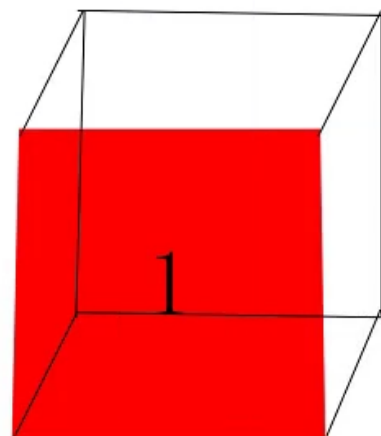
默认



正方体转180deg

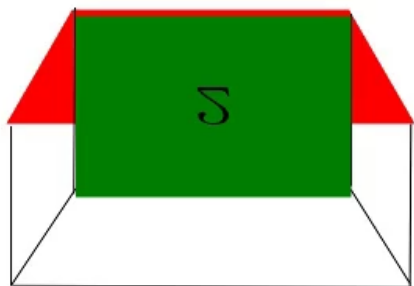


正方体转90deg

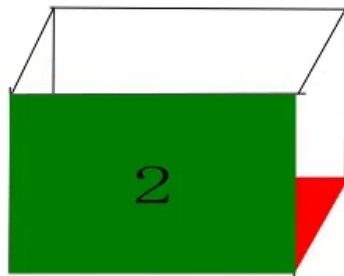


正方体转270deg

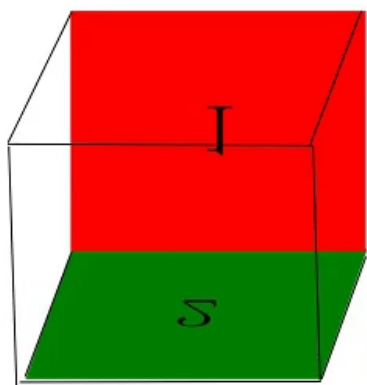
然后做后面那张图：



默认



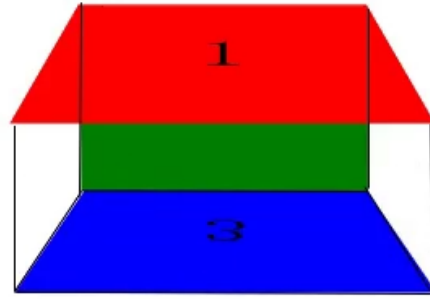
正方体转180deg



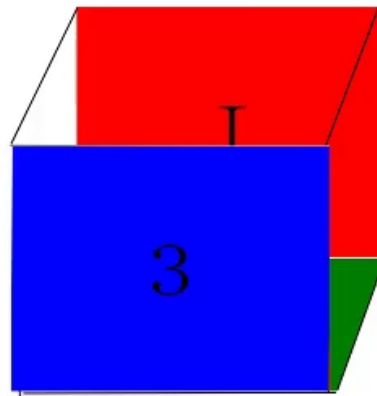
正方体转90deg

疑问： 3D 模块的坐标系到底是如何的？

然后做下面那张图：

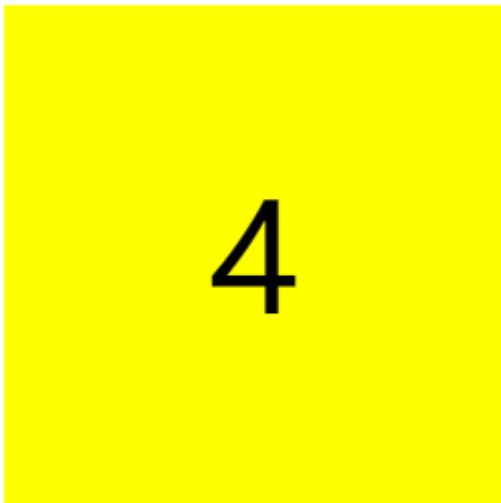


默认



正方体转90deg

最后做前面：



```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>108-3D转换模块正方体终极方案</title>
</style>
```

```

*{
    margin: 0;
    padding: 0;
}
ul{
    width: 200px;
    height: 200px;
    margin: 100px auto;
    position: relative;
    transform: rotateY(0deg) rotateX(0deg);
    transform-style: preserve-3d;
}
ul li{
    width: 200px;
    height: 200px;
    list-style: none;
    font-size: 60px;
    text-align: center;
    line-height: 200px;
    position: absolute;
    left: 0;
    top: 0;
}
ul li:nth-child(1){
    background-color: red;
    transform: rotateX(90deg) translateZ(100px);
}
ul li:nth-child(2){
    background-color: green;
    transform: rotateX(180deg) translateZ(100px);
}
ul li:nth-child(3){
    background-color: blue;
    transform: rotateX(270deg) translateZ(100px);
}
ul li:nth-child(4){
    background-color: yellow;
    transform: rotateX(360deg) translateZ(100px);
}
ul li:nth-child(5){
    background-color: purple;
    transform: translateX(-100px) rotateY(90deg);
}
ul li:nth-child(6){
    background-color: pink;
    transform: translate(100px) rotateY(90deg);
}
</style>
</head>
<body>
<ul>
    <li>1</li>

