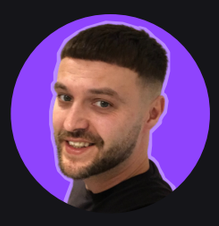
Learn CSS By Use Cases

ebook by Joe Harrison

Syntax Property Value Types



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Property Value Types

Syntax

Intro

Each CSS property value can include a combination of keywords, lengths and functions. Let’s run through what I consider to be the most important to know.

Syntax Overview

```
border-width: 1px;
font-size: 1rem;
width: 100%;
transform: rotate(45deg);
border-color: #8F44FD;
color: rgba(255, 255, 255, 0.96);
font-family: "Euclid Circular A";
line-height: 1.375;
margin: auto;
grid-area: menu-top;
background: url(image.png);
flex-grow: 1;
```

pixel

rem

%

degree

hex

rgba

string

number

pre-defined keyword

custom keyword

function

fraction

Property Value Types

Syntax

Lengths

px

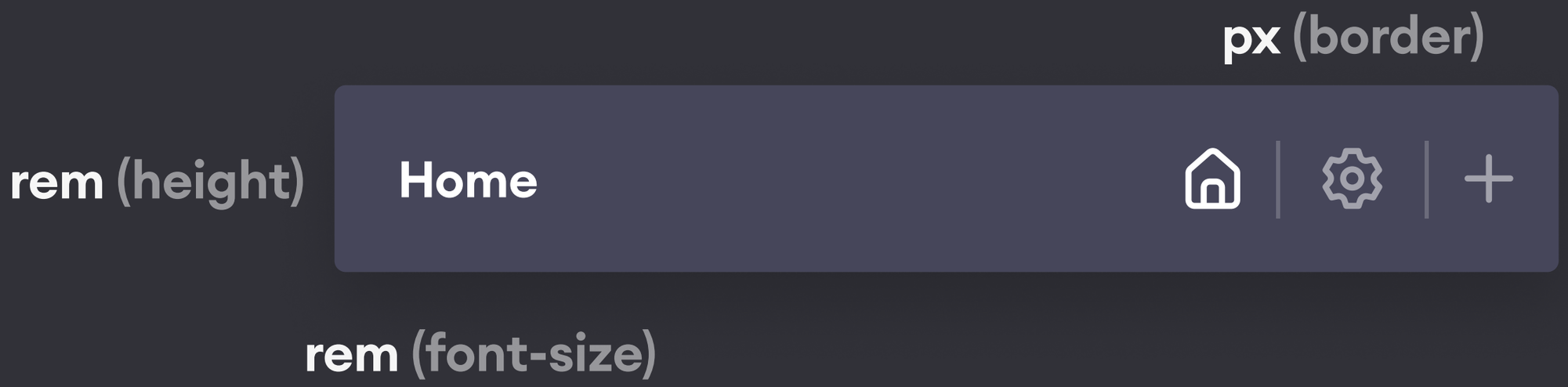
I use pixels for things that are tiny, like borders or letter spacing. They are also useful if you want something to maintain its size (like borders) if the root font size is changed. When creating very bespoke designs it can be easier to use pixels, then convert them to rem later on.

rem

Rem or root em is my “go to” length for anything with a fixed size. Websites will scale up and down real nice if you predominantly use rems throughout your work. When the root font size changes (i.e. your website has different custom fonts) everything will scale a lot more naturally. As a guide, think of 1rem as about 16px.

Lengths

Pixel and rem




```
.nav {
  height: 4rem;
  font-size: 0.75rem;
}

.nav-item {
  border-width: 1px;
}
```

Property Value Types

Syntax

Lengths (Continued)

%

More difficult to learn than px or rem in that the percentage can either be of it's parent, or of itself (bounding box) - depending on the element, function or context. The main use case for % is to fill an area of space proportionally. % can be negative in all contexts.

deg

This allows us to set the degrees of an angle. You will see them mainly in functions when adding linear gradient backgrounds or rotating shapes with transform. Chrome has a cool feature to toggle the angle in dev tools, like many other property values.

