

**CSS
IS
AWESOME!**

\$ whoami

#1

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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.

1. Texte
2. HTML (sémantique)
3. CSS (layout, style, animations simples)
4. SVG (formes et animations complexes)
5. JavaScript, WebAssembly (gestion d'états, appel backend, calculs)

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

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

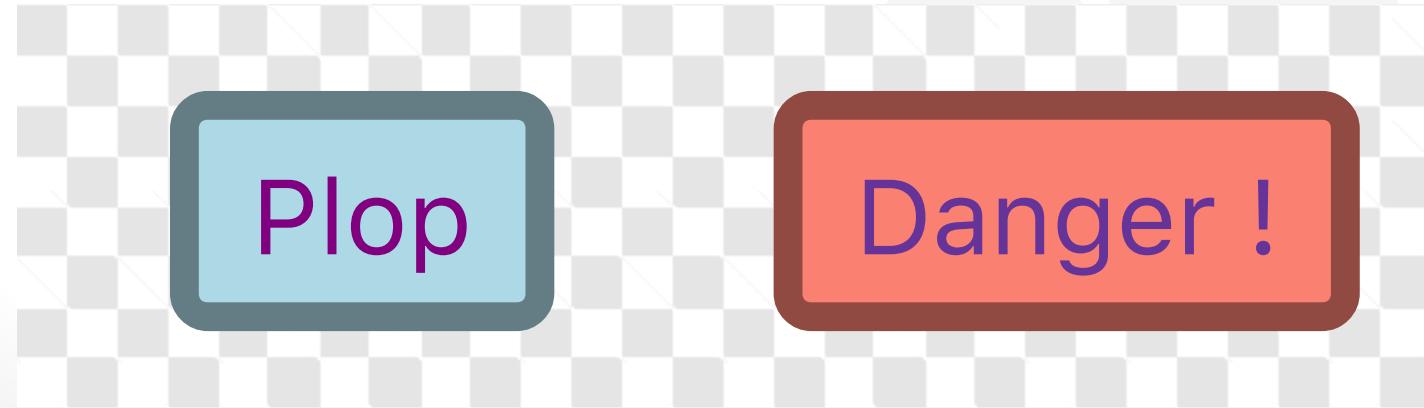
- I. Utiliser un pré-processeur ?
- II. Unités
- III. Flexbox et Grid
- IV. Pseudo éléments
- V. Animations
- VI. Pseudo classes d'état
- VII. HTML
- VIII. Conclusion

UTILISER UN PRÉ-PROCESSEUR ?

Bordure des boutons

#7

```
button {  
    background: lightblue;  
    color: purple;  
    /*border: medium solid currentColor;*/  
    border: medium solid rgba(0,0,0,.42);  
}  
button.danger {  
    background: salmon;  
    color: rebeccapurple;  
}
```



Alors utilise-t-on un pré-processeurs ?

#S

Oui, mais privilégiez:

