

CSS

Cascade et spécificité



On joue ?

quelle est ma couleur ?



spécificité des sélecteurs CSS

plus c'est haut, plus c'est violent



`!important`

`style=" "`

`#id`

`:not()`

`:has()`

`.class (+ pseudo-classes) + attribut`

`éléments (+ pseudo-éléments)`

`:where()`

`opérateurs (* > + ~ espace)`



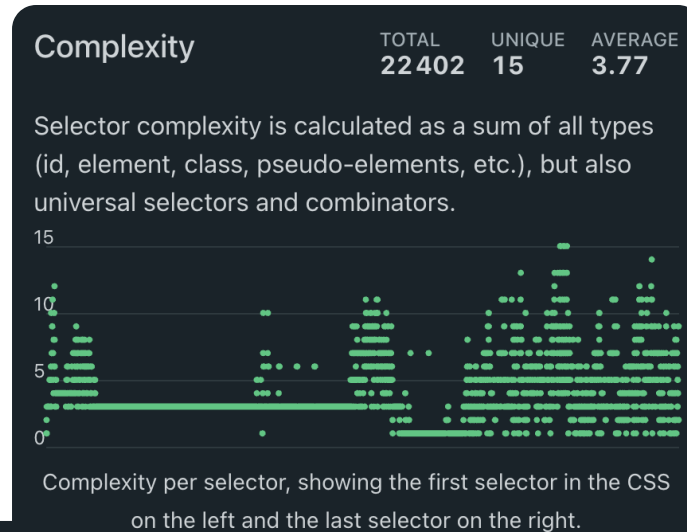
Pas d'ID en CSS !