Lengths

Percentages and degrees

% (width)

deg (gradient)

```
.nav { width: 100%; }

.nav {
  background: linear-gradient(
    45deg,
    #8F44FD,
    #B744FD
  )
}
```

Property Value Types

Syntax

Colors

hex

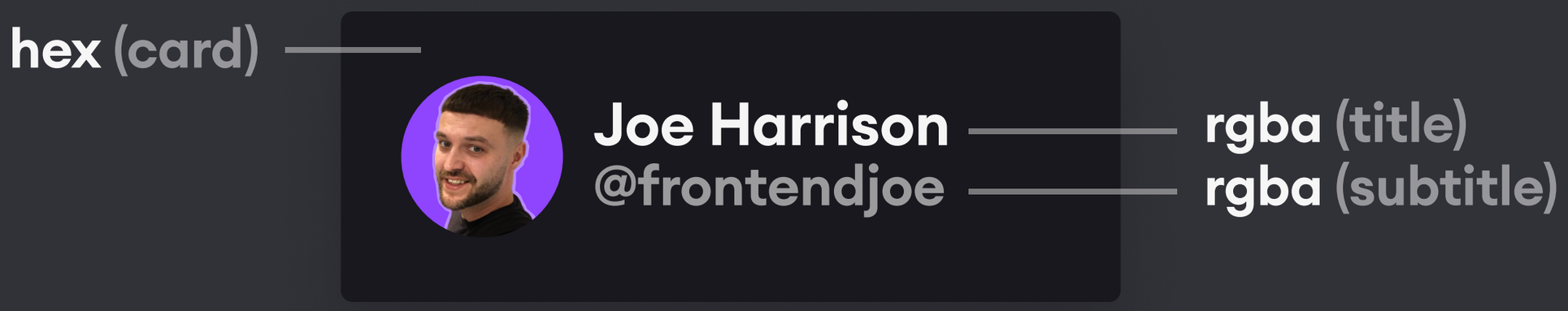
Hexadecimal or hex color values are supported in all browsers and are universally used across a variety of vector editing tools, such as Figma. They are mainly used for solid colors that do not require any opacity.

rgba

The rgba function allows us to define RGB (red, green, blue) colors but also add a fourth argument - opacity. This type of color is useful when opacity/alpha is required - the most common use case being light text on a colored background.

Colors

hex and rgba




```
.card { background: #18181E; }

.card-title {
  color: rgba(255, 255, 255, 0.96);
}

.card-subtitle {
  color: rgba(255, 255, 255, 0.57);
}
```

All 255's is white

or 57%

Property Value Types

Syntax

Data Types

string

Strings represent a sequence of characters and are used in a few CSS properties, like font-family and content. They are usually reserved for values that can contain a space character.

number

Number values can be whole integers or a fractional value represented by a . character (e.g. 0.57). This decimal fraction would equate to 57% if converted to a percentage. The alpha/opacity value inside the rgba function we've just seen is a good example of it's usage. You will also find them in properties such as - opacity, line-height and flex.

Data Types

String and number

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Custom font that contains spaces

```
.card-title,
.card-subtitle {
  font-family: "Euclid Circular A";
  line-height: 1.375;
}
```

Decimal fraction (137.5%)

