



为梦想增值!

WEB前端基础 — HTML5和CSS3新特性快速参考

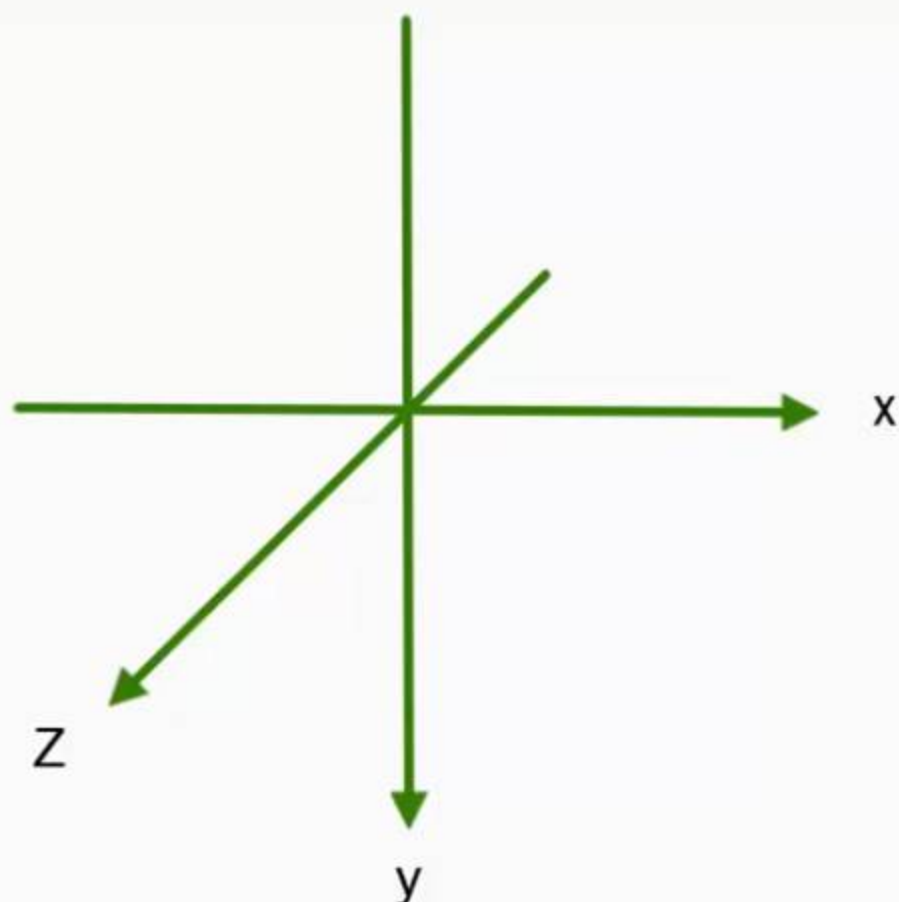
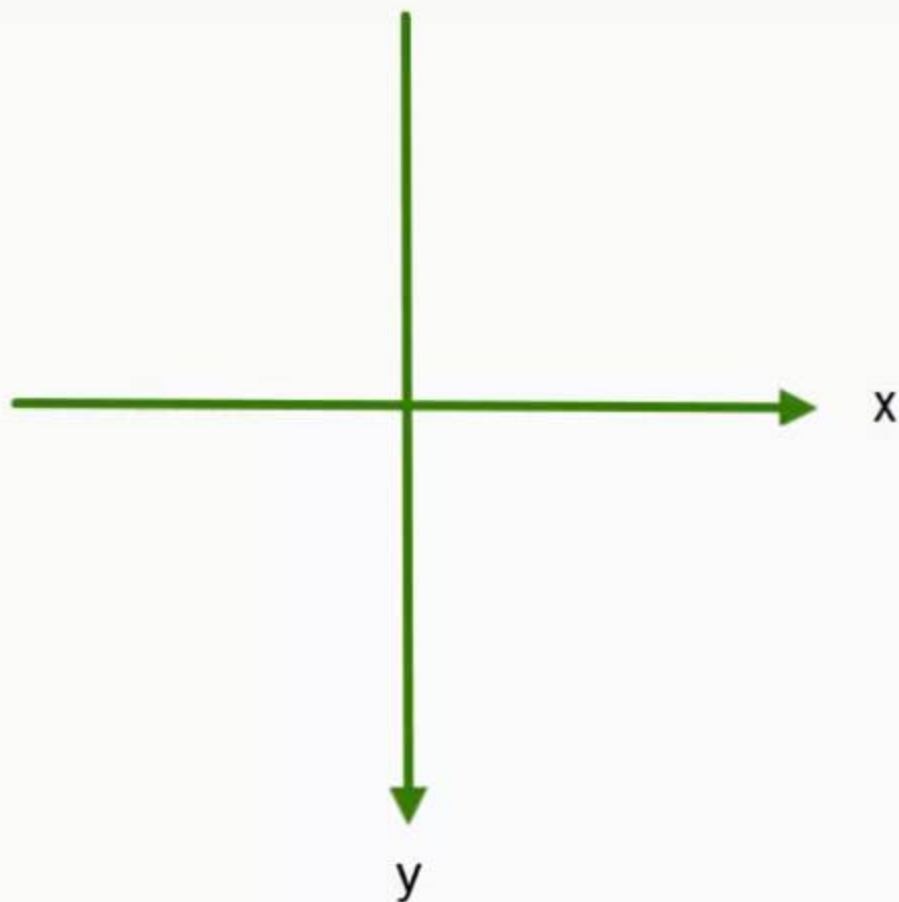
讲师：HELEN