Fil rouge

Project Wallace

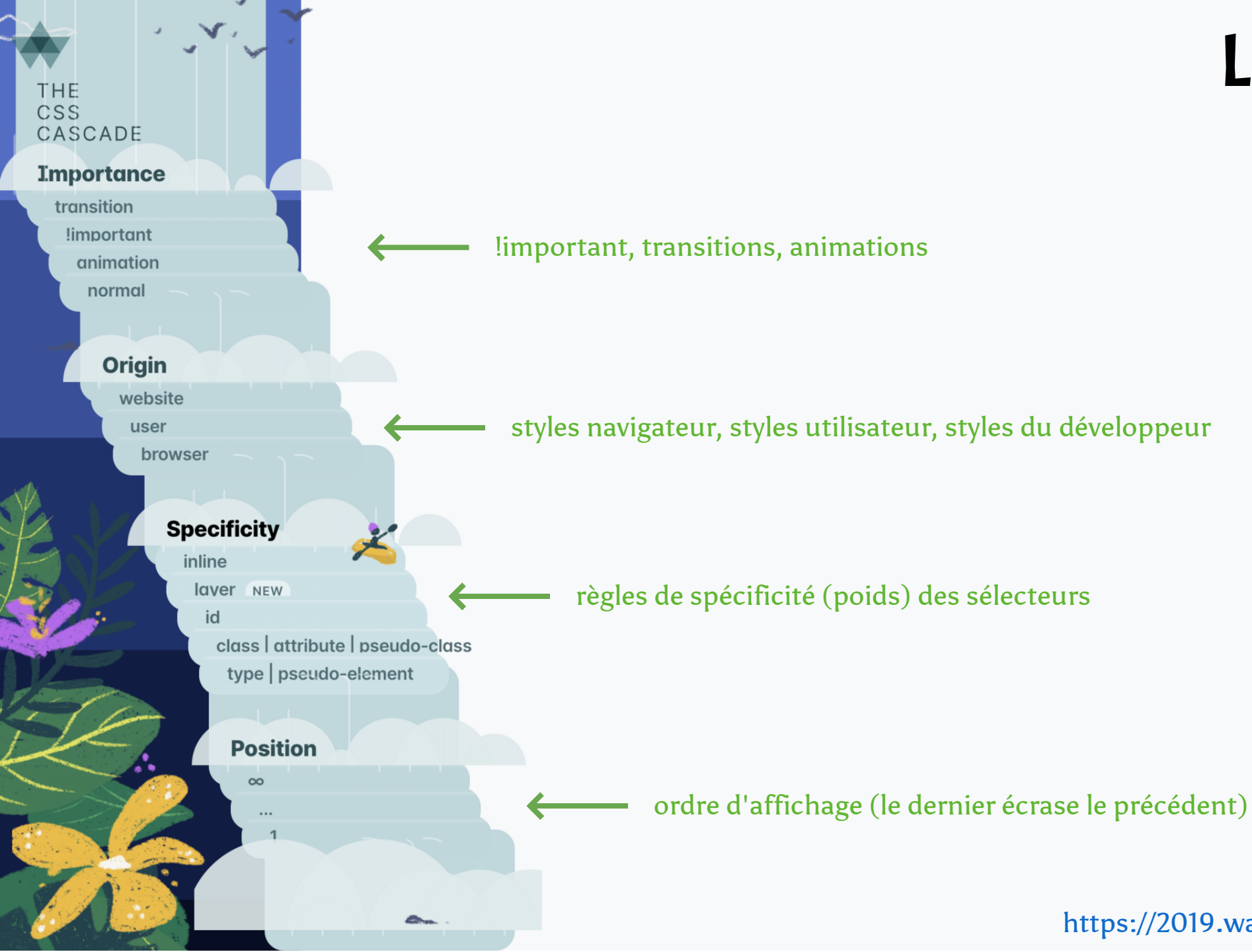
!important + specificity + nesting



Value	Line
div.ds-panel-container-wrapper.Grid-item--4_4.Grid-item--8_8--md.Grid-item--9_12--ld.Grid-item--18_24--xl.ds-comp-mounter.show.tabSections	26390:1
div.Grid-item--4_4.Grid-item--8_8--md.Grid-item--4_12--ld.Grid-item--8_24--xl.action-full-height.ds-action-text.inside-panel.ds-comp-mounter	26777:1
div.Grid-item--4_4.Grid-item--8_8--md.Grid-item--4_12--ld.Grid-item--8_24--xl.action-full-height.ds-action-text.inside-panel.ds-comp-mounter	26801:1
div.Grid-item--4_4.Grid-item--8_8--md.Grid-item--4_12--ld.Grid-item--8_24--xl.action-full-height.ds-action-text.inside-panel.ds-comp-mounter	26825:1

<https://www.projectwallace.com/analyze-css>

La Cascade CSS



Le problème de la spécificité

reset.css

```
a { color: salmon }  
a:hover, a:focus { color: purple }
```

legacy-2010.css

```
ul#navigation > a { color: salmon }  
ul#navigation li a { color: pink } /* TODO: à changer ASAP ! */  
#navigation a.link { color: olive }  
body ul#navigation li a { color: tomato }  
body nav ul li a.link:first-child { color: chocolate }
```

←... c'était "olive"

navigation.css

```
ul#navigation li a { color: hotpink }
```

←... quelle couleur l'emporte ?

La spécificité des sélecteurs :

1. Chaque type de sélecteur CSS a sa propre spécificité (élément, classe, id, etc.)
2. Ajouter du poids pour écraser un sélecteur a un effet "boule de neige" pour la prochaine modification à opérer
3. Pourquoi ce 🦴 🤬 🤬 de bouton ne devient pas hotpink ?!?!

Alors on fait quoi ?



On utilise le bazooka !important

spoiler : non

legacy-2010.css

```
.navigation-link { color: pink }  
.navigation-link:first-child { color: chocolate }
```

navigation.css

```
.navigation-link { color: hotpink !important }
```



!important surclasse tous les poids de sélecteurs et complique la maintenance future des styles.