- › le CSS
- › les post-processeurs

›  `currentColor`

›  `background-origin`

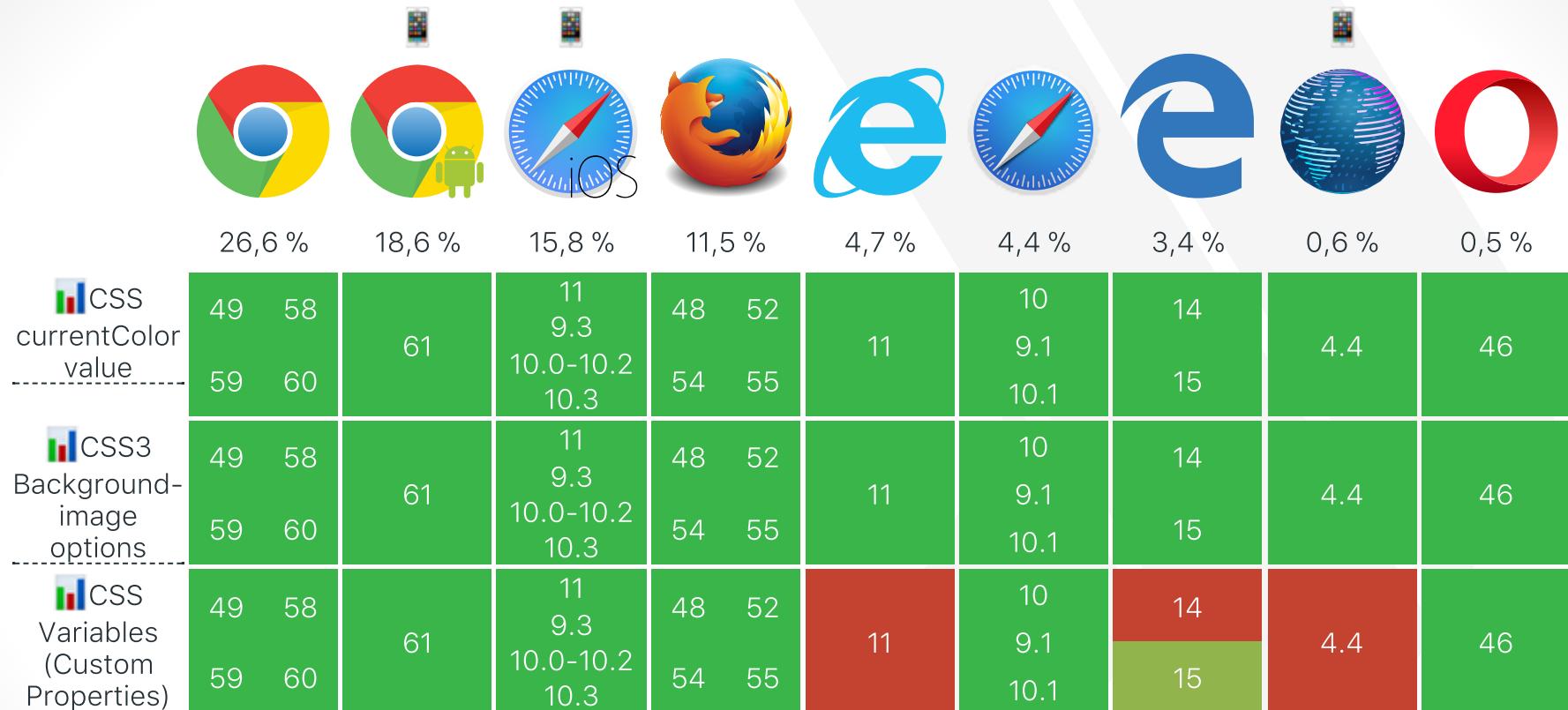
›  `w3c` CSS Variables (aka Custom Properties)

›  `w3c` CSS Color Module Level 4

Compatibilité

#9

Navigateurs, usage ≥ 0,4% en France



UNITÉS

Une histoire d'unités CSS

#11



 CommitStrip

Les unités de longueur

#12

px, cm, pt, ... longueurs absolues (mesure physique)

em, rem fonction de la `font-size`

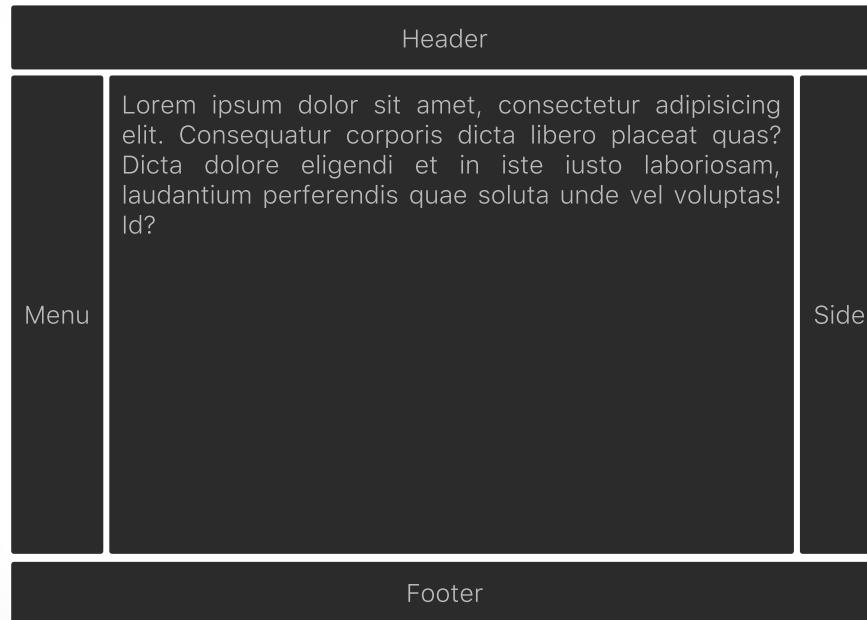
ex, ch hauteur d'un x, largeur d'un Ø

vh, vw $(100\text{vh}, 100\text{vw}) = (\text{hauteur}, \text{largeur})$ du
viewport