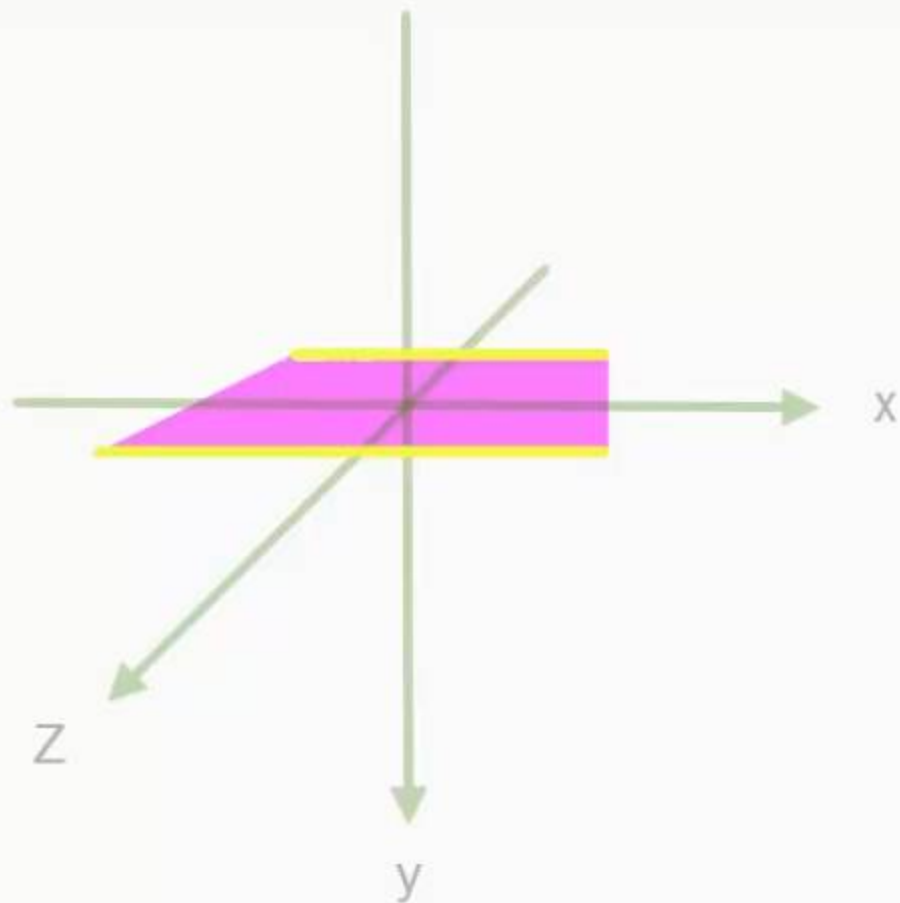
第二十六课

3D转换



可以使用 transform 属性将HTML元素在3D空间内

- 旋转 rotate
- 移动 translate
- 缩放 scale

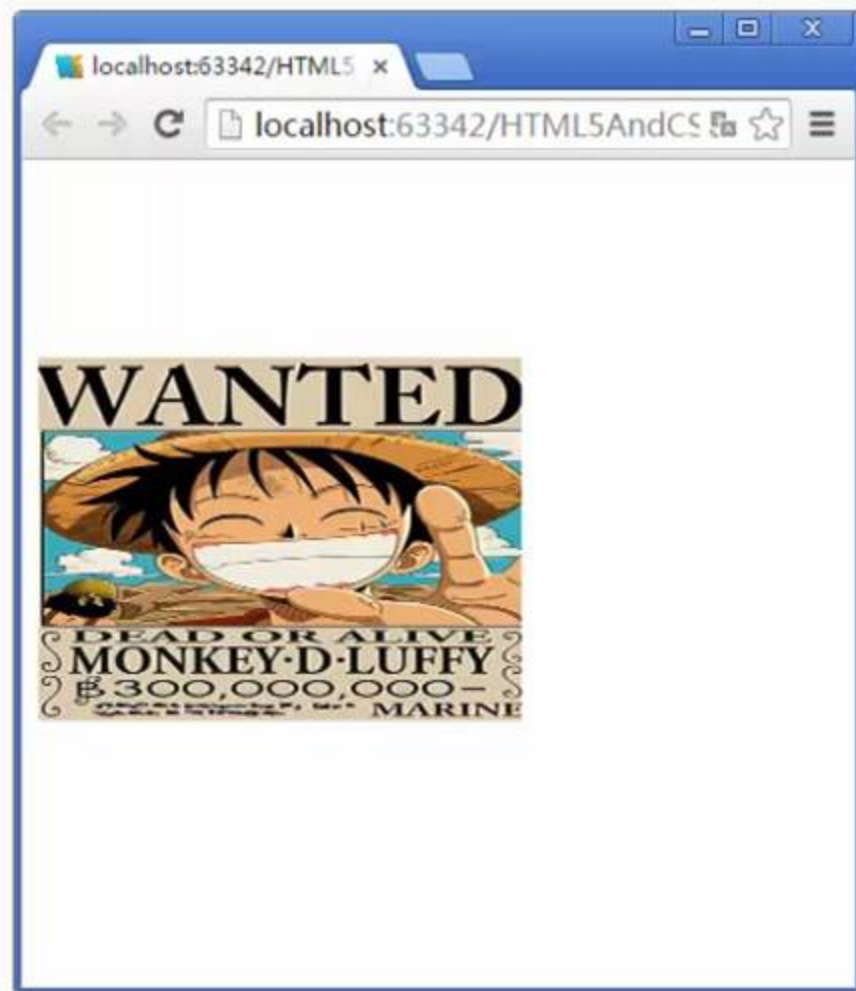





```
<div>
  
