CSS IS AWESOME!

$ whoami

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⚠️ *Je ne suis pas un designer*

w3c The Rule of Least Power

> When designing computer systems, one is often faced with a choice between using a more or less powerful language for publishing information, for expressing constraints, or for solving some problem. This finding explores tradeoffs relating the choice of language to reusability of information. The "Rule of Least Power" suggests **choosing the least powerful language suitable** for a given purpose.

Règles du jeu

1. Texte
2. HTML (sémantique) & CSS (layout, style, animations simples)
3. SVG (formes et animations complexes)
4. JavaScripts

⚠️... *mais il y a toujours de bonnes raisons pour ne pas suivre ces règles*

Le CSS c'est vaste

- Selectors
- Box model
- Float
- Media Query
- Transitions
- Gradients
- Responsive Design
- Media
- Variables
- Colors
- Shapes
- ...

Plan

Utiliser un pré-processeur ?

Bordure des boutons

```
button {
  background: lightblue;
  border: medium solid purple;
}
button.danger { /*
   background: salmon;
   color: rebeccapurple; */
}
```

Alors utilise-t-on un pré-processeurs ?

Oui, mais privilégiez:

- le CSS
- les post-processeurs

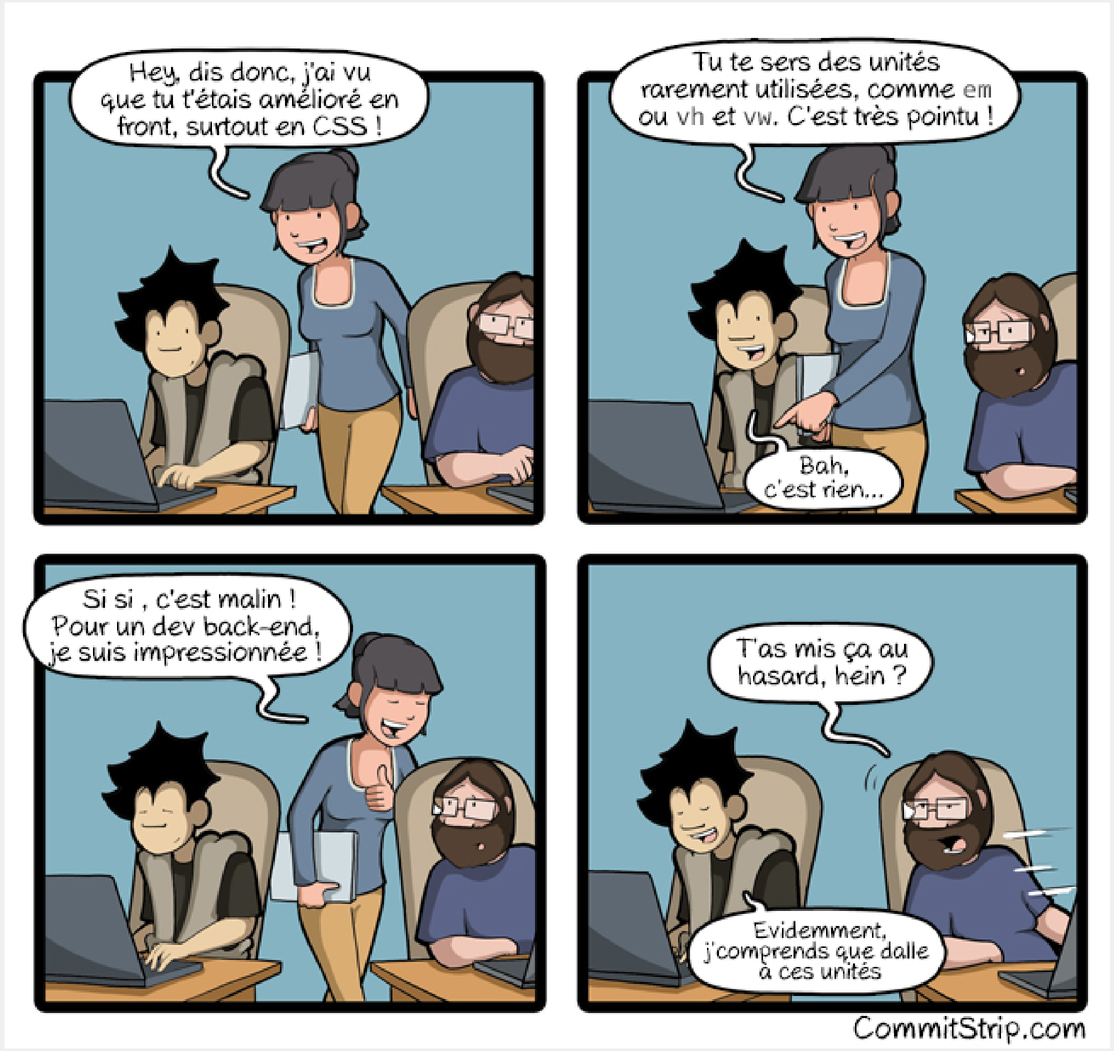
- ✻ `currentColor` <https://css-tricks.com/currentcolor/>
- 🦊 `background-origin` <https://developer.mozilla.org/fr/docs/Web/CSS/background-origin>
- w3c CSS Variables (aka Custom Properties) <https://www.w3.org/TR/css-variables/>
- w3c CSS Color Module Level 4 <https://www.w3.org/TR/css-color-4/>

