CSS Chapter 3

Transforms, Transitions, Animations & Media Query

CSS3 2D Transforms

With CSS3 transform, we can move, scale, turn, spin, and stretch elements.

How Does it Work?

A transform is an effect that lets an element change shape, size and position.

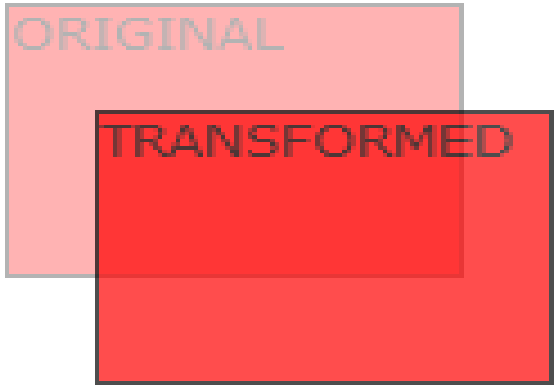
2D Transform methods

- Translate()
- Rotate()
- Scale()
- Skew()
- Matrix()

Transform Translate

With the translate() method, the element moves from its current position, depending on the parameters given for the left (X-axis) and the top (Y-axis) position.

The syntax : translate(X, Y).



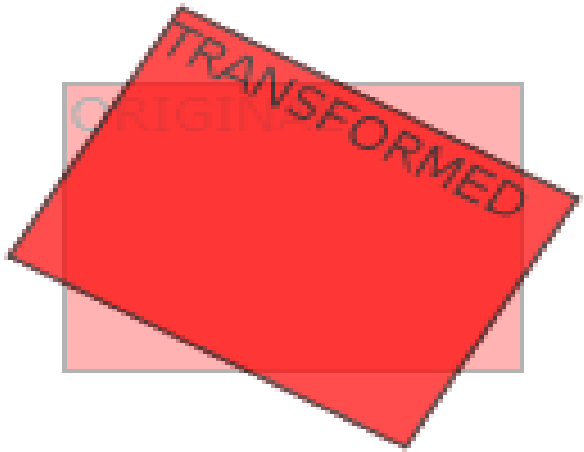
Example

```
trnsform: translate(50px,100px);
```

Transform Rotate

With the rotate() method, the element rotates clockwise at a given degree. Negative values are allowed and rotates the element counter-clockwise.

The syntax transform: rotate(30deg);



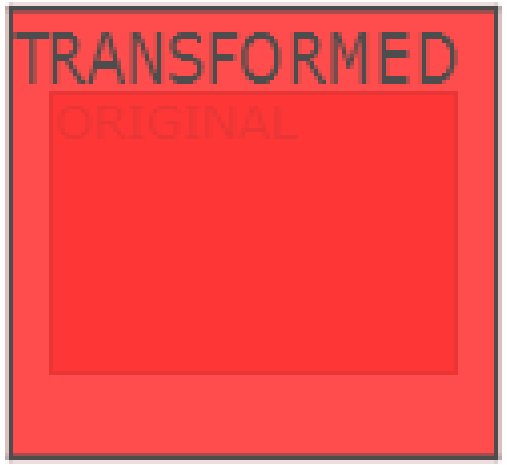
Example

```
transform: rotate(30deg);
```

Transform Scale

With the scale() method, the element increases or decreases the size, depending on the parameters given for the width (X-axis) and the height (Y-axis).

The syntax transform: scale(x, y);



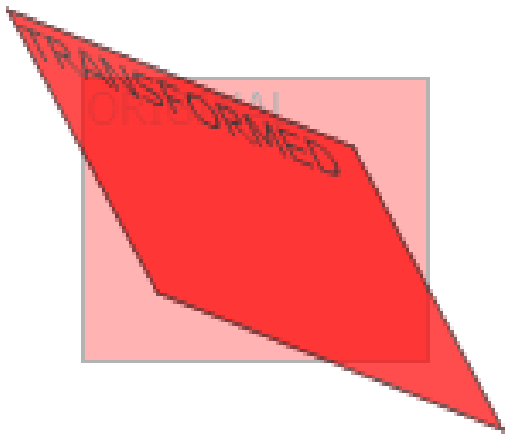
Example

```
transform: scale(2,4);
```

Transform Skew

With the skew() method, the element turns at a given angle, depending on the parameters given for the horizontal (X-axis) and the vertical (Y-axis) lines.

