



**NEW MEDIA &
COMMUNICATION
TECHNOLOGY**

Front End Web Development



What do you miss in CSS?

Missing Links

Variabelen

Functies

Hergebruik van stukken code

Nesten van code

...

Preprocessors



Preprocessors

Sass (Ruby)

LESS (JavaScript)

Stylus (JavaScript)

Crush (PHP)

Preprocessors

Ze hebben verschillen maar min of meer dezelfde principes

Toevoegen van nieuwe features
zonder de browser compatibiliteit
te verbreken

“

*Preprocessors
produce CSS that
works in all
browsers.*

”

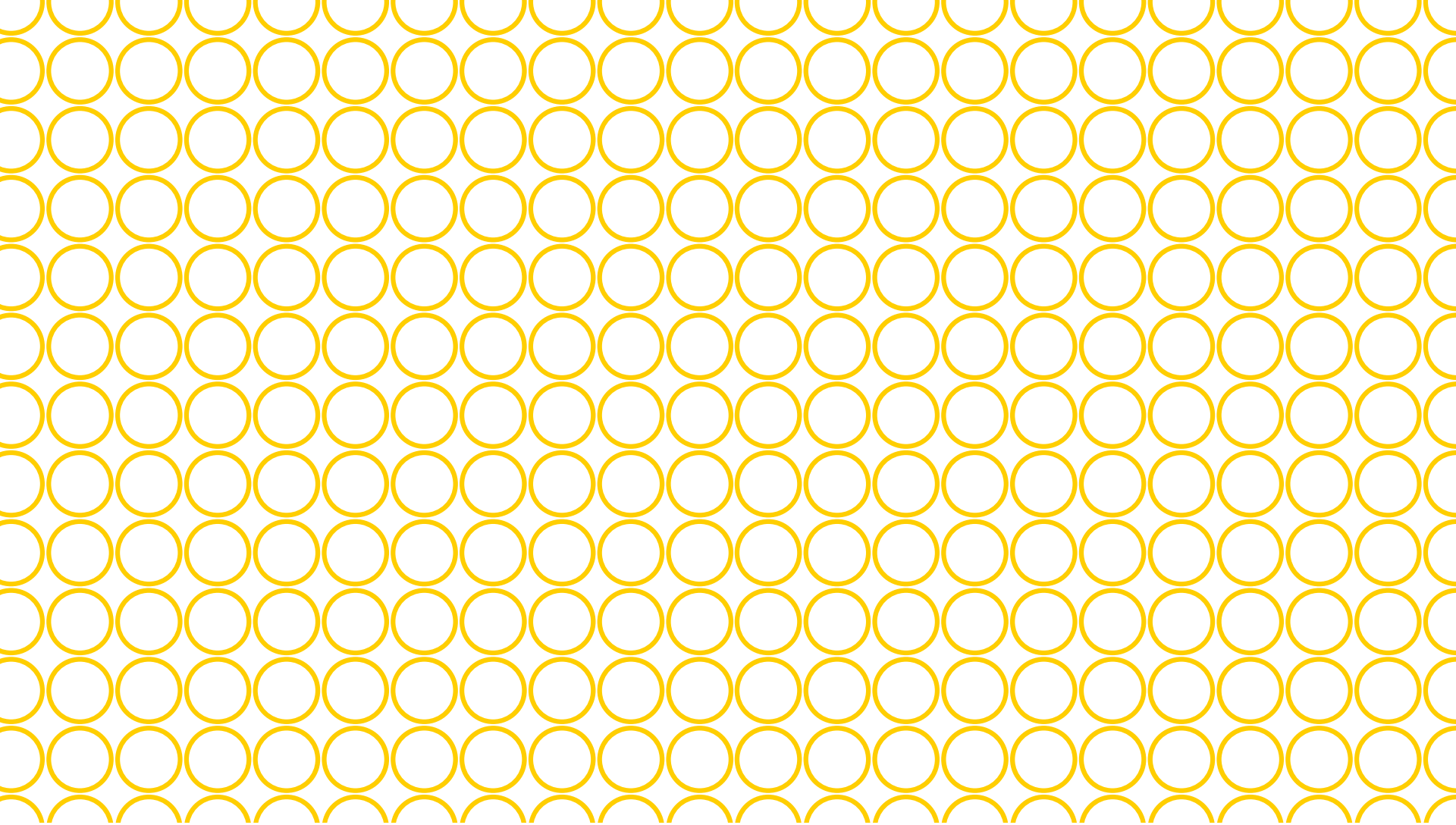
Syntax

Sass & LESS gebruiken de standaard CSS syntax.

```
article{  
    border: 1 solid blue;  
}
```

Met Stylus kan je de {, :, ; gewoon weglaten

```
article  
    border 1 solid blue  
}
```



LESS

Usage

```
<head>  
  <title>LESS</title>  
  <link rel="stylesheet/less" type="text/css" href="styles.less" />  
  <script src="less.js" type="text/javascript"></script>  
</head>
```

Variables

```
@nmct-color: orange;  
@nmct-darkerColor: (@nmct-color + #111);  
  
body{  
    background-color: @nmct-color;  
    border: 1px solid @nmct-darkerColor;  
}
```

Operations

```
@width: 960px;
```

```
.middle{  
    width: @width * 2 / 3;  
}
```

```
.left, .right{  
    width: @width / 6;  
}
```

Colors and operations

```
.element{  
    background-color: lighten(@mainColor, 20%);  
    border: 1px solid darken(@mainColor, 40%);  
}  
  
.element2{  
