RESPONSIVE DESIGN BASICS

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How to make CSS more **modular**?

How to make CSS more **scalable**?

The **answer** is ….

CSS PREPROCESSORS

How **CSS preprocessors** really are?

The answer is in the name.

They get some code written in preprocessed language and translate it to old CSS we are using for years

Why I should use these **preprocessors**?

they aren't css => **no limitations** of css

They get some code written in preprocessed language and translate it to old CSS we are using for years

Which CSS preprocessor should I use?

Sass? Less? Stylus?

It's up to **YOU**!

//I am going with Sass and .scss syntax.

How is it **actually** works?

VARIABLES

Much more maintainable!
Thats enough to give that preprocessor a try!

```scss
/* -- .scss --  */
$color: #efefef;
body {background:  $color;}

/* -- .less -- */
@color: #efefef;
body {background:  @color;}

/* -- resulting css -- */
body {background:  #efefef;}
```

INTERPOLATION

Expands on variables in that you aren't limited to the values of css properties

```scss
/* -- .scss --  */
$side: top;
border-#{$side): 1px solid #000;

/* -- resulting css -- */
border-top: 1px solid #000;
```

OPERATIONS

come in handy, especially in design based on proportions **over** fixed measurements.

```scss
/* -- .scss --  */
$navbar-width: 800px;
$items: 5;
#navbar li {width: $navbar-width/$items - 10px;}

/* -- resulting css -- */
#navbar li {width: 150px}
```

MIXINS

allow for the easy reuse of blocks of code

```scss
/* -- .scss --  */
@mixin rounded-corners {
  $radius: 5px;

  border-radius: $radius;
  -webkit-border-radius: $radius;
  -moz-border-radius: $radius;
}

#navbar li { @include rounded-corners; }
#footer { @include rounded-corners; }
```

NESTING

allow for nested formatting

Notice how the list, list items, and link are nested within #navbar. of blocks of code

```scss
/* -- .scss or .less -- */
#navbar {
  width: 80%;
  height: 25px;

  ul { list-style: none; }

  li {
    float: left;
    a { text-decoration: none; }
    &:hover { text-decoration: underline; }
  }
}
```

```css
/* -- resulting css -- */
#navbar {width: 80%; height: 25px;}
#navbar ul {list-style: none;}
#navbar li {float: left;}
#navbar li a {text-decoration: none;}
#navbar li a:hover {text-decoration: underline;}
```

SUMMARY

- They offer extra things you can't do in css alone that can make development quicker, easier, more maintainable, and more scalable.

- There are some potential issues such as needing to get the team on board, find some tools for translate it…

- There are plenty or css preprocessor to choose from. LESS, Sass, and Stylus are 3 popular choices.
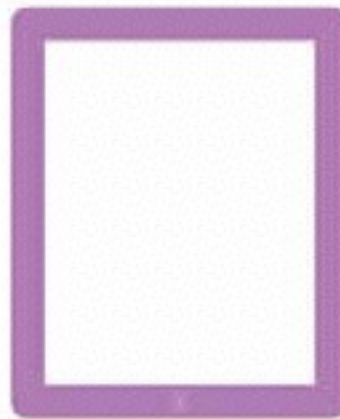
WHAT IS RESPONSIVE DESIGN?

MEDIA QUERIES

```
<style>
@media (max-width: 600px)
{
  .facet_sidebar {
    display: none;
  }
}
</style>
```