</div>
```

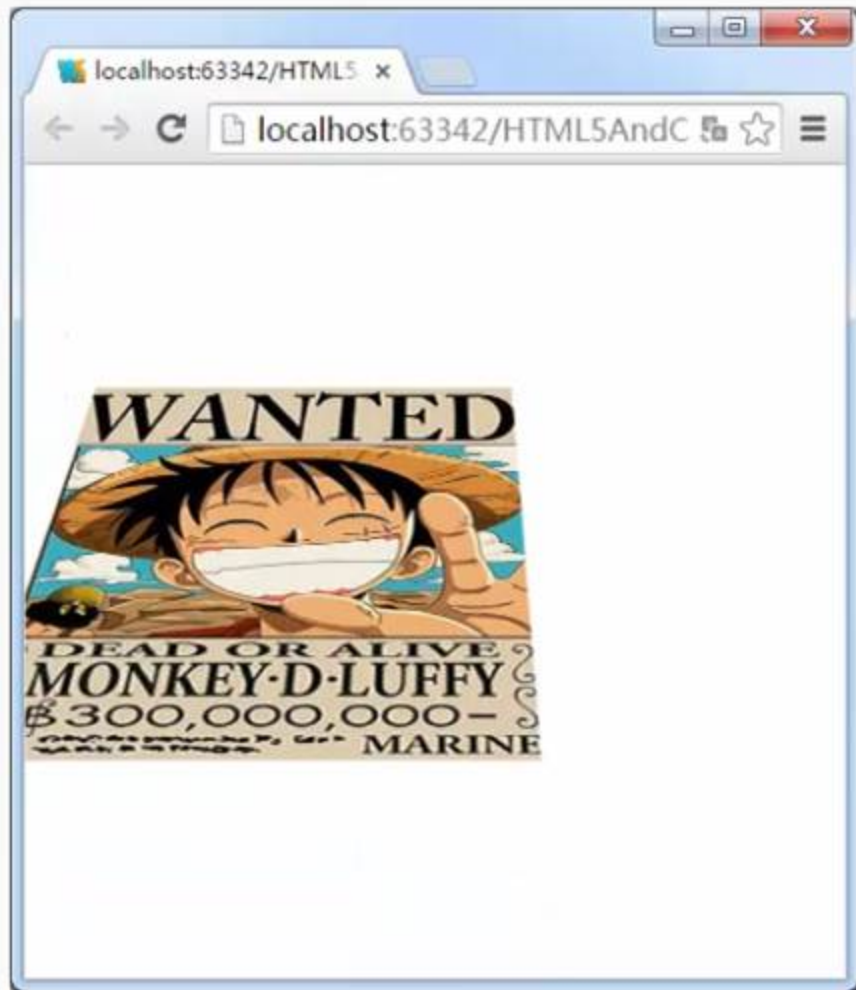
```
@-webkit-keyframes rotate {
  100% {transform: rotateX(60deg);}
}

img{
  -webkit-animation: rotate 2s linear 2s both;
}
```

