CSS
IS
AWESOME!

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⚠️ *Je ne suis pas un designer*

> " 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*

- Selectors
- Box model
- Float
- Media Query
- Transitions
- Gradients

- Responsive Design
- Media
- Variables
- Colors
- Shapes
- ...

Utiliser un pré-processeur ?

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

Oui, mais privilégiez:

- le CSS
- les post–processeurs

- ➥ `currentColor` <https://css-tricks.com/currentcolor/>
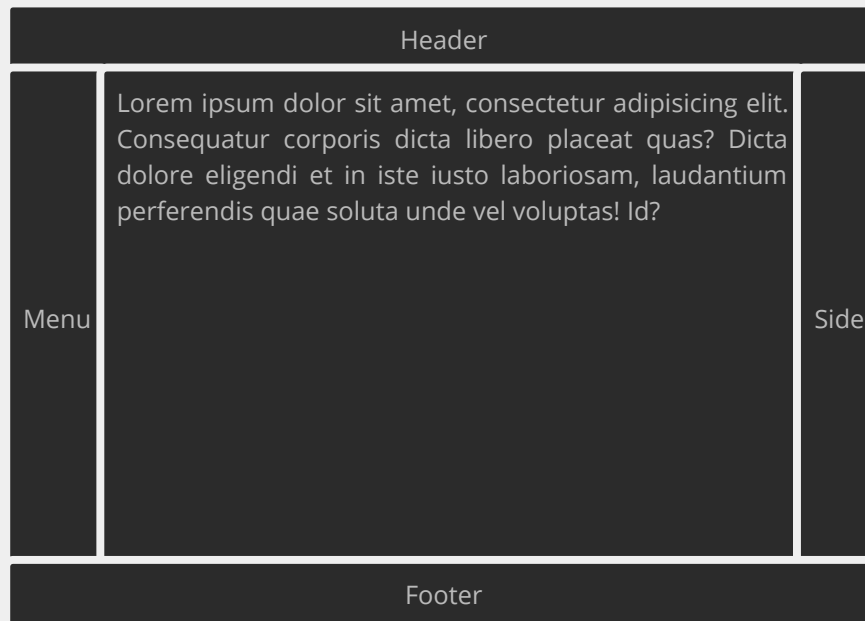- ➥ `background-origin`

  <https://developer.mozilla.org/fr/docs/Web/CSS/background-origin>
- ➥ CSS Variables (aka Custom Properties)

  <https://www.w3.org/TR/css-variables/>
- ➥ CSS Color Module Level 4 <https://www.w3.org/TR/css-color-4/>