vmin, vmax $\min(1\text{vh}, 1\text{vw}), \max(1\text{vh}, 1\text{vw})$

Holy Grail avec calc

#13



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

›  Unités

›  w3c Truc et astuces

›  calc

›  Fun with Viewport Units

Compatibilité

#15

Navigateurs, usage $\geq 0,4\%$ en France

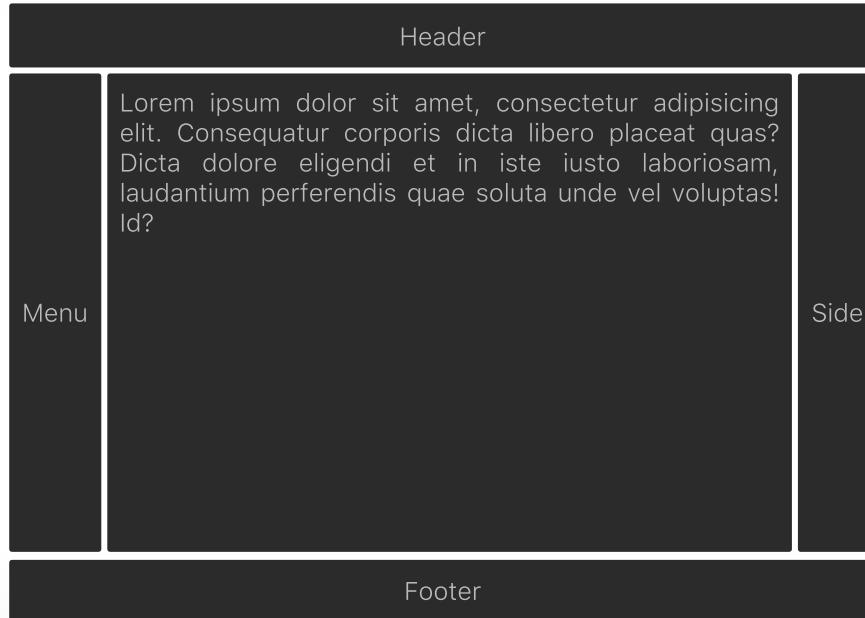
26,6 % 18,6 % 15,8 % 11,5 % 4,7 % 4,4 % 3,4 % 0,6 % 0,5 %

	rem (root em) units								
Chrome	49	58	61	11	48	52	11	10	14
Google Chrome (Android)	59	60		9.3	54	55		9.1	15
Safari (iOS)	49	58	61	10.0-10.2	48	52	11	10	14
Firefox	59	60		10.3	54	55		9.1	15
Internet Explorer	49	58	61	11	48	52	11	10.1	10.1
Edge	59	60		9.3	54	55		10.1	15
Opera	49	58	61	10.0-10.2	48	52	11	10	14
Microsoft Edge (mobile)	59	60		10.3	54	55		9.1	15
Others								4.4	4.4
Total								46	46

FLEXBOX ET GRID

Holy Grail avec flexbox

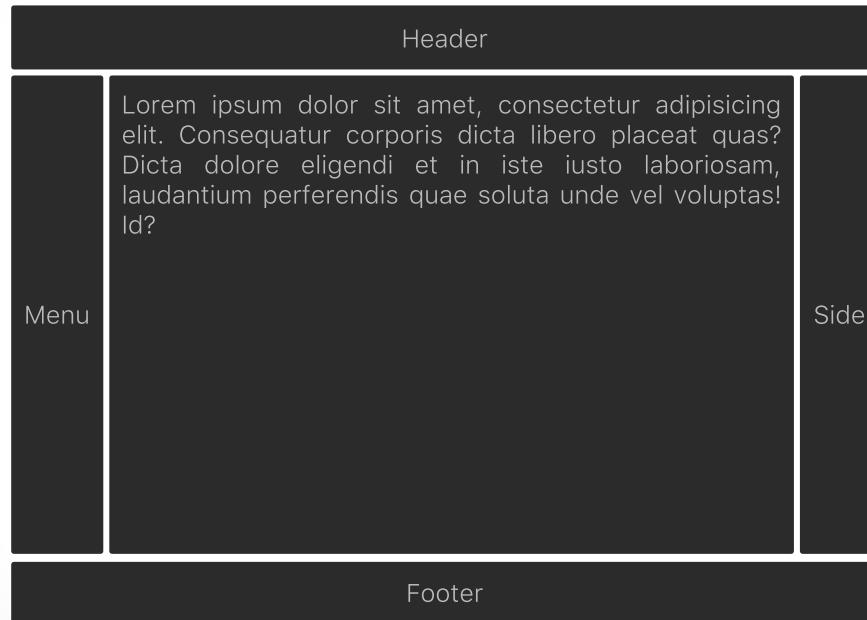
#17



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

Holy Grail avec grid

#18



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

Flexbox

- ›  [Flexbox, et le CSS redevient fun ! \(Hubert SABLONNIÈRE\)](#)
- ›  [Solved by Flexbox](#)
- ›  [Flexbox Froggy](#)