Conpatibilité

	26,2 %	18,6 %	15,8 %	11,1 %	4,7 %	3,9 %	1,3 %	0,6 %	0,5 %
📊CSS currentColor value <https://caniuse.com/#feat=currentcolor>	49 59 60	61	9.0-9.2 9.3 10.0-10.2 10.3	52 54 55	11	9.1 10.1	14	4.4	46
📊CSS3 Background-image options <https://caniuse.com/#feat=background-img-opts>	49 59 60	61	9.0-9.2 9.3 10.0-10.2 10.3	52 54 55	11	9.1 10.1	14	4.4	46
📊CSS Variables (Custom Properties) <https://caniuse.com/#feat=css-variables>	49 59 60	61	9.0-9.2: n 9.3 10.0-10.2 10.3	52 54 55	11: n	9.1 10.1	14: n	4.4: n	46

Unités

Une histoire d'unités CSS

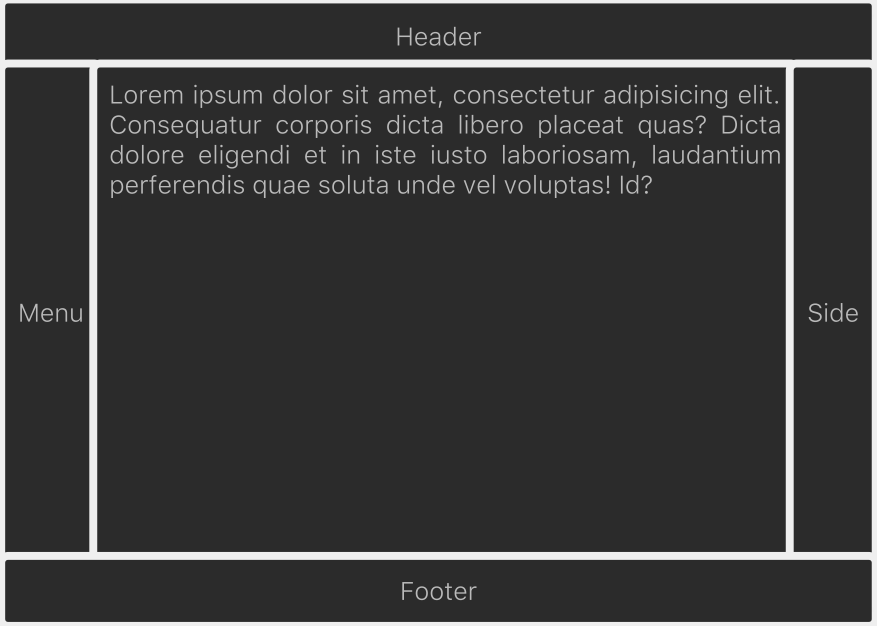

Hey, dis donc, j'ai vu que tu t'étais amélioré en front, surtout en CSS !
Tu te sers des unités rarement utilisées, comme em ou vh et vw. C'est très pointu !
Bah, c'est rien...
Si si , c'est malin ! Pour un dev back-end, je suis impressionnée !
T'as mis ça au hasard, hein ?
Evidemment, j'comprends que dalle à ces unités
CommitStrip.com

🎨 CommitStrip <http://www.commitstrip.com/fr/2016/10/10/a-story-about-css-units/>