bootstrap.min.css (1043x !important)

```
pack:distribute!important;justify-content:space-around!important}.align-items-md-start{-ms-flex-align:start!important;align-items:flex-start!important}.align-items-md-end{-ms-flex-align:end!important;align-items:flex-end!important}.align-items-md-center{-ms-flex-align:center!important;align-items:center!important}.align-items-md-baseline{-ms-flex-align:baseline!important;align-items:baseline!important}.align-items-md-stretch{-ms-flex-align:stretch!important;align-items:stretch!important}.align-content-md-start{-ms-flex-line-pack:start!important;align-content:flex-start!important}.align-content-md-end{-ms-flex-line-pack:end!important;align-content:flex-end!important}.align-content-md-center{-ms-flex-line-pack:center!important;align-content:center!important}.align-content-md-between{-ms-flex-line-pack:justify!important;align-content:space-between!important}.align-content-md-around{-ms-flex-line-pack:distribute!important;align-content:space-around!important}.align-content-md-stretch{-ms-flex-line-pack:stretch!important;align-content:stretch!important}.align-self-md-auto{-ms-flex-item-align:auto!important;align-self:auto!important}.align-self-md-start{-ms-flex-item-align:start!important;align-self:flex-start!important}.align-self-md-end{-ms-flex-item-align:end!important;align-self:flex-end!important}.align-self-md-center{-ms-flex-item-align:center!important;align-self:center!important}.align-self-md-baseline{-ms-flex-item-align:baseline!important;align-self:baseline!important}.align-self-md-stretch{-ms-flex-item-align:stretch!important;align-self:stretch!important}}@media (min-width:992px){.flex-lg-row{-ms-flex-direction:row!important;flex-direction:row!important}.flex-lg-column{-ms-flex-direction:column!important;flex-direction:column!important}.flex-lg-row-reverse{-ms-flex-direction:row-reverse!important;flex-direction:row-reverse!important}.flex-lg-column-reverse{-ms-flex-direction:column-reverse!important;flex-direction:column-reverse!important}.flex-lg-wrap{-ms-flex-wrap:wrap!important;flex-wrap:wrap!important}.flex-lg-nowrap{-ms-flex-wrap:nowrap!important;flex-wrap:nowrap!important}.flex-lg-wrap-reverse{-ms-flex-wrap:wrap-reverse!important;flex-wrap:wrap-reverse!important}.flex-lg-fill{-ms-flex:1 1 auto!important;flex:1 1 auto!important}.flex-lg-grow-0{-ms-flex-positive:0!important;flex-grow:0!important}.flex-lg-grow-1{-ms-flex-positive:1!important;flex-grow:1!important}.flex-lg-shrink-0{-ms-flex-negative:0!important;flex-shrink:0!important}.flex-lg-shrink-1{-ms-flex-negative:1!important;flex-shrink:1!important}.justify-content-lg-start{-ms-flex-pack:start!important;justify-content:flex-start!important}.justify-content-lg-end{-ms-flex-pack:end!important;justify-content:flex-end!important}.justify-content-lg-center{-ms-flex-pack:center!important;justify-content:center!important}.justify-content-lg-between{-ms-flex-pack:justify!important;justify-content:space-between!important}.justify-content-lg-around{-ms-flex-pack:distribute!important;justify-content:space-around!important}.align-items-lg-start{-ms-flex-align:start!important;align-items:flex-start!important}.align-items-lg-end{-ms-flex-align:end!important;align-items:flex-end!important}.align-items-lg-center{-ms-flex-align:center!important;align-items:center!important}.align-items-lg-baseline{-ms-flex-align:baseline!important;align-items:baseline!important}.align-items-lg-stretch{-ms-flex-align:stretch!important;align-items:stretch!important}.align-content-lg-start{-ms-flex-line-pack:start!important;align-content:flex-start!important}.align-content-lg-end{-ms-flex-line-pack:end!important;align-content:flex-end!important}.align-content-lg-center{-ms-flex-line-pack:center!important;align-content:center!important}.align-content-lg-between{-ms-flex-line