Grid

- ›  [@supports](#)
- ›  [# Grid by examples](#)
- ›  [CSS Grid Changes Everything \(About Web Layouts\) by Morten Rand-Hendriksen](#)
- ›  [Grid Garden](#)

Compatibilité

#20

Navigateurs, usage ≥ 0,4% en France



26,6 %



18,6 %



15,8 %



11,5 %



4,7 %



4,4 %



3,4 %



0,6 %



0,5 %

	49	58	61	11 9.3 10.0-10.2 10.3	48 52	11	10 9.1 10.1	14	4.4	46
CSS Flexible Box Layout Module	59	60			54	55		15		
CSS Grid Layout	49	58	61	11 9.3 10.0-10.2 10.3	48 52	11	10 9.1 10.1	14	4.4	46
CSS Feature Queries	49	58	61	11 9.3 10.0-10.2 10.3	48 52	11	10 9.1 10.1	14	4.4	46

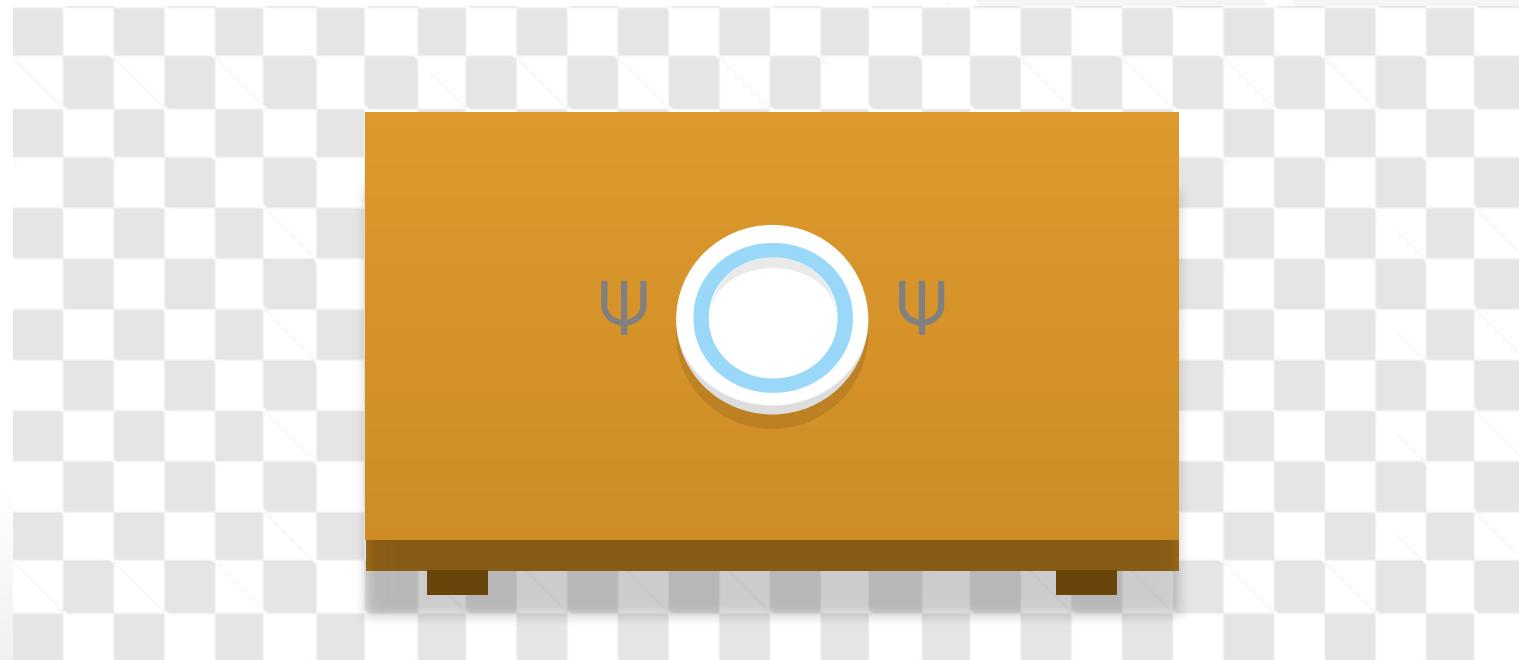
PSEUDO ÉLÉMENTS

Le dîner d'un philosophe

#22

```
<div class="table">  
  <div class="plate"></div>  
</div>
```

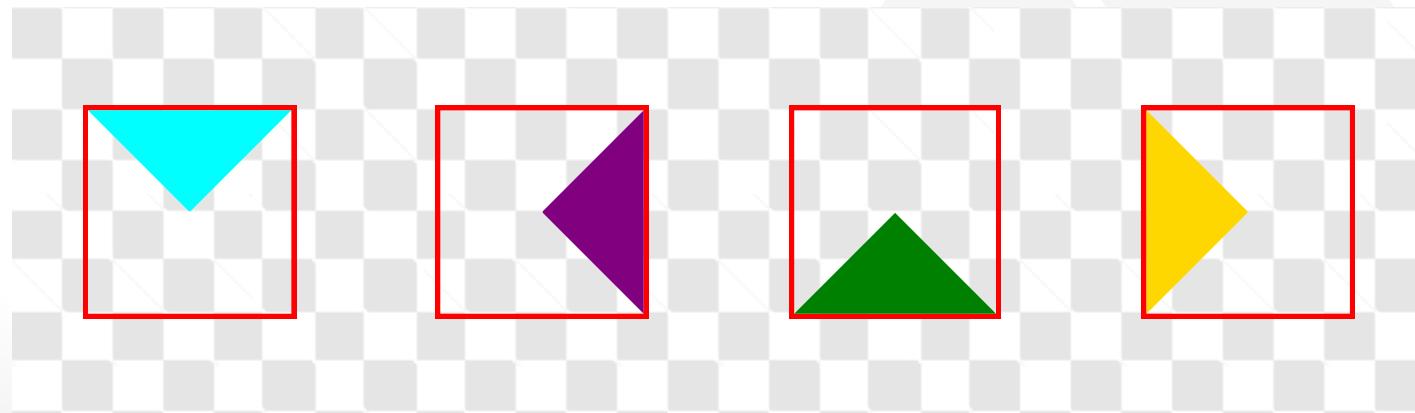
```
.table::before, .table::after {  
  color: gray;  
  font-size: 2rem;  
  content: '⠃';  
  transform: rotate(180deg);  
}
```



Triangle avec des bordures

#23

```
div.top, div.right, div.bottom, div.left {  
    border: 2em solid transparent;  
    display: inline-block;  
    box-shadow: 0 0 0 .1em red;  
}  
  
div.top { border-top-color: cyan; }  