The syntax transform: skew(30deg, 20deg);



Example

```
transform: skew(30deg,20deg);
```

Transform Matrix

- The matrix() method combines all of the 2D transform methods into one.

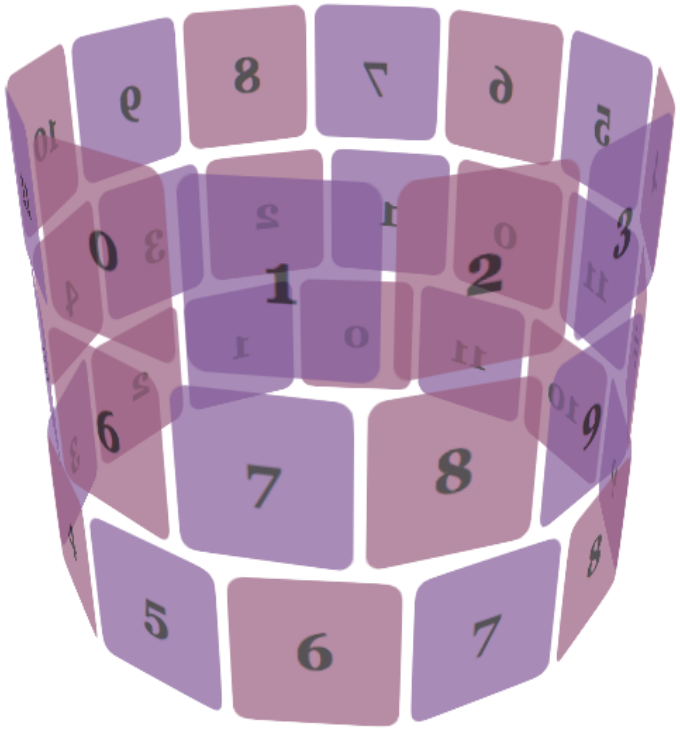
- The matrix method takes six parameters, containing mathematic functions, which allow you to: rotate, scale, move (translate), and skew elements.

The syntax transform: matrix(a, b, c, d, e, f).

Example

```
transform: matrix(0.866,0.5,-0.5,0.866,0,0);
```

CSS 3D Transforms



3D transform methods:

rotateX()

rotateY()

rotateZ()

3D Transform Rotate X

- With the **rotateX()** method, the element rotates around its X-axis at a given degree.

The syntax **transform: rotateX(angle);**

Example

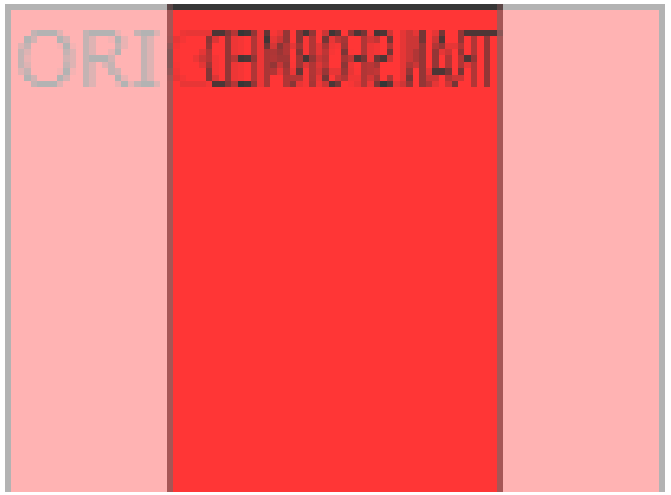
```
transform: rotateX(120deg);
```

3D Transform Rotate Y

- With the rotateY() method, the element rotates around its Y-axis at a given degree.

Example

```
transform: rotateY(130deg);
```



3D Transform Rotate Z

- With the rotateZ() method, the element rotates around its Z-axis at a given degree.