    background-color: desaturate(@mainColor, 18%);  
}  
  
.element3{  
    background-color: saturate(@mainColor, 18%);  
}  
  
.element4{  
    background-color: spin(@mainColor, 25%);  
}
```

Nesting

```
article{  
  h1{  
    font-size: 2em;  
  }  
  
  h2{  
    font-size: 1.5em;  
  }  
}
```

Nesting

```
header{  
    background-color: orange;  
  
    nav{background-color: darken(orange, 10%);  
    }  
    nav a{    text-decoration: none;  
            &:hover{text-decoration: underline;}  
    }  
}
```

```
header {background-color: orange;}  
header nav {background-color: #cc8400;}  
header nav a {text-decoration: none;}  
header nav a:hover {text-decoration: underline;}
```

Mixins

```
.rounded-corners(@radiusX: 20px, @radiusY: 10px)
{
border-radius: @radiusX @radiusY;

}
```

```
article
{
.rounded-corners;
}
```

```
.roundedDiv{
.rounded-corners(5px, 10px);
}
```

Everything @ once

```
.border(@width: 1px, @bordertype: solid, @color: red)
{
    border: @arguments;
}
```

```
.element{
    .border(2px, solid ,blue);
}
```


Pattern matching

```
.border(thick, @type, @color)
{
    border: 10px @type @color;
}

.border(thin, @type, @color)
{
    border: 1px @type @color;
}

.border(@_, @type, @color){
    border-radius: 10px;
}

@thickness: thin;
.rounded{
    .border(@thickness, solid, blue);
}
```

```
.rounded {
    border: 1px solid #0000ff;
    border-radius: 10px;
}
```