div.right { border-right-color: purple; }  
div.bottom { border-bottom-color: green; }  
div.left { border-left-color: gold; }
```



```
.popover {  
  position: relative;  
  background: teal;  
}  
.popover::before {  
  position: absolute;  
  z-index: -1;  
  content: '';  
  top: 1.25em; left: 1em;  
  border: .8em solid transparent;  
  border-top-color: teal;  
  transform: skew(-30deg);  
}
```



Hello DevFest Toulouse !

- › [w3c The :before and :after pseudo-elements](#)
- › mais aussi ::first-letter, ::first-line,
::selection, ::backdrop
- › [S 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 [!\[\]\(262a69471e6c1b2959997023f73bfe46_img.jpg\) CSS Diner](#)
- › [!\[\]\(3f8eabbc5fbc831a822ddb57fc80787d_img.jpg\) Dîner des philosophes](#)

Compatibilité

#26

Navigateurs, usage ≥ 0,4% en France



26,6 % 18,6 % 15,8 % 11,5 % 4,7 % 4,4 % 3,4 % 0,6 % 0,5 %

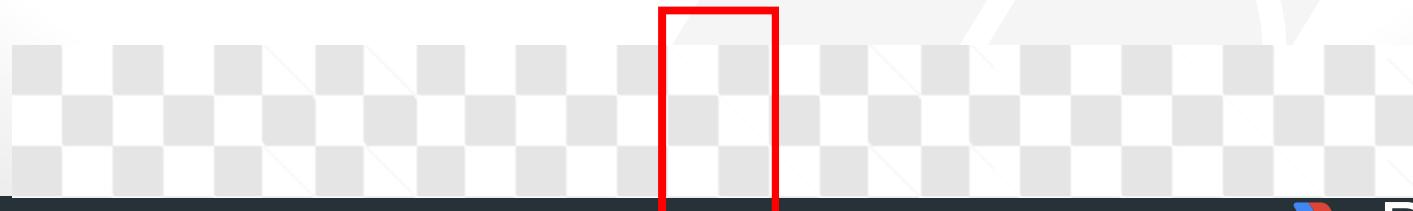
	IE	FF	SF	CH	OP	ED	MO	CB	OP MO
CSS Generated content for pseudo-elements	49 59	58 60	61	11 9.3 10.0-10.2 10.3	48 54	52 55	11	10 9.1 10.1	14 15
CSS3 2D Transforms	49 59	58 60	61	11 9.3 10.0-10.2 10.3	48 54	52 55	11	10 9.1 10.1	14 15