Les unités de longueur

px, cm, pt, ...	longueurs absolues (mesure physique)
em, rem	fonction de la `font-size`
ex, ch	hauteur d'un `x`, largeur d'un `0`
vh, vw	(100vh, 100vw) = (hauteur, largeur) du *viewport*
vmin, vmax	min(1vh, 1vw), max(1vh, 1vw)

Holy Grail avec `calc`



Lorem ipsum dolor sit amet, consectetur adipisicing elit. Consequatur corporis dicta libero placeat quas? Dicta dolore eligendi et in iste iusto laboriosam, laudantium perferendis quae soluta unde vel voluptas! Id?

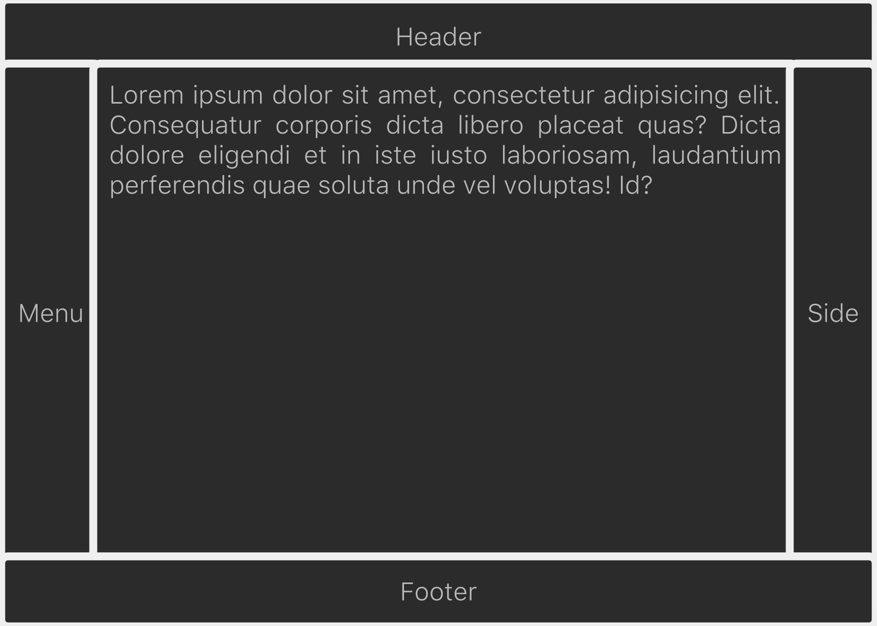
```html
<body>
  <header>Header</header>
  <div>
    <nav>Menu</nav>
    <main>Content</main>
    <aside>Side</aside>
  </div>
  <footer>Footer</footer>
</body>
```

Bilan unités

- 🦊 Unités <https://developer.mozilla.org/fr/docs/Web/CSS/length>
- w3c Truc et astuces <https://www.w3.org/Style/Examples/007/units.fr.html>
- 🦊 `calc` <https://developer.mozilla.org/fr/docs/Web/CSS/calc>
- ✻ Fun with Viewport Units <https://css-tricks.com/fun-viewport-units/>