Example

```
transform: rotateZ(130deg);
```

Transitions in CSS-3

- CSS3 transitions allow you to add smooth and gradual changes to the CSS properties of an element, such as its colour, size, or position.

- Here also learn about the following properties:

  - transition-delay
  - transition-duration
  - transition-property
  - transition-timing-function

Transition-Delay

The transition-delay property specifies when the transition effect will start.

The transition-delay value is defined in seconds (s) or milliseconds (ms).

Transition-Duration

The transition-duration property specifies how many seconds (s) or milliseconds (ms) a transition effect takes to complete.

Transition-Timing-Function

The transition-timing function property specifies the speed curve of the transition effect.

The transition-timing-function property can have the following values:

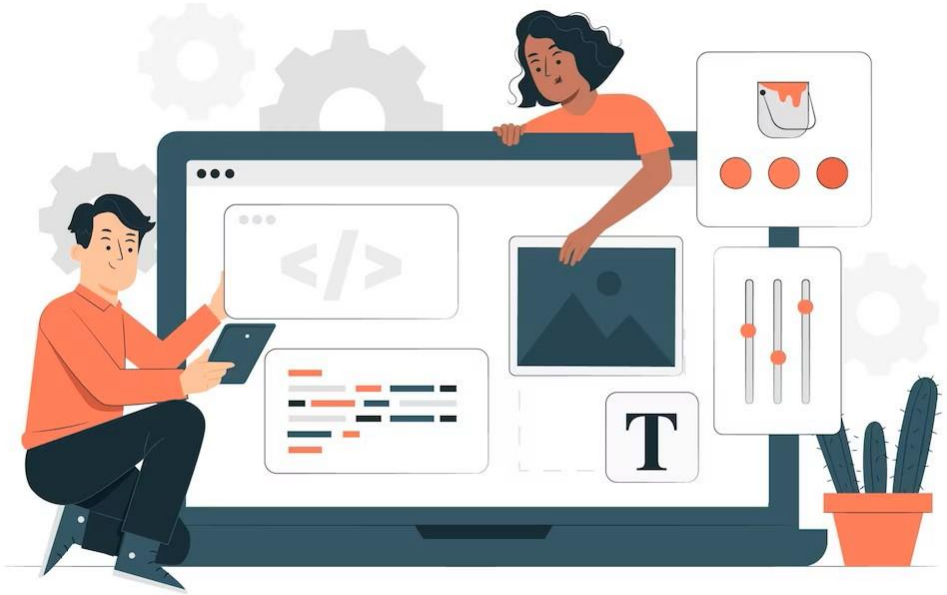
- **ease** - specifies a transition effect with a slow start, then fast, then end slowly.
- **linear** - specifies a transition effect with the same speed from start to end.
- **ease-in** - specifies a transition effect with a slow start.
- **ease-out** - specifies a transition effect with a slow end.
- **ease-in-out** - specifies a transition effect with a slow start and end.
- **cubic-bezier(n,n,n,n)** - lets you define your own values in a cubic-bezier function.

Transition-Property

The **transition-property** specifies the name of the CSS property the transition effect is for (the transition effect will start when the specified CSS property changes.

Example

```
transition-property: color;
```



Example:

Get Hired By Compnay Around The World

Discover Global Career Opportunities And Land Your Dream Job Anywhere In The World With Our Extensive Job Listings Of Top Companies