ANIMATIONS

Texte de chargement

#28

```
.loader {  
    display: inline-block;  
    white-space: pre;  
    height: 1.3em; margin-top: -.3rem;  
    line-height: 1.5;  
    overflow: hidden;  
}  
.loader::before {  
    display: inline-table;  
    content: '\a \a \a :\a :';  
    animation: spin 1s steps(10, end) infinite;  
}  
@keyframes spin {  
    to { transform: translateY(-15em); }  
}
```



```
.editable svg path {  
  stroke: purple;  
  stroke-width: 1em;  
  fill: none;  
  stroke-dasharray: 4700;  
  stroke-dashoffset: 4700;  
  animation: draw 2s linear infinite;  
}  
@keyframes draw {  
  to { stroke-dashoffset: 0; }  
}
```

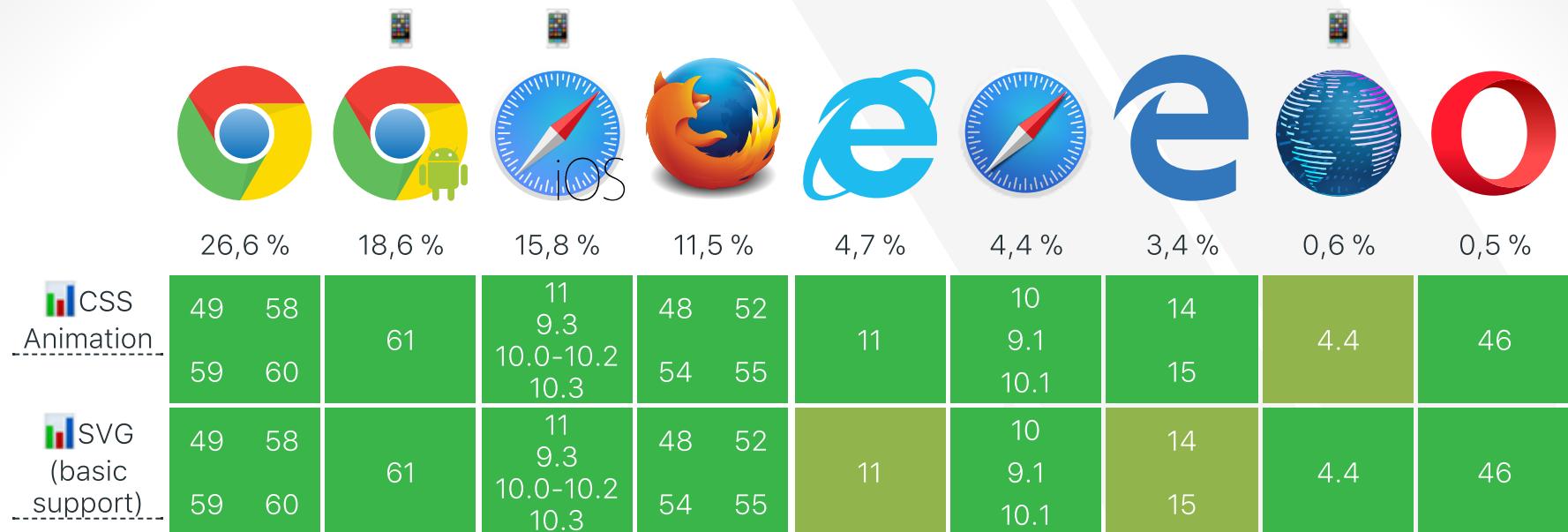


- ›  Utiliser les animations CSS
- ›  Text spinners
- ›  CSS only loaders
- ›  Animate.css
- ›  How SVG Line Animation Works
- ›  Animated line drawing in SVG
- ›  CSS triggers

Compatibilité

#31

Navigateurs, usage $\geq 0,4\%$ en France



PSEUDO CLASSES D'ÉTAT

Usage des info-bulles

#33

Input Text

mandatory field

Mandatory

➡ hover me

Hello DevFest Toulouse

- › :hover
- › :focus
- › :visited
- › :checked
- › :valid
- › :invalid
- › :empty
- › :active
- › :target
- › ...

Checkbox Hack

#35

```
.editable input[type=checkbox] + label::before {  
    content: 'Click if you like it';  
}  
  
.editable input[type=checkbox]:checked + label::before {  
    content: '💖💖💖';  
}  
  
fieldset input[type=checkbox] { opacity: 0; }
```