Flexbox et Grid

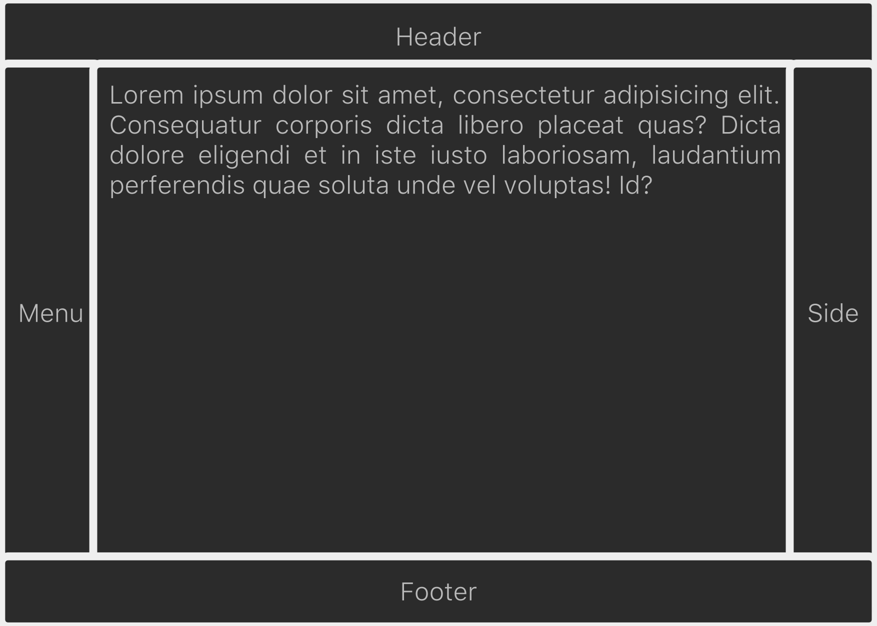
Holy Grail avec **flexbox**



Lorem ipsum dolor sit amet, consectetur adipisicing elit. Consequatur corporis dicta libero placeat quas? Dicta dolore eligendi et in iste iusto laboriosam, laudantium perferendis quae soluta unde vel voluptas! Id?

```html
<body>
  <header>Header</header>
  <div>
    <nav>Menu</nav>
    <main>Content</main>
    <aside>Side</aside>
  </div>
  <footer>Footer</footer>
</body>
```

Holy Grail avec **grid**


Header

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Consequatur corporis dicta libero placeat quas? Dicta dolore eligendi et in iste iusto laboriosam, laudantium perferendis quae soluta unde vel voluptas! Id?

```
<body>
  <header>Header</header>
  <div>
    <nav>Menu</nav>
    <main>Content</main>
    <aside>Side</aside>
  </div>
  <footer>Footer</footer>
</body>
```

Bilan Flexbox & Grid

Flexbox

- 🎥 Flexbox, et le CSS redevient fun ! (Hubert SABLONNIÈRE) <https://www.youtube.com/watch?v=5F_ngjHDcJQ>
- 📐 Solved by Flexbox <https://philipwalton.github.io/solved-by-flexbox/>
- 🐸 Flexbox Froggy <https://flexboxfroggy.com/>

Grid

- ＃ Grid by examples <https://gridbyexample.com/>
- 🎥 CSS Grid Changes Everything (About Web Layouts) by Morten Rand-Hendriksen <https://www.youtube.com/watch?v=txZq7Laz7_4>
- 🥕 Grid Garden <http://cssgridgarden.com/>

Pseudo éléments

Le dinner d'un philosophe

```
.table {
  color: gray;
  font-size: 5em;
  /*content: '';*/
}
```

Triangle avec des bordures

```
div.top, div.right, div.bottom, div.left {
  border: 1em solid transparent;
  display: inline-block;
  box-shadow: 0 0 0 .1em transparent;
}

div.top { border-top-color: transparent; }
div.right { border-right-color: transparent; }
div.bottom { border-bottom-color: transparent; }
div.left { border-left-color: transparent; }
```