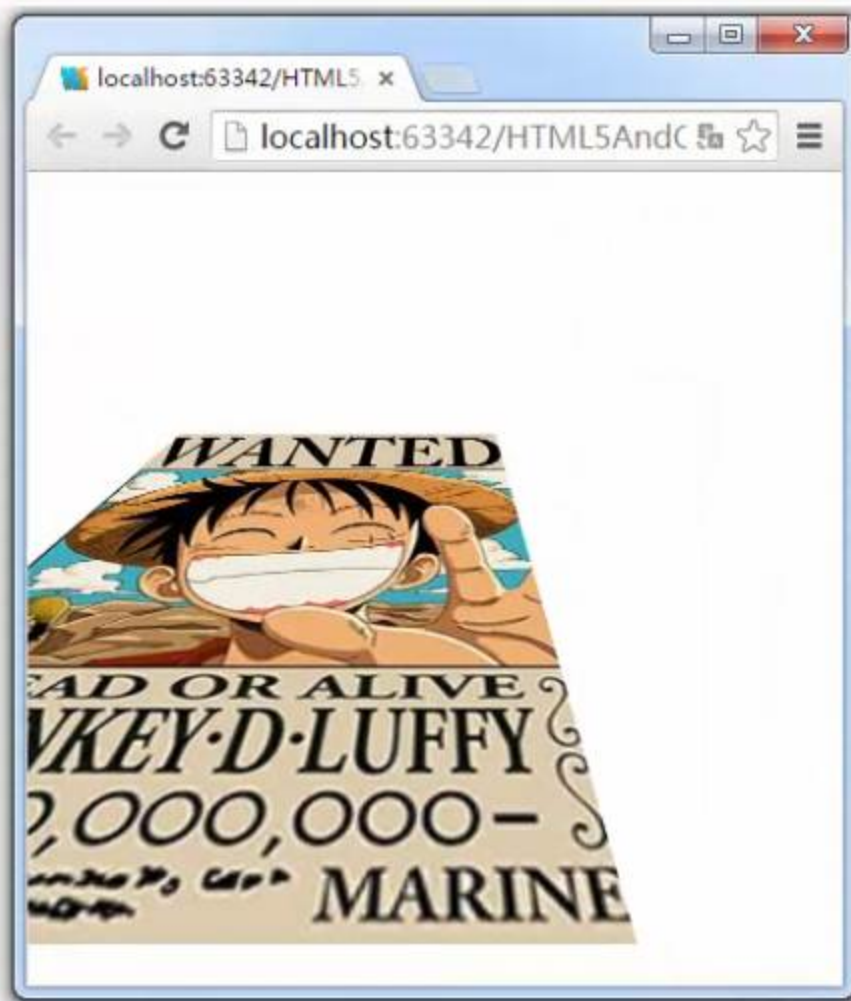


视点和画面的距离

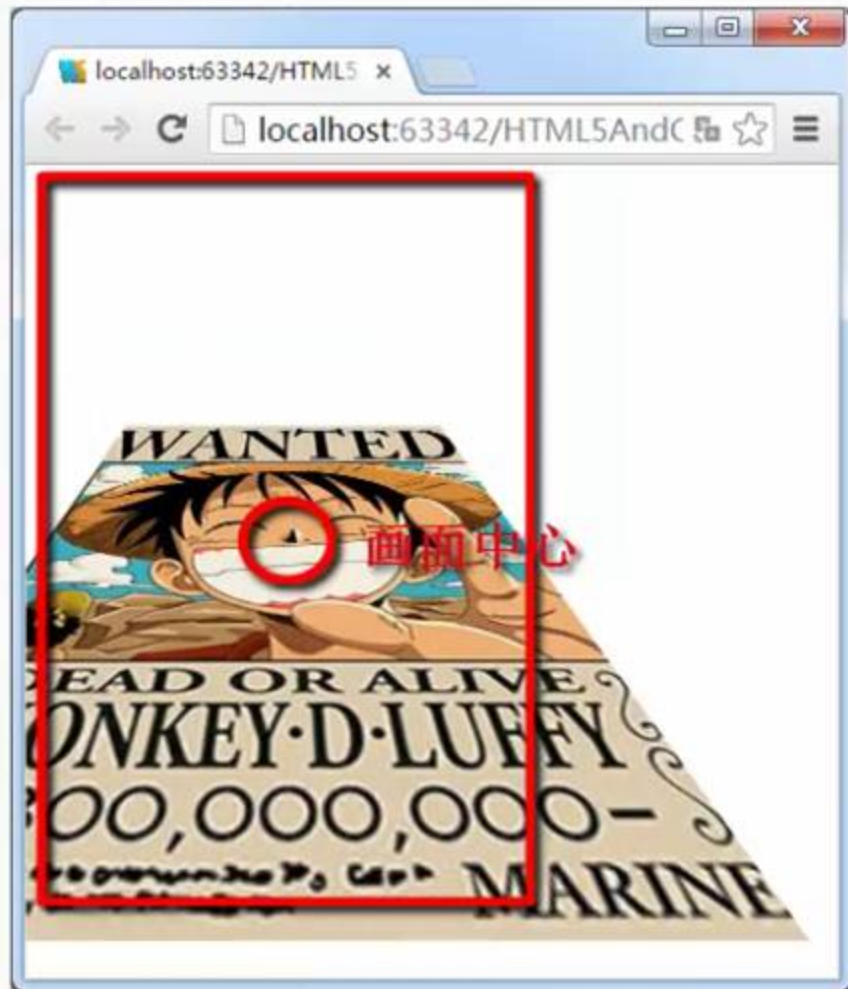
```
div {  
    perspective: 1000px;  
}  
  
@-webkit-keyframes rotate {  
    100% {transform: rotateX(60deg);}  
}  
  
img{  
    -webkit-animation: rotate 2s linear 2s both;  
}
```