Property Value Types

Syntax

Keywords

Pre-defined Keywords

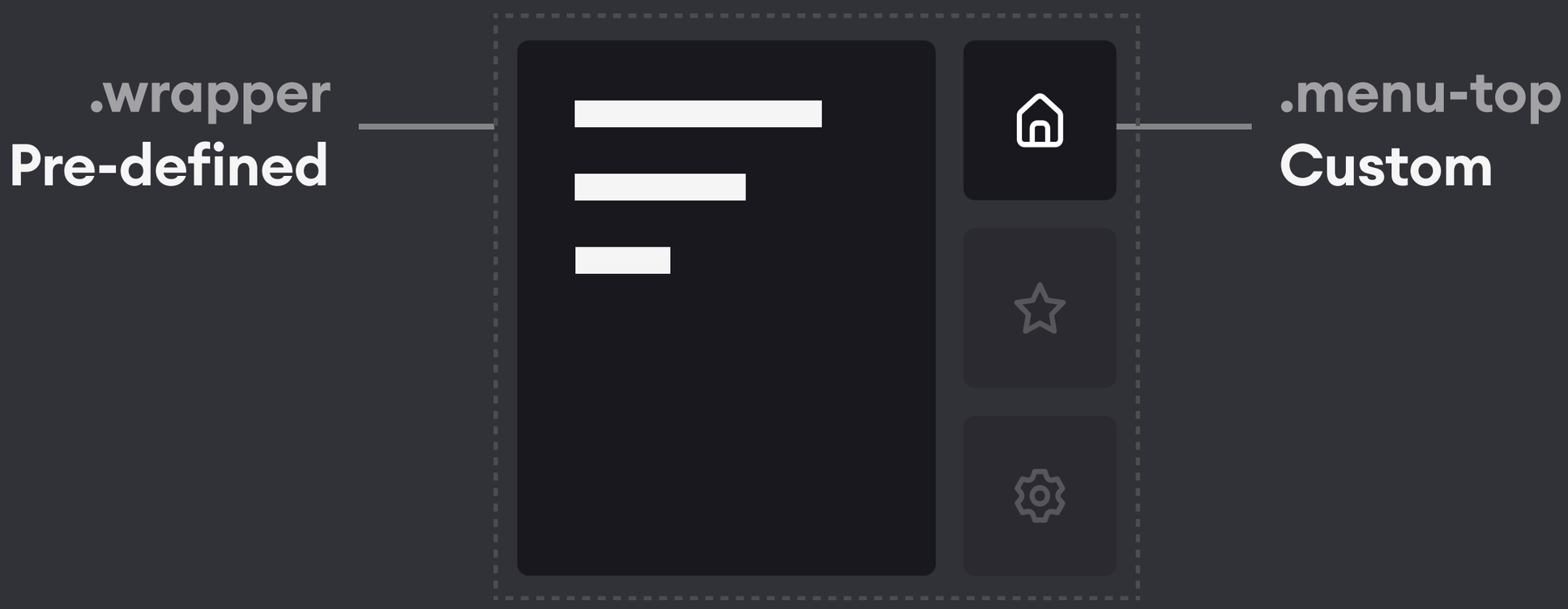
Throughout CSS we can use pre-defined keywords that are defined by the property being used. Unlike strings, they do not need to be quoted and multiple word keywords are separated by a dash character.

Custom Keywords

The main place we will see custom keywords is in the CSS grid area property. Functionally, they are the same as pre-defined keywords as they do not require quotes and should be separated by a dash character. However, the fundamental difference is that they are defined by the user and must be referenced in both the grid container and grid items.

Keywords

Pre-defined and custom




```
.wrapper {
  display: grid;
  margin: auto;
}

.menu-top {
  grid-area: menu-top;
}
```

Pre-defined

Pre-defined

Custom keyword

Property Value Types

Syntax

Advanced

Functions

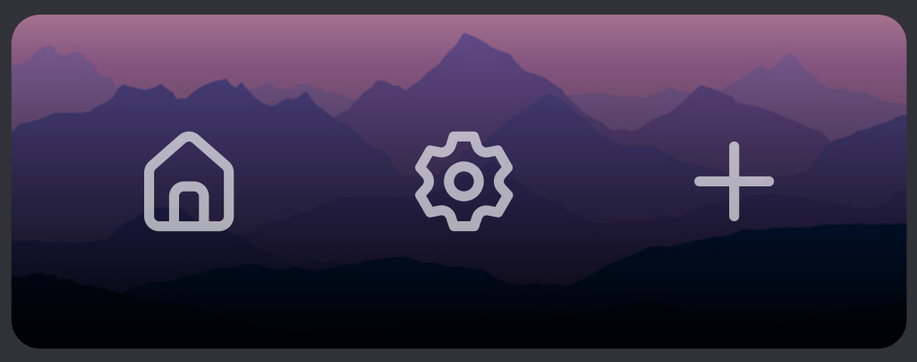
Arguably the most complex property value type are functions. Functions that are available are defined by the property being used - like keywords, consider them contextual. Syntactically they can be passed multiple arguments made up of various value types.

Fractions

Like custom keywords, fractions are a part of flexbox and grid. They allow us to set the proportion of space an element takes up, inside a flexbox row or grid column for example. Fractions inside flexbox are a single integer (1) where as in grid they are suffixed with an “fr” (1fr). They can also be considered a CSS length.

Advanced

Functions and fractions



```
.wrapper {
  color:
    rgba(255, 255, 255, 0.5);

  background:
    url("image.png");

  grid-template-columns:
    repeat(3, 1fr);
}
```

Function

Function

Function

Each button will be 1 Fraction (33.33%)

Integer (repeat 3 times)

Property Value Types

Syntax

Knowledge Gained

- 🏆 CSS property values can include keywords, lengths and functions
- 🏆 All lengths have the same format (1xx)
- 🏆 Strings are quoted and numbers can be whole or a decimal fraction
- 🏆 All keywords should be separated by a dash character
- 🏆 Functions can accept many different arguments of various value types

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