(min-width:800px)
(min-device-aspect-ratio: 1/1)
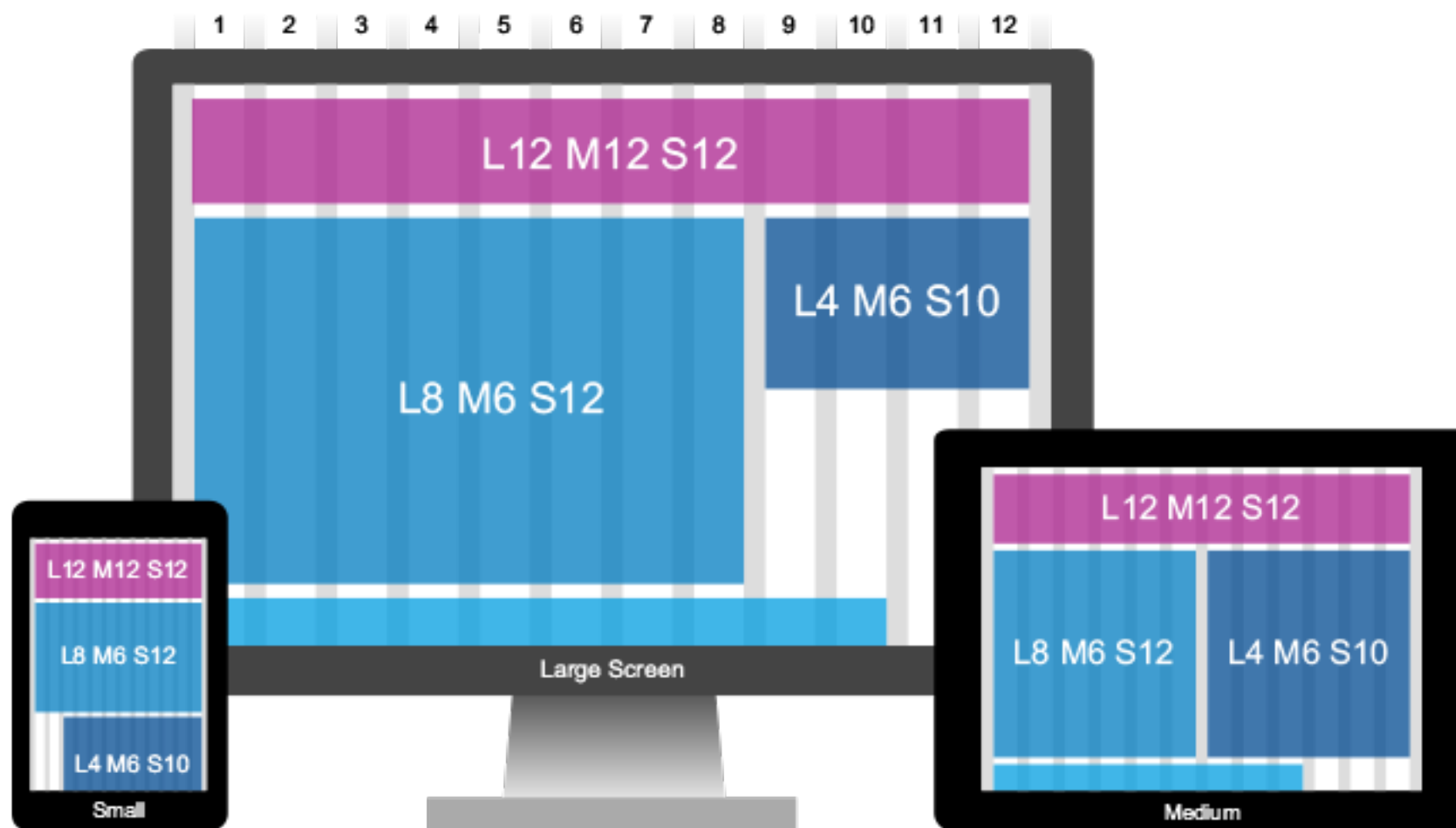
(min-device-width:768px)
(max-device-width:1024px)

(min-device-width:320px)
(max-device-width:480px)

↑ Designing mobile-friendly web mapping applications using CSS3 media queries can provide an improved experience to your end users.
A @media screen and (orientation: portrait)   B @media screen and (orientation: landscape)

GRID SYSTEM

- Bootstrap

- Susy (ruby gem)

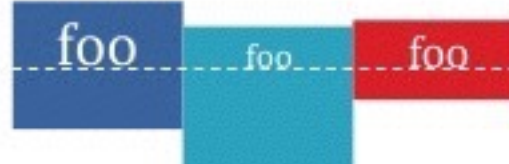# FLEXBOX

align-items
aligns flex items in cross axis

stretch
(default)

flex-start

flex-end

center

foo   foo   foo

baseline

```css
.container {
  display: -webkit-flex;
  display: flex;
}
nav {
  width: 200px;
}
.flex-column {
  -webkit-flex: 1;
          flex: 1;
}
```

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