

Extra notes - CSS - Functions

- Dr Nick Hayward

A brief introduction to the basics of CSS Functions.

Contents

- Intro
 - CSS Functions
 - Element transform
 - Further information
- References

Intro A **Cascading Style Sheet**, or CSS, allows us to define stylistic characteristics for our HTML. In effect, it helps us define how our HTML is displayed and rendered. The colours used, font sizes, borders, padding, margins, links, and so on.

CSS is used for defining how documents will be presented to users, for example rendered HTML in a web browser.

CSS Functions When we define a ruleset in CSS, we commonly define property values using keywords or numeric values.

However, we may also use *functions* as a property value.

For example, a common function used in CSS is `calc()`, which allows simple mathematical calculations.

```
p {  
  max-width: calc(100% - 30px)  
}
```

In this example, the `calc()` function returns a numerical value based on the percentage width of the container minus a fixed value of `30px`.

In effect, we may use this function, `calc()`, to dynamically define the width of a `<p>` paragraph element, and restrict the `max-width`.

The benefit of this function in CSS is that the numerical value for `max-width` may not be calculated beforehand and stored in the CSS as a static value. It needs to be a value that corresponds to the dynamic nature of the size of the paragraph.

Element transform A fun CSS property is `transform`, which provides numerous functions we may commonly use to manipulate shapes, images, &c.

For example,

- scale
- rotate
- translate
- skew
- perspective
- matrix

and variants of the above functions for X, Y, Z axes, and 3D.

An initial example is as follows,

```
div.marker {  
  height: 100px;  
  width: 100px;  
  transform: rotate(0.75turn);  
}
```

We may also combine multiple functions,

```
div.marker {  
  height: 100px;  
  width: 100px;  
  transform: translateX(50px) rotate(0.75turn);  
}
```

The order of execution for multiple functions will also have an effect on the rendering.

Further information A list of current and developmental CSS functions may be found at the following URL,

- https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Functions

These functions are commonly divided into the following broad groupings,

- color
- counter
- filter
- font
- image
- math
- shape
- transform

References

- [MDN - CSS](#)
- [MDN - CSS Functional Notation](#)
- [MDN - CSS - Transform](#)
- [MDN - CSS - Using CSS transforms](#)
- [W3 CSS](#)
- [W3 Schools - CSS](#)