Guards

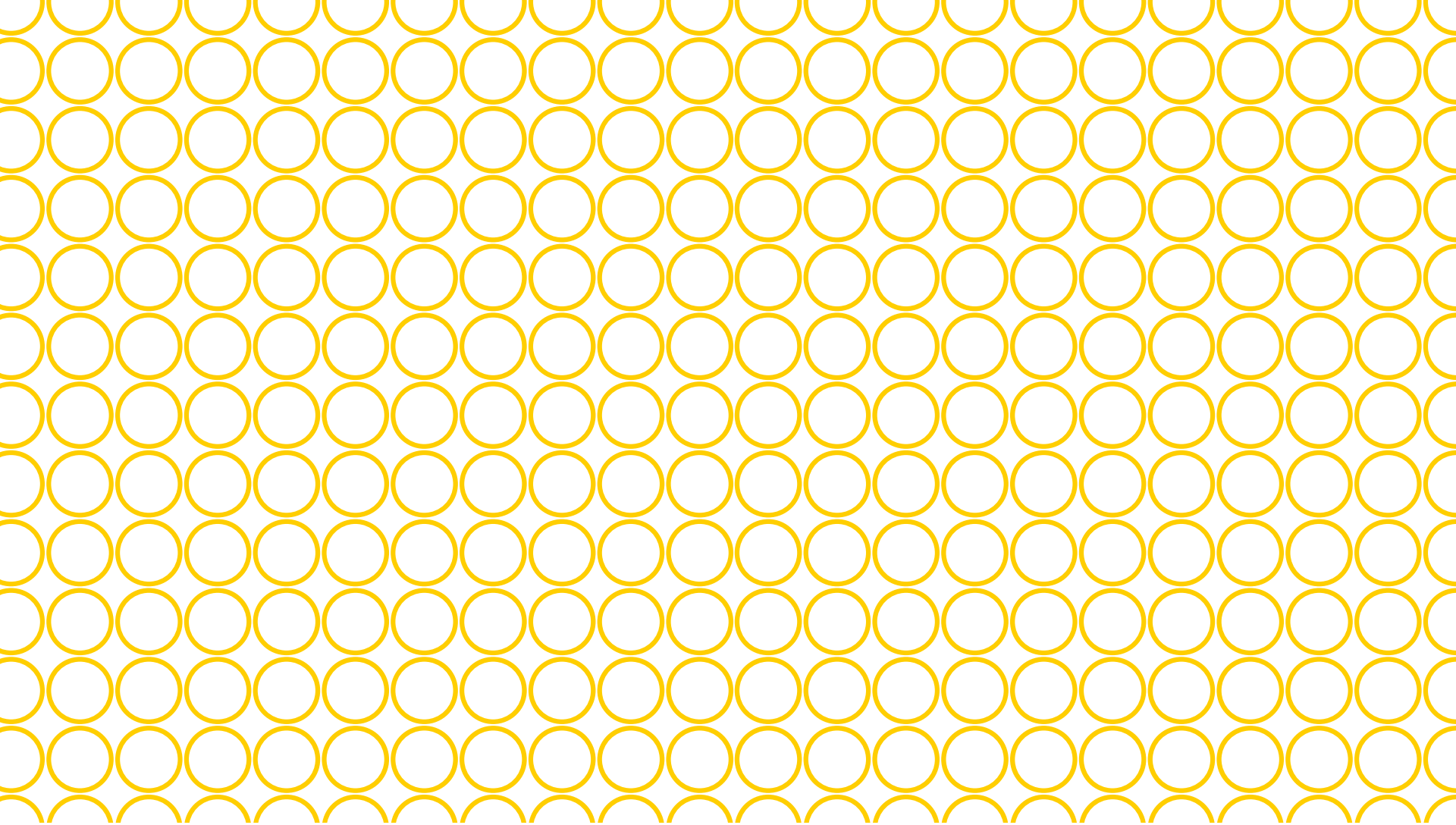
```
.mixin (@a) when (lightness(@a) >= 50%) {  
    background-color: black;  
}  
.mixin (@a) when (lightness(@a) < 50%) {  
    background-color: white;  
}  
.mixin (@a) {  
    color: @a;  
}
```

Namespaces

```
.element{  
    #mainContent > p{  
        margin: 2px;  
    }  
  
    #mainContent > a{  
        color:blue;  
    }  
}
```

Importing CSS

```
@import "reset.min.css";  
@import "mycss.less";
```



SASS

Gebruik

In tegenstelling tot LESS werk je met een direct gecompileerde CSS

- Geen JS op je pagina

Compileer het bestand via de Ruby Command

Er zijn ook manieren om dit rechtstreeks in Visual Studio om te zetten

Gebruik



```
C:\Users\Kevin>ruby 2.0.0p247 (2013-06-27) [i386-mingw32]  
C:\Users\Kevin>sass -watch uwfileinsass.scss:uwfileincss.css
```