Unités

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

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

Header

Menu	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?	Side

Footer

```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>
- ➤ Truc et astuces <https://www.w3.org/Style/Examples/007/units.fr.html>
- ➤ calc <https://developer.mozilla.org/fr/docs/Web/CSS/calc>

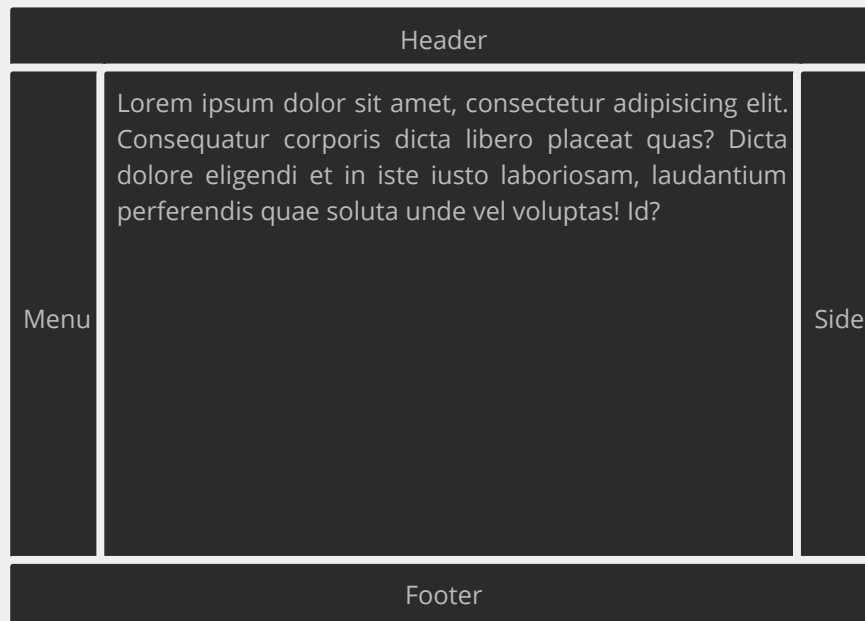# Flexbox et Grid
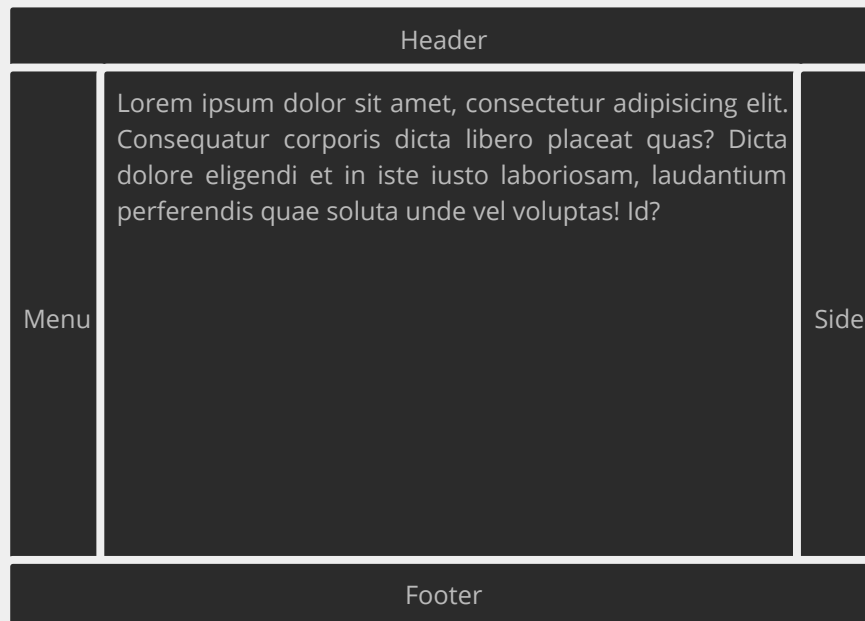
```html
<body>
    <header>Header</header>
    <div>
        <nav>Menu</nav>
        <main>Content</main>
        <aside>Side</aside>
    </div>
    <footer>Footer</footer>
</body>
```

Header		
Menu	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?	Side
Footer		

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

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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/>
- ➥ Here's a Super Quick Way to Try out CSS Grid

  <http://jensimmons.com/post/aug-15-2017/heres-super-quick-way-try-out-css-grid>

Pseudo éléments

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

Triangle avec des bordures

```css
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

```css
.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;
}*/
```

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- ➵ The :before and :after pseudo-elements
  <https://www.w3.org/TR/CSS22/generate.html#before-after-content>
- mais aussi `::first-letter`, `::first-line`, `::selection`, `::backdrop`
- ➵ 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
  <https://fr.wikipedia.org/wiki/D%C3%AEner_des_philosophes>

Animations

```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); }
}
```

```css
.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; }
}
```

- ➥ 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>

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Pseudo classes d'état

Input Text

mandatory field

Mandatory

➼ hover me <#usage_des_info_bulles>

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

- :invalid
- :empty
- :target
- …

```css
.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; }
```

```css
.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;
}
```

```css
.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 */
}
```

```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>
```

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HTML

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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;
}
```

```css
.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);
} */
```

- ➤ 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*

Animations *98*

Conclusion

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 !

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

- ➤ les slides <>
- ➤ le code <>
- ➤ Making Of <>

Pour apprendre

- `(Ctrl|Cmd) + 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 <>

- ↠ Shop Talk Show <>

- ↠ CSS Flags <>

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