“

The science of operations, as derived from mathematics more especially, is a science of itself, and has its own abstract truth and value.

~~~~ Ada Lovelace



# Switch

#36

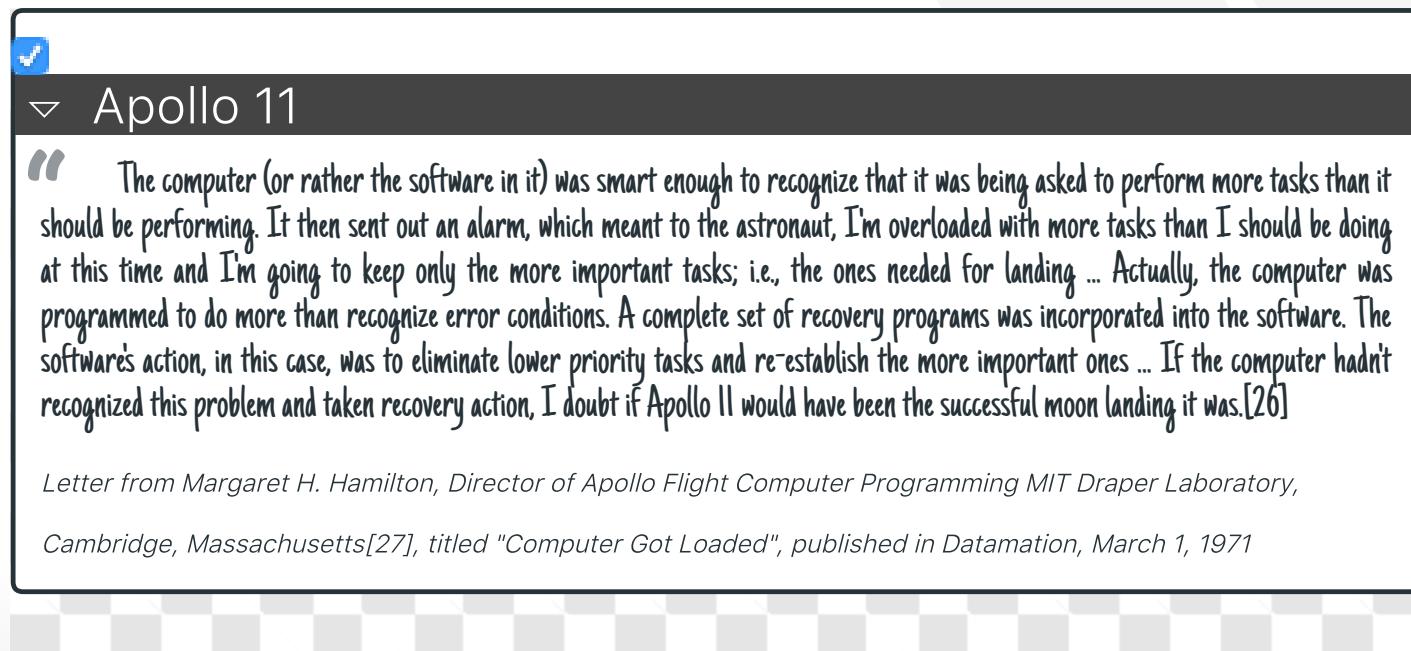
```
.switch + label {  
  display: block;  
  position: relative;  
  padding: .1em;  
  width: 2em;  
  height: 1em;  
  background-color: #ccc;  
  border-radius: 1em;  
  border: medium solid #444;  
  transition: 0.4s;  
  
.switch:checked + label {  
  background-color: green;  
}
```

```
.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);  
}
```

Switch

## ➡ Hiding Content for Accessibility

```
.panel input[type=checkbox] {  
  position: fixed;  
  left: -100vmax;  
}
```



A screenshot of a web browser window. At the top, there is a dark header bar with a checked checkbox icon and the text "Apollo 11". Below this is a white content area containing a quote. The quote is preceded by a small "i" icon and reads: "The computer (or rather the software in it) was smart enough to recognize that it was being asked to perform more tasks than it should be performing. It then sent out an alarm, which meant to the astronaut, I'm overloaded with more tasks than I should be doing at this time and I'm going to keep only the more important tasks; i.e., the ones needed for landing ... Actually, the computer was programmed to do more than recognize error conditions. A complete set of recovery programs was incorporated into the software. The software's action, in this case, was to eliminate lower priority tasks and re-establish the more important ones ... If the computer hadn't recognized this problem and taken recovery action, I doubt if Apollo 11 would have been the successful moon landing it was.[26]" Below the quote, there is a smaller text: "Letter from Margaret H. Hamilton, Director of Apollo Flight Computer Programming MIT Draper Laboratory, Cambridge, Massachusetts[27], titled "Computer Got Loaded", published in Datamation, March 1, 1971".

# Principe pour les onglets

#38