Info-bulle

```
.popover {
  position: relative;
  background: teal;
}

/*.popover::before {
  position: absolute;
  z-index: 0;
  content: '';
  top: 0em; left: 0em;
  border: 1em solid red;
  border-top-color: red;
}*/
```

Bilan pseudo éléments

w3c

<https://www.w3.org/TR/CSS22/generate.html#before-after-content>

- mais aussi `::first-letter`, `::first-line`, `::selection`, `::backdrop`
- 𝒮 An Ultimate Guide To CSS Pseudo-Classes And Pseudo-Elements <https://www.smashingmagazine.com/2016/05/an-ultimate-guide-to-css-pseudo-classes-and-pseudo-elements>

⚠️ `::before` et `::after` ne marchent pas sur `input`, `img`, `iframe` (pas encore spécifié)

- Table et assiette de 🍽️ CSS Diner <https://flukeout.github.io/>
- Ⓦ Dîner des philosophes

Animations

Texte de chargement

```css
.loader {
  display : inline-block;
  white-space : normal;
  height: 1em;
  line-height : 1.5;
  overflow: auto;
  box-shadow  : 0 0 0 .05em red;
}
.loader::before {
  display : inline-table;
  /*content: '0\a 1\a 2\a 3\a 4\a 5\a 6\a 7\a 8\a 9';*/
  /*content: '⠋\a ⠙\a ⠹\a ⠸\a ⠼\a ⠴\a ⠦\a ⠧\a ⠇\a ⠏';*/
  /*animation: spin 5s infinite;*/
}
@keyframes spin {
  to { transform : translateY(-15em); }
}
```

Dessiner

```
.editable svg path {
  stroke: purple;
  stroke-width: .1em;
  fill: none;
  /*stroke-dasharray: 0;*/
  /*stroke-dashoffset: 0;*/
  /*animation: draw 4s linear;*/
}

@keyframes draw {
  to { stroke-dashoffset: 0; }
}
```

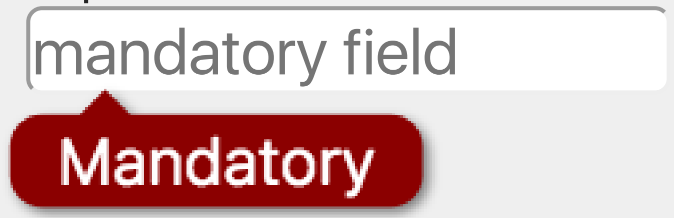
Bilan animations

- 🦊 Utiliser les animations CSS <https://developer.mozilla.org/fr/docs/Web/CSS/Animations_CSS/Utiliser_les_animations_CSS>
- ➼ Text Spinner <http://tawian.io/text-spinners/>
- ➼ CSS only loader <https://www.pexels.com/blog/css-only-loaders/>
- 📐 Animate.css <https://daneden.github.io/animate.css/>
- ✻ How SVG Line Animation Works <https://css-tricks.com/svg-line-animation-works/>
- 🦊 `<progress>` <https://developer.mozilla.org/fr/docs/Web/HTML/Element/Progress>

Pseudo classes d'état

Usage des info-bulles

Input Text


mandatory field

Mandatory

➻ hover me <#usage_des_info_bulles>

Pseudo états

- :hover
- :focus
- :visited
- :checked

- :valid
- :invalid
- :empty
- :target
- …

Checkbox

```
.like input[type=checkbox] + label {
    box-shadow: 0 0 0 1px red;
}
.like input[type=checkbox] + label::before {
    content: '';
}
.like input[type=checkbox] + label::before {
    content: '';
}
.like fieldset input[type=checkbox] { opacity: 1; }
```