-pack:justify!important;align-content:space-between!important}.align-content-lg-around{-ms-flex-line-pack:distribute!important;align-content:space-around!important}.align-content-lg-stretch{-ms-flex-line-pack:stretch!important;align-content:stretch!important}.align-self-lg-auto{-ms-flex-item-align:auto!important;align-self:auto!important}.align-self-lg-start{-ms-flex-item-align:start!important;align-self:flex-start!important}.align-self-lg-end{-ms-flex-item-align:end!important;align-self:flex-end!important}.align-self-lg-center{-ms-flex-item-align:center!important;align-self:center!important}.align-self-lg-baseline{-ms-flex-item-align:baseline!important;align-self:baseline!important}.align-self-lg-stretch{-ms-flex-item-align:stretch!important;align-self:stretch!important}}@media (min-width:1200px){.flex-xl-row{-ms-flex-direction:row!important;flex-direction:row!important}.flex-xl-column{-ms-flex-direction:column!important;flex-direction:column-reverse!important;flex-direction:column-reverse!important}.flex-xl-wrap{-ms-flex-wrap:wrap!important;flex-wrap:wrap!important}.flex-xl-nowrap{-ms-flex-wrap:nowrap!important;flex-wrap:nowrap!important}.flex-xl-wrap-reverse{-ms-flex-wrap:wrap-reverse!important;flex-wrap:wrap-reverse!important}.flex-xl-fill{-ms-flex:1 1 auto!important;flex:1 1 auto!important}.flex-xl-grow-0{-ms-flex-positive:0!important;flex-grow:0!important}.flex-xl-grow-1{-ms-flex-positive:1!important;flex-grow:1!important}.flex-xl-shrink-0{-ms-flex-negative:0!important;flex-shrink:0!important}.flex-xl-shrink-1{-ms-flex-negative:1!important;flex-shrink:1!important}.justify-content-xl-start{-ms-flex-pack:start!important;justify-content:flex-start!important}.justify-content-xl-end{-ms-flex-pack:end!important;justify-content:flex-end!important}.justify-content-xl-center{-ms-flex-pack:center!important;justify-content:center!important}.justify-content-xl-between{-ms-flex-pack:justify!important;justify-content:space-between!important}.justify-content-xl-around{-ms-flex-pack:distribute!important;justify-content:space-around!important}.align-items-xl-start{-ms-flex-align:start!important;align-items:flex-start!important}.align-items-xl-end{-ms-flex-align:end!important;align-items:flex-end!important}.align-items-xl-center{-ms-flex-align:center!important;align-items:center!important}.align-items-xl-baseline{-ms-flex-align:baseline!important;align-items:baseline!important}.align-items-xl-stretch{-ms-flex-align:stretch!important;align-items:stretch!important}.align-content-xl-start{-ms-flex-line-pack:start!important;align-content:flex-start!important}.align-content-xl-end{-ms-flex-line-pack:end!important;align-content:flex-end!important}.align-content-xl-center{-ms-flex-line-pack:center!important;align-content:center!important}.align-content-xl-between{-ms-flex-line-pack:justify!important;align-content:space-between!important}.align-content-xl-around{-ms-flex-line-pack:distribute!important;align-content:space-around!important}.align-content-xl-stretch{-ms-flex-line-pack:stretch!important;align-content:stretch!important}.align-self-xl-auto{-ms-flex-item-align:auto!important;align-self:auto!important}.align-self-xl-start{-ms-flex-item-align:start!important;align-self:flex-start!important}.align-self-xl-end{-ms-flex-item-align:end!important;align-self:flex-end!important}.align-self-xl-center{-ms-flex-item-align:center!important;align-self:center!important}.align-self-xl-baseline{-ms-flex-item-align:baseline!important;align-self:baseline!important}.align-self-xl-stretch{-ms-flex-item-align:stretch!important;align-self:stretch!important}}.float-left{float:left!important}.float-right{float:right!important}.float-none{float:none!important}}@media (min-width:576px){.float-sm-left{float:left!important}.float-sm-right{float:right!important}.float-sm-none{float:none!important}}@media (min-width:768px){.float-md-left{float:left!important}.float-md-right{float:right!important}.float-md-none{float:none!important}}@media (min-width:992px){.float-lg-left{float:left!important}.float-lg-right{float:right!important}.float-lg-none{float:none!important}}@media (min-width:1200px){.float-xl-left{float:left!important}.float-xl-right{float:right!important}.float-xl-none{float:none!important}}.user-select-all{-webkit-user-select:all!important;moz-user-select:all!important;ms-user-select:all!important;user-select:all!important}.user-select-auto{-webkit-user-select:auto!important;moz-user-select:auto!important;ms-user-select:auto!important;user-select:auto!important}.user-select-none{-webkit-user-select:none!important;moz-user-select:none!important;ms-user-select:none!important;user-select:none!important}.overflow-auto{overflow:auto!important}.overflow-hidden{overflow:hidden!important}.position-static{position:static!important}.position-relative{position:relative!important}.position-absolute{position:absolute!important}.position-fixed{position:fixed!important}.position-sticky{position:-webkit-sticky!important;position:sticky!important}.fixed-top{position:fixed;top:0;right:0;left:0;z-index:1030}.fixed-bottom{position:fixed;right:0;bottom:0;left:0;z-index:1030}@supports ((position:-webkit-sticky) or (position:sticky)){.sticky-top{position:-webkit-sticky;position:sticky;top:0;z-index:1020}}.sr-only{position:absolute;width:1px;height:1px;padding:0;margin:-1px;overflow:hidden;clip:rect(0,0,0,0);white-space:nowrap;border:0}.sr-only-focusable{position:static;width:auto;height:auto;overflow:visible;clip:auto;white-space:normal}.shadow-sm{box-shadow:0 .125rem .25rem rgba(0,0,0,.075)!important}.shadow{box-shadow:0 .5rem 1rem rgba(0,0,0,.15)!important}.shadow-lg{box-shadow:0 1rem 3rem rgba(0,0,0,.175)!important}.shadow-none{box-shadow:none!important}.w-25{width:25%!important}.w-50{width:50%!important}.w-75{width:75%!important}.w-100{width:100%!important}.w-auto{width:auto!important}.h-25{height:25%!important}.h-50{height:50%!important}.h-75{height:75%!important}.h-100{height:100%!important}.h-auto{height:auto!important}.mw-100{max-width:100%!important}.mh-100{max-height:100%!important}.min-vw-100{min-width:100vw!important}.min-vh-100{min-height:100vh!important}.vw-100{width:100vw!important}.vh-100{height:100vh!important}.m-0{margin:0!important}.mt-0,.my-0{margin-top:0!important}.mr-0,.mx-0{margin-right:0!important}.mb-0,.my-0{margin-bottom:0!important}.ml-0,.mx-0{margin-left:0!important}.m-1{margin:.25rem!important}.mt-1,.my-1{margin-top:.25rem!important}.mr-1,.mx-1{margin-right:.25rem!important}.mb-1,.my-1{margin-bottom:.25rem!important}.ml-1,.mx-1{margin-left:.25rem!important}.m-2{margin:.5rem!important}.mt-2,.my-2{margin-top:.5rem!important}.mr-2,.mx-2{margin-right:.5rem!important}.mb-2,.my-2{margin-bottom:.5rem!important}.ml-2,.mx-2{margin-left:.5rem!important}.m-3{margin:1rem!important}.mt-3,.my-3{margin-top:1rem!important}.mr-3,.mx-3{margin-right:1rem!important}.mb-3,.my-3{margin-bottom:1rem!important}.ml-3,.mx-3{margin-left:1rem!important}.m-4{margin:1.5rem!important}.mt-4,.my-4{margin-top:1.5rem!important}.mr-4,.mx-4{margin-right:1.5rem!important}.mb-4,.my-4{margin-bottom:1.5rem!important}.ml-4,.mx-4{margin-left:1.5rem!important}.m-5{margin:3rem!important}.mt-5,.my-5{margin-top:3rem!important}.mr-5,.mx-5{margin-right:3rem!important}.mb-5,.my-5{margin-bottom:3rem!important}.ml-5,.mx-5{margin-left:3rem!important}.p-0{padding:0!important}.pt-0,.py-0{padding-top:0!important}.pr-0,.px-0{padding-right:0!important}.pb-0,.py-0{padding-bottom:0!important}.pl-0,.px-0{padding-left:0!important}.p-1{padding:.25rem!important}.pt-1,.py-1{padding-top:.25rem!important}.pr-1,.px-1{padding-right:.25rem!important}.pb-1,.py-1{padding-
```