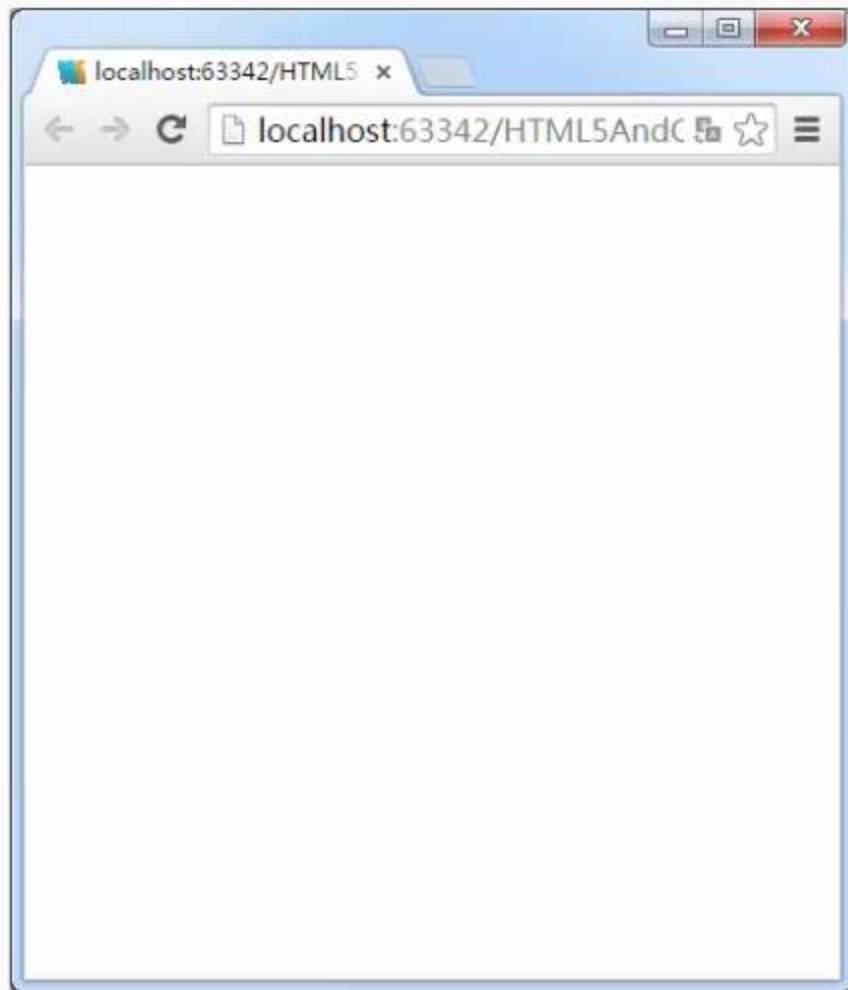
```
div {  
  perspective: 300px;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: rotateX(60deg);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both;  
}
```



```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 300px;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: rotateX(60deg);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both;  
}
```




```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 300px;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: rotateX(90deg);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both;  
}
```



```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 300px;  
  perspective-origin: right top;  
}
```

视点的位置



```
@-webkit-keyframes rotate {  
  100% {transform: rotateX(90deg);}  
}
```

```
img{  
  -webkit-animation: rotate 2s linear 2s both;  