```

```
<li>2</li>
<li>3</li>
<li>4</li>
<li>5</li>
<li>6</li>
</ul>
</body>
</html>
```

185. 3D转换模块-长方体(理解)

使用 `scale`

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>109-3D转换模块之长方体</title>
  <style>
    *{
      margin: 0;
      padding: 0;
    }
    ul{
      width: 200px;
      height: 200px;
      margin: 100px auto;
      position: relative;
      transform: rotateY(0deg) rotateX(0deg);
      transform-style: preserve-3d;
    }
    ul li{
      width: 200px;
      height: 200px;
      list-style: none;
      font-size: 60px;
      text-align: center;
      line-height: 200px;
      position: absolute;
      left: 0;
      top: 0;
    }
    ul li:nth-child(1){
      background-color: red;
      transform: rotateX(90deg) translateZ(100px) scale(2, 1);
    }
    ul li:nth-child(2){
```



```
        background-color: green;
        transform: rotateX(180deg) translateZ(100px) scale(2, 1);
    }
    ul li:nth-child(3){
        background-color: blue;
        transform: rotateX(270deg) translateZ(100px) scale(2, 1);
    }
    ul li:nth-child(4){
        background-color: yellow;
        transform: rotateX(360deg) translateZ(100px) scale(2, 1);
    }
    ul li:nth-child(5){
        background-color: purple;
        transform: translateX(-200px) rotateY(90deg);
    }
    ul li:nth-child(6){
        background-color: pink;
        transform: translate(200px) rotateY(90deg);
    }
</style>
</head>
<body>
<ul>
    <li>1</li>
    <li>2</li>
    <li>3</li>
    <li>4</li>
    <li>5</li>
    <li>6</li>
</ul>
</body>
</html>
```

186. 3D转换模块-练习(理解)



注意点

只要父元素被拉伸了，子元素也会被拉伸。

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>3D转换模块-练习</title>
  <style>
    *{
      margin: 0;
      padding: 0;
    }
    body {
      perspective: 500px;
    }
    ul{
      width: 200px;
      height: 200px;
      margin: 100px auto;
      position: relative;
      transform: rotateY(0deg) rotateX(0deg);
      transform-style: preserve-3d;
      animation: sport 5s linear 0s infinite normal;
    }
    ul li{
      width: 200px;
      height: 200px;
      list-style: none;
      font-size: 60px;
      text-align: center;
      line-height: 200px;
      position: absolute;
      left: 0;
```

```

        top: 0;
    }
    ul li:nth-child(1){
        background-color: red;
        transform: rotateX(90deg) translateZ(100px) scale(2, 1);
    }
    ul li:nth-child(2){
        background-color: green;
        transform: rotateX(180deg) translateZ(100px) scale(2, 1);
    }
    ul li:nth-child(3){
        background-color: blue;
        transform: rotateX(270deg) translateZ(100px) scale(2, 1);
    }
    ul li:nth-child(4){
        background-color: yellow;
        transform: rotateX(360deg) translateZ(100px) scale(2, 1);
    }
    ul li:nth-child(5){
        background-color: purple;
        transform: translateX(-200px) rotateY(90deg);
    }
    ul li:nth-child(6){
        background-color: pink;
        transform: translate(200px) rotateY(90deg);
    }
    ul li img{
        width: 200px;
        height: 200px;
    }
    @keyframes sport{
        from{
            transform: rotateX(0deg);
        }
        to{
            transform: rotateX(360deg);
        }
    }
</style>
</head>
<body>
<ul>
    <li></li>
    <li></li>
    <li></li>
    <li></li>
    <li></li>
    <li></li>
</ul>
</body>
</html>

```

187. 3D播放器上(理解)

`background-size: cover;` 背景图片填满整个浏览器

快捷键：`lisn - list-style: none;`

注意点：

1. 动画中如果有和默认样式中同名的属性，会覆盖默认样式中同名的属性
2. 在编写动画的时候，固定不变的值写在前面，需要变化的值写在后面

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>111-3D播放器上</title>
  <style>
    *{
      margin: 0;
      padding: 0;
    }
    body{
      background: url("img/jacky/bg.jpg") no-repeat;
      background-size: cover;
    }
    ul{
      width: 200px;
      height: 200px;
      /*background-color: red;*/
      position: absolute;
      bottom: 100px;
      left: 50%;
      margin-left: -100px;
      transform-style: preserve-3d;
      transform: rotateX(-10deg);
      animation: sport 6s linear 0s infinite normal;
    }
    ul li{
      list-style: none;
      width: 200px;
      height: 200px;
      font-size: 60px;
      text-align: center;
      line-height: 200px;
      position: absolute;
      left: 0;
      top: 0;
```

