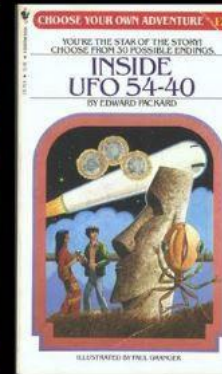
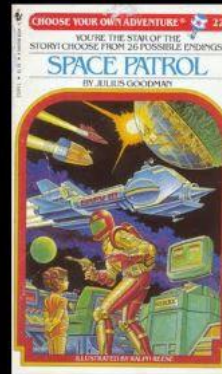
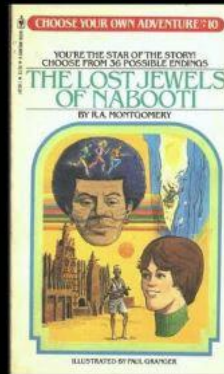
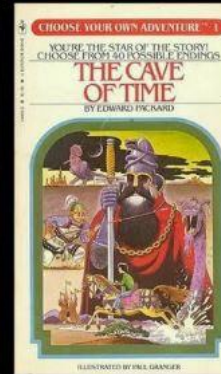
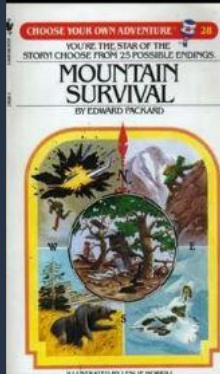