}
```



| 值 | x (默认值50%) | y (可选 默认值50%) |
|------|--------------------------------------|--------------------------------------|
| 描述 | 0,0点是所在元素的左上角 | |
| 可能的值 | left center right 长度 百分比 | top center bottom 长度 百分比 |

转换函数

- rotateX(角度)
- rotateY(角度)
- rotateZ(角度)
- rotate3d(x, y, z, 角度)

```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 500px;  
  perspective-origin: right top;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: rotateY(360deg);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both;  
}
```



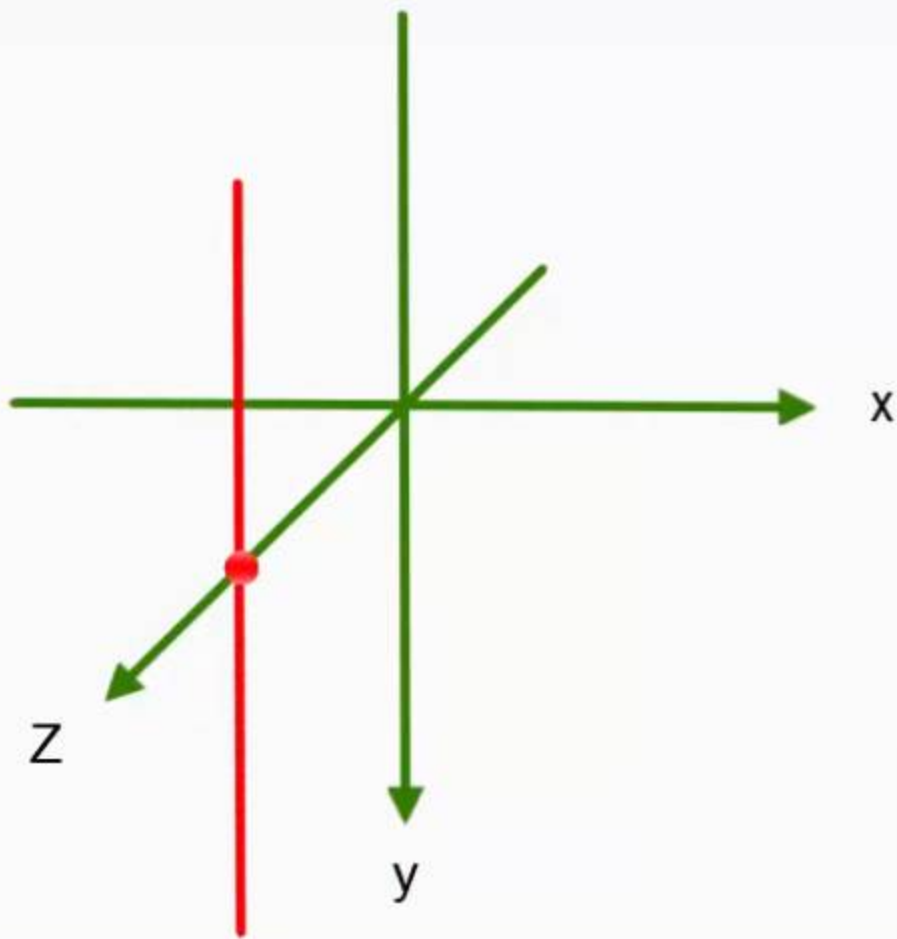
```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 500px;  
  perspective-origin: right top;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: rotateZ(360deg);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both;  
}
```



```
transform-origin: x y z;
```