Switch

```
.switch + label {
  display: block;
  position: relative;
  padding: .1em;
  width: 2em;
  height: 1em;
  background-color: #ccc;
  border-radius: 1em;
  border: medium solid #444;
  transition: 0.4s;
}

.switch:checked + label {
  background-color: green;
}
```

```
.switch + label::before {
  display: block;
  position: absolute;
  content: '';
  top: 0.1em;
  left: 0.1em;
  height: 1em;
  width: 1em;
  background-color: #fff;
  border-radius: 50%;
  transition: all 0.25s;
}

.switch:checked + label::before {
  transform: translateX(1em);
}
```

Panel

```
.panel input[type=checkbox] {
    /* hide me */
}
```

Principe pour les onglets

```html
<div class="tabs">
  <input type="radio" name="tab" id="home" checked>
  <input type="radio" name="tab" id="projects">
  <input type="radio" name="tab" id="about">
  <nav>
    <label for="home">Home</label>
    <label for="projects">Projects</label>
    <label for="about">About</label>
  </nav>
  <div data-for="home">Home page</div>
  <div data-for="projects">Projects page</div>
  <div data-for="about">About page</div>
</div>
```

Démo des onglets

HTML

Panel

```html
<details>
  <summary>Des détails</summary>
  <p>Plus d'infos
    à propos des détails.</p>
</details>
```

```css
details {
  border: medium solid currentcolor;
  border-radius: .25em;
  width: 100%;
}

details summary {
  background: #888; color: #eee;
}
```

Dialog

```
.editable dialog {
  border: medium solid rgba(0, 0, 0, 0.3);
  border-radius: .125em;
  padding: .125rem;
  box-shadow: .25em .25em .125em rgba(0, 0, 0, 0.42);
}

/* .editable dialog::backdrop {
  position: fixed;
  top: 0; right: 0; bottom: 0; left: 0;
  background-color: rgba(0, 0, 0, 0.8);
} */
```

Polyfill

- 📐 Collapsible Panel Polyfill <https://github.com/chemerisuk/better-details-polyfill/>
- 📐 Dialog Polyfill <https://github.com/GoogleChrome/dialog-polyfill>

Compatibilité des navigateurs

caniuse <http://caniuse.com>

The CSS3 / CSS4 Test <http://css3test.com>

IE 7+, Firefox, Chrome	Pseudo classes (CSS3 selectors *93*)
IE 8+, Firefox, Chrome	`::before`, `::after` *98*
IE 9+, Firefox, Chrome	`currentColor` *98*
`background-origin` *98*	`box-shadow` *98*
`calc` *97*	`vh, vw, …` *97*
IE 10+, Firefox, Chrome	`flexbox` *98*

Conclusion

Bilan

1. Utilisez du CSS pour simpifier le code
2. Utilisez intelligemment les pre/post-processeurs
3. HTML, SVG are Awesome !
4. JavaScript, TypeScript could be Awesome !

👉 Traitez le CSS comme du code

1. Revue de code
2. DRY
3. Clean Code
4. Single Responsibility Principle
5. ...

Liens

- 📐 les slides en HTML <https://ilaborie.github.io/slides/devfest-tls.html#cssIsAwesome>
- 📐 les slides en PDF <https://ilaborie.github.io/slides/devfest-tls.pdf>
- 📐 le code <https://github.com/ilaborie/slides>
- 🐵 Making Of <http://www.monkeypatch.io/2017/05/02/MakingOf_CSS_is_Awesome.html>

Pour apprendre

- `(Ctrl|⌘) + Shift + i`
-

➽ CSS Secret by Lea Verou <https://www.amazon.fr/CSS-Secrets-Lea-Verou/dp/1449372635>
- 🦊 CSS sur MDN <https://developer.mozilla.org/fr/docs/Web/CSS>
- ➽ CodePen <https://codepen.io/> , ➽ JSFiddle <https://jsfiddle.net/> , ➽ Dabblet <http://dabblet.com/> ,…
- ✻ CSS Tricks <https://css-tricks.com/> , 𝓢 Smashing Magazine <https://www.smashingmagazine.com/>
- 📐 CSS Flags <https://pixelastic.github.io/css-flags/>

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