Apply Now! Learn More

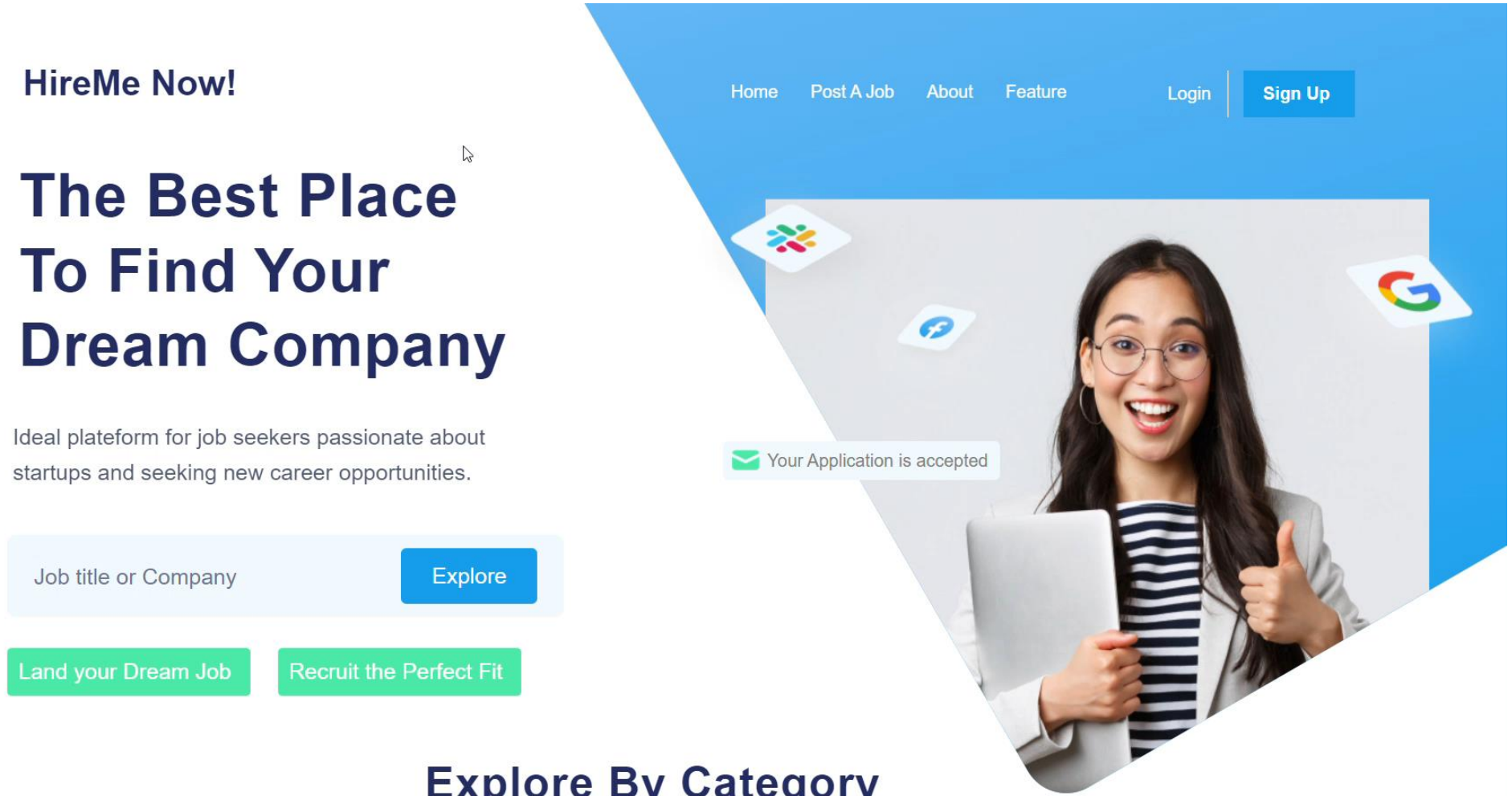
Code Behind:

```
<div class=“abc">

<img class=image1 src="images/ image1.png">
<img class=image2 src="images/ image2.png">
<img class=image3 src="images/ image3.png">
<img class=image4 src="images/ image4.png">
<img class=twitter src="images/twitter.png">
<img class=facebook src="images/fb.png">
<img class=google src="images/google.png">

</div>
```

CSS Behind:

```
.abc:hover
 {
    scale: 1.15;
    transition: scale 2s;
    transition-timing-function: linear;
 }
```

Example:


HireMe Now!
Home
Post A Job
About
Feature
Login
Sign Up
The Best Place To Find Your Dream Company
Ideal plateform for job seekers passionate about startups and seeking new career opportunities.
Job title or Company
Explore
Land your Dream Job
Recruit the Perfect Fit
Your Application is accepted
Explore By Category

Code Behind:

```
<div class="rect-over-images">

<img class="google" src="images/google.png">
<img class="slack" src="images/ slack.png">
<img class="fb" src="images/fb.png">

</div>
```

CSS Behind:

```
.slack
{
   animation: rotation 2s infinite;
}

.fb
{
   animation: rotation 2s infinite;
}
.google
{
    animation: rotation 2s infinite;
}
```

Animations

With CSS3, we can create animations that replace animated images, Flash animations, and JavaScript in many web pages.