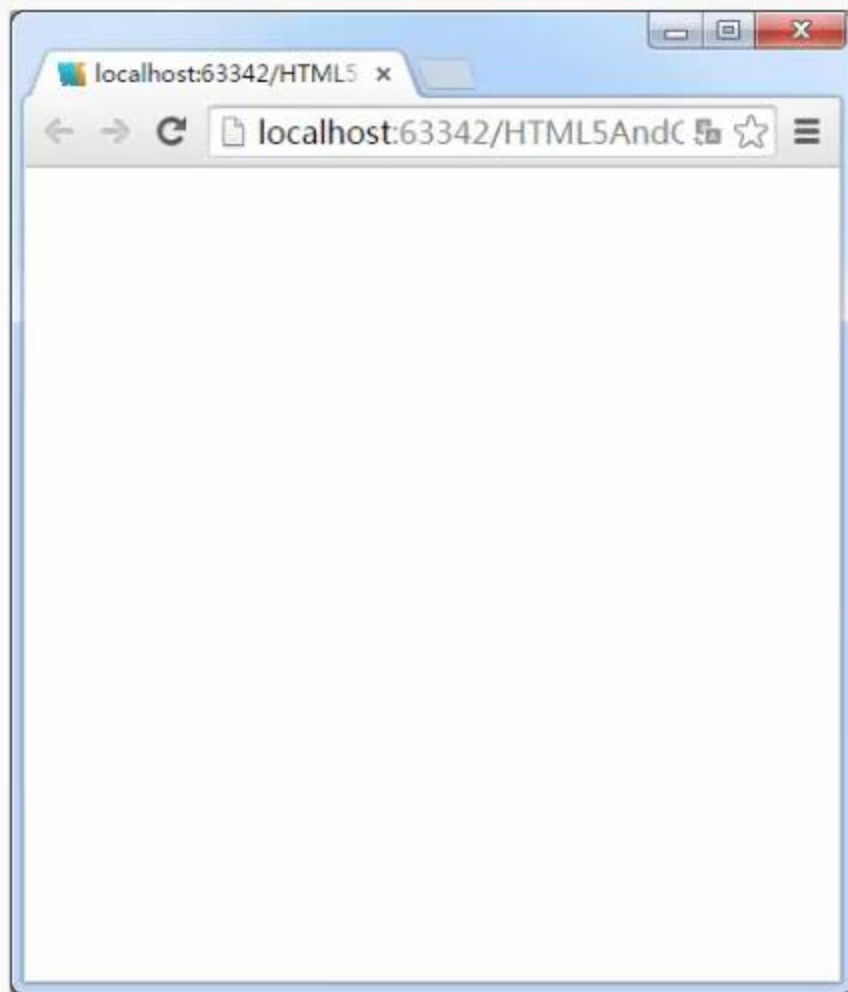
| 值 | x (默认值50%) | y (可选 默认值50%) | z (可选 默认值是0) |
|------|--------------------------------------|--------------------------------------|----------------|
| 描述 | 0,0点是所在元素的左上角 | | |
| 可能的值 | left center right 长度 百分比 | top center bottom 长度 百分比 | 长度 |


```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 500px;  
  perspective-origin: right top;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: rotateY(360deg);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both;  
  transform-origin: center center 100px;  
}
```