```

    }
    ul li:nth-child(1){
        /*background-color: green;*/
        transform: rotateY(60deg) translateZ(200px);
    }
    ul li:nth-child(2){
        /*background-color: blue;*/
        transform: rotateY(120deg) translateZ(200px);
    }
    ul li:nth-child(3){
        /*background-color: yellow;*/
        transform: rotateY(180deg) translateZ(200px);
    }
    ul li:nth-child(4){
        /*background-color: pink;*/
        transform: rotateY(240deg) translateZ(200px);
    }
    ul li:nth-child(5){
        /*background-color: yellow;*/
        transform: rotateY(300deg) translateZ(200px);
    }
    ul li:nth-child(6){
        /*background-color: gold;*/
        transform: rotateY(360deg) translateZ(200px);
    }
    ul li img{
        width: 200px;
        height: 200px;
        border: 5px solid skyblue;
        box-sizing: border-box;
    }
    @keyframes sport {
        from{
            /*
            注意点：
            1. 动画中如果有和默认样式中同名的属性，会覆盖默认样式中同名的属性
            2. 在编写动画的时候，固定不变的值写在前面，需要变化的值写在后面
            */
            transform: rotateX(-10deg) rotateY(0deg);
        }
        to{
            transform: rotateX(-10deg) rotateY(360deg);
        }
    }
</style>
</head>
<body>
<ul>
    <li></li>
    <li></li>
    <li></li>
    <li></li>

```

```
<li></li>
<li></li>
</ul>
</body>
</html>
```

188. 3D播放器下(理解)



```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>111-3D播放器上</title>
  <style>
    *{
      margin: 0;
      padding: 0;
    }
    body{
      background: url("img/jacky/bg.jpg") no-repeat;
      background-size: cover;
      overflow: hidden;
    }
    ul{
      width: 200px;
      height: 200px;
```

```
        /*background-color: red;*/
        position: absolute;
        bottom: 100px;
        left: 50%;
        margin-left: -100px;
        transform-style: preserve-3d;
        transform: rotateX(-10deg);
        animation: sport 6s linear 0s infinite normal;
    }
    ul:hover{
        animation-play-state: paused;
    }
    ul:hover li img{
        opacity: 0.5;
    }
    ul li{
        list-style: none;
        width: 200px;
        height: 200px;
        font-size: 60px;
        text-align: center;
        line-height: 200px;
        position: absolute;
        left: 0;
        top: 0;
        background-color: black;
    }
    ul li:hover img{
        opacity: 1;
    }
    ul li:nth-child(1){
        /*background-color: green;*/
        transform: rotateY(60deg) translateZ(200px);
    }
    ul li:nth-child(2){
        /*background-color: blue;*/
        transform: rotateY(120deg) translateZ(200px);
    }
    ul li:nth-child(3){
        /*background-color: yellow;*/
        transform: rotateY(180deg) translateZ(200px);
    }
    ul li:nth-child(4){
        /*background-color: pink;*/
        transform: rotateY(240deg) translateZ(200px);
    }
    ul li:nth-child(5){
        /*background-color: yellow;*/
        transform: rotateY(300deg) translateZ(200px);
    }
    ul li:nth-child(6){
        /*background-color: gold;*/
```

```

        transform: rotateY(360deg) translateZ(200px);
    }
    ul li img{
        width: 200px;
        height: 200px;
        border: 5px solid skyblue;
        box-sizing: border-box;
    }
    @keyframes sport {
        from{
            /*
            注意点：
            1. 动画中如果有和默认样式中同名的属性，会覆盖默认样式中同名的属性
            2. 在编写动画的时候，固定不变的值写在前面，需要变化的值写在后面
            */
            transform: rotateX(-10deg) rotateY(0deg);
        }
        to{
            transform: rotateX(-10deg) rotateY(360deg);
        }
    }
    .heart{
        width: 173px;
        height: 157px;
        position: absolute;
        left: 100px;
        bottom: 100px;
        animation: move 5s linear 0s infinite normal;
    }
    @keyframes move {
        0%{
            left: 100px;
            bottom: 100px;
            opacity: 1;
        }
        20%{
            left: 300px;
            bottom: 400px;
            opacity: 0;
        }
        40%{
            left: 500px;
            bottom: 700px;
            opacity: 1;
        }
        60%{
            left: 800px;
            bottom: 300px;
            opacity: 0;
        }
        80%{
            left: 1200px;

```



```
        bottom: 100px;
        opacity: 1;

    }
    100%{
        left: 800px;
        bottom: -200px;
        opacity: 0;
    }
}
</style>
</head>
<body>
<ul>
    <li></li>
    <li></li>
    <li></li>
    <li></li>
    <li></li>
    <li></li>
</ul>

<audio src="img/jacky/music.mp3" autoplay="autoplay" loop="loop"></audio>
</body>
</html>
```

完成于 20190222