CSS3 @keyframes Rule

The @keyframes rule is where the animation is created. Specify a CSS style inside the @keyframes rule and the animation will gradually change from the current style to the new style.

Specify when the change will happen in per cent, or the keywords "from" and "to", which is the same as 0% and 100%.

Example:

```
@keyframes myfirst{
        0%   {background: red;}
        25%  {background: yellow;}
        50%  {background: blue;}
        100% {background: green;}
        }

    @-webkit-keyframes myfirst {
        0%   {background: red;}
        25%  {background: yellow;}
        50%  {background: blue;}
        100% {background: green;}
    }
```

Properties included in animations

- animation-name
- animation-duration
- animation-delay
- animation-iteration-count
- animation-direction
- animation-timing-function
- animation-fill-mode
- animation

Media Query

- Media query is a CSS technique introduced in CSS3
- It uses the @media rule to include a block of CSS properties only if a certain condition is true.
- Media queries will allow us to change our layouts to suit the extract need of different devices – without changing the content
- CSS can be used to specify how a document is presented in different media.

Example:

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<style>
body {
  background-color: lightgreen;
}

@media only screen and (max-width: 600px) {
  body {
    background-color: lightblue;
  }
}
</style>
</head>
<body>

</body>
</html>
```

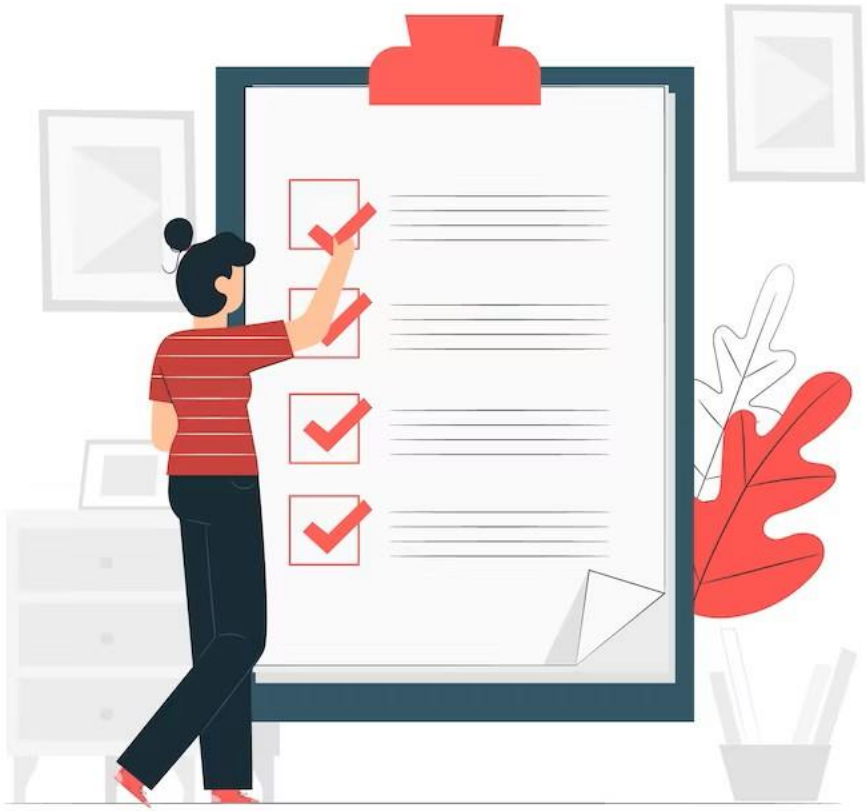
Media query syntax: external

```
<link href="narrow.css" rel="stylesheet"
media="only screen and (max-width:500px)">
```

```
@import url(narrow.css) only screen and
(max-width:500px);
```

What we have discussed so far…

- CSS-Transform
- CSS-Transition
- CSS-Media Query



Questions?