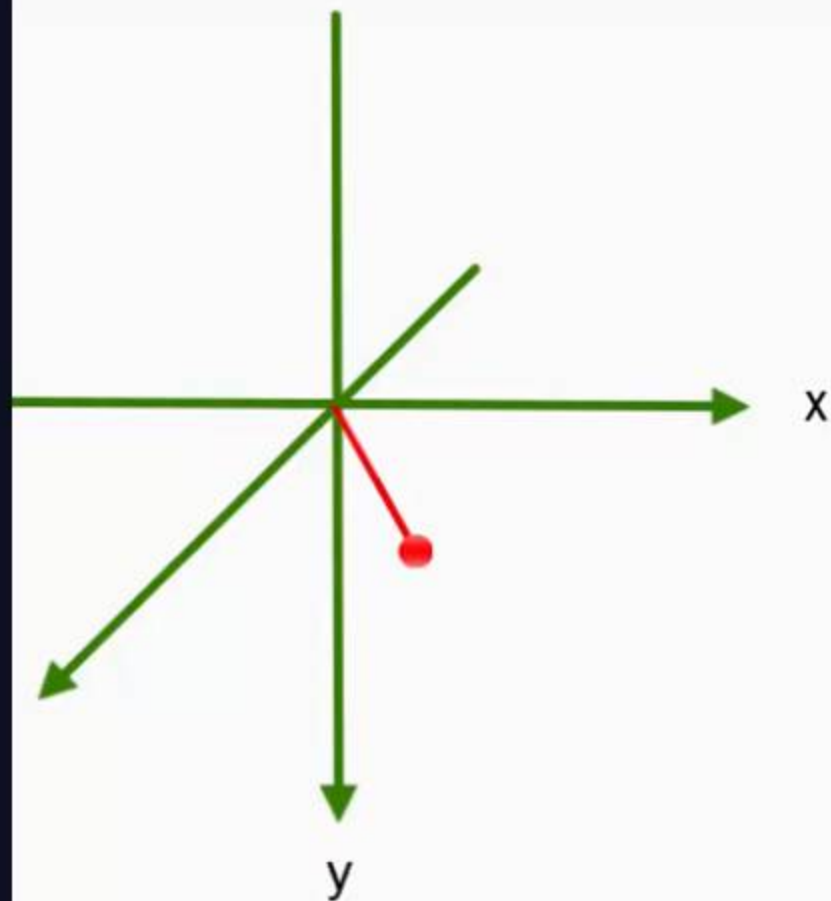
```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 500px;  
  perspective-origin: right top;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: rotateY(360deg);}  
}  
  
img{  
  设置元素背面是否见，默认值是visible  
  -webkit-animation: rotate 2s linear 2s both;  
  transform-origin: center center 100px;  
  backface-visibility: hidden;  
}
```

为梦想增值!




```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 500px;  
  perspective-origin: right top;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: rotate3d(1, 1, 1, 360deg);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s infinite;  
}
```

单位是px



转换函数

- `translateX(x)`
- `translateY(y)`
- `translateZ(z)`
- `translate3d(x, y, z)`

```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 500px;  
  perspective-origin: right top;  
}  
  
@-webkit-keyframes rotate {  
  0% {transform: translateZ(-100px);}  
  50% {transform: translateZ(100px);}  
  100% {transform: translateZ(-100px);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both infinite;  
}
```



为梦想增值!


```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 500px;  
  perspective-origin: right top;  
}  
  
@-webkit-keyframes rotate {  
  50% {transform: translate3d(50%, 50%, 100px);}  
  100% {transform: translate3d(0, 0, 0);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both infinite;  
}
```

也可以是长度



只能是长度



转换函数

- `scaleX(z)`
- `scaleY(y)`
- `scaleZ(z)`
- `scale3d(x, y, z)`

```
div {  
  width: 250px;  
  height: 375px;  
  perspective: 500px;  
  perspective-origin: right top;  
}  
  
@-webkit-keyframes rotate {  
  100% {transform: scaleZ(5) translateZ(100px);}  
}  
  
img{  
  -webkit-animation: rotate 2s linear 2s both infinite;  
}
```

z轴放大5倍

实际移动了500px



| 值 | 描述 |
|--------------|-----------------|
| flat (默认值) | 子元素将不保留其 3D 位置。 |
| preserve-3d | 子元素将保留其 3D 位置。 |



Thank You !

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