On réduit le poids dès le départ

ouais enfin quand c'est possible hein

legacy-2010.css

```
.navigation-link { color: pink }  
.navigation-link:first-child { color: chocolate }
```

navigation.css

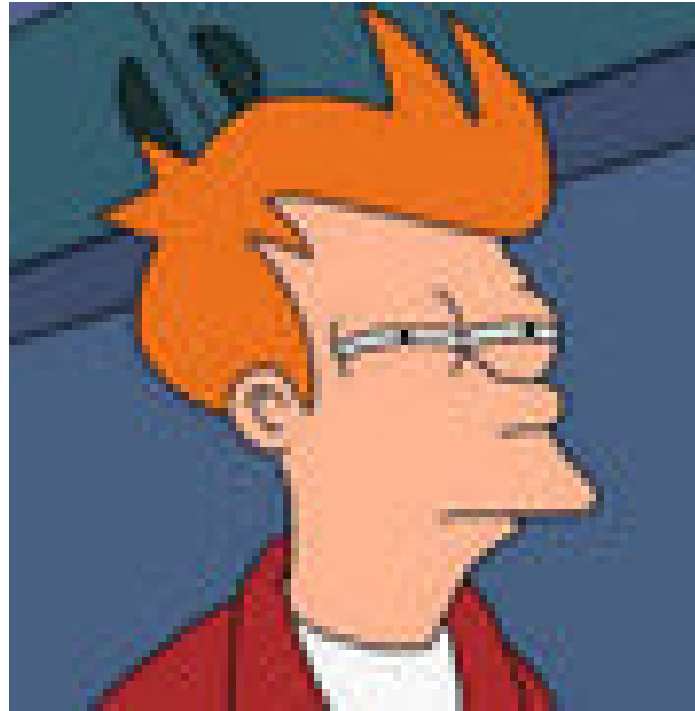
```
.navigation-link { color: hotpink }
```

Cibler uniquement avec des **classes** permet de modifier facilement quand le contexte change



On utilise le sélecteur :where()

wait, what?



:where()

confère une spécificité de zéro !

legacy-2010.css

```
...  
#navigation a.link { color: olive }  
...
```

←..... spécificité = 1, 1, 1

navigation.css

```
ul#navigation li a { color: hotpink }
```

←..... spécificité = 1, 0, 3 😞



legacy-2010.css

```
...  
#navigation :where(a.link) { color: olive }  
...
```

←..... spécificité = 1, 0, 0

navigation.css

```
ul#navigation li a { color: hotpink }
```

←..... spécificité = 1, 0, 3 💪



On isole avec les Cascade Layers

wait, what encore?



@layer

isole les couches de spécificités de CSS

legacy-2010.css

```
...  
#navigation a.link { color: olive }  
...
```

navigation.css

```
ul#navigation li a { color: hotpink }
```

legacy-2010.css

```
@layer legacy {  
  #navigation a.link { color: olive }  
}
```

navigation.css

```
.link { color: hotpink }
```

←..... je place les styles dans une couche que j'appelle "legacy"

←..... les styles hors layers sont prioritaires 💪

@layer

importer dans un layer

styles.css

```
@import "legacy-2010.css" layer(legacy);  
  
.link { color: hotpink }
```

←... On peut importer des feuilles de styles au sein de Layers
(oui oui, ça marche avec bootstrap.css aussi)

styles.css

```
@import "legacy-2010.css" layer;  
  
.link { color: hotpink }
```

←... On peut même importer des feuilles de styles au sein de Layers anonymes

@layer

l'ordre des couches

styles.css

```
/* L'ordre des layers définit la priorité des styles */

/* Chaque layer écrase le précédent si conflit */
@layer config, base, components, utilities;

/* Config */
@import "reset.css" layer(config);
@import "theme.css" layer(config);
@import "theme-tokens.css" layer(config);
@import "layouts.css" layer(config);
@import "natives.css" layer(config);

/* Base */
@import "styles.css" layer(base);

/* Components */

/* Ici un @import dans le layer(components) */

/* Utilities */

/* Ici un @import dans le layer(utilities) */
```



Exercice !

Cascade