```
<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

#39



# Compatibilité

#40

Navigateurs, usage  $\geq 0,4\%$  en France

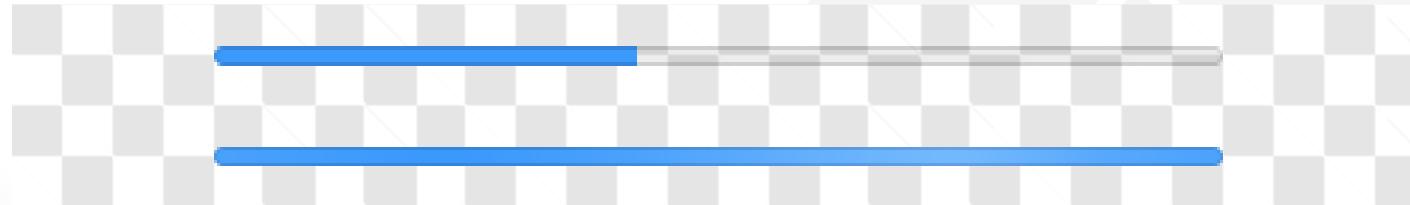


|                          | Chrome |    | Safari |                                | Firefox |    | IE |                   | Opera |    |
|--------------------------|--------|----|--------|--------------------------------|---------|----|----|-------------------|-------|----|
| CSS3<br>selectors        | 49     | 58 | 61     | 11<br>9.3<br>10.0-10.2<br>10.3 | 48      | 52 | 11 | 10<br>9.1<br>10.1 | 14    | 46 |
|                          | 59     | 60 |        | 54                             | 55      |    |    | 15                |       |    |
| Form<br>validation       | 49     | 58 | 61     | 11<br>9.3<br>10.0-10.2<br>10.3 | 48      | 52 | 11 | 10<br>9.1<br>10.1 | 14    | 46 |
|                          | 59     | 60 |        | 54                             | 55      |    |    | 15                |       |    |
| CSS3<br>3D<br>Transforms | 49     | 58 | 61     | 11<br>9.3<br>10.0-10.2<br>10.3 | 48      | 52 | 11 | 10<br>9.1<br>10.1 | 14    | 46 |
|                          | 59     | 60 |        | 54                             | 55      |    |    | 15                |       |    |

# HTML

## \* The HTML5 progress Element

```
<progress value="42" max="100">42 %</progress>  
<progress></progress>
```



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

```
details {
  border: medium solid currentcolor;
  border-radius: .25em;
}

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

► Des détails

# Dialog

#44

```
.editable dialog {  
    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);  
}
```



- ›  [Better details polyfill](#)
- ›  [Dialog Polyfill](#)

# Compatibilité

#46

Navigateurs, usage ≥ 0,4% en France



26,6 % 18,6 % 15,8 % 11,5 % 4,7 % 4,4 % 3,4 % 0,6 % 0,5 %

|                            | 49 | 58 | 61 | 11<br>9.3<br>10.0-10.2<br>10.3 | 48<br>52<br>54<br>55 | 11 | 10<br>9.1<br>10.1 | 14<br>15 | 4.4 | 46 |
|----------------------------|----|----|----|--------------------------------|----------------------|----|-------------------|----------|-----|----|
| progress element           | 49 | 58 | 61 | 11<br>9.3<br>10.0-10.2<br>10.3 | 48<br>52<br>54<br>55 | 11 | 10<br>9.1<br>10.1 | 14<br>15 | 4.4 | 46 |
| Details & Summary elements | 49 | 58 | 61 | 11<br>9.3<br>10.0-10.2<br>10.3 | 48<br>52<br>54<br>55 | 11 | 10<br>9.1<br>10.1 | 14<br>15 | 4.4 | 46 |
| Dialog element             | 49 | 58 | 61 | 11<br>9.3<br>10.0-10.2<br>10.3 | 48<br>52<br>54<br>55 | 11 | 10<br>9.1<br>10.1 | 14<br>15 | 4.4 | 46 |

# CONCLUSION

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

## 👉 Traitez le CSS comme du code

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

- › [!\[\]\(9e49868ba8eaf7071fc438017bcc77b8\_img.jpg\) les slides en HTML](#)

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- › [!\[\]\(88770677255ac3652019e5bd08cd9933\_img.jpg\) les slides en PDF](#)

---
- › [!\[\]\(92b47a52c91648e96ec79f56a96a075f\_img.jpg\) le code](#)

---
- › [!\[\]\(cb1d67ac93897d8644fea0ec34acea7b\_img.jpg\) Blog: 'Making Of'](#)

- › (Ctrl|⌘) + Shift + i
- › ➡ CSS Secrets by Lea Verou
- ›  CSS sur MDN , ➡ The A11Y Project
- › ➡ CodePen , ➡ JSFiddle , ➡ Dabblet ,...
- ›  CSS Tricks , ➡ Smashing Magazine
- ›  CSS Flags , ➡ A Single Div

CSS  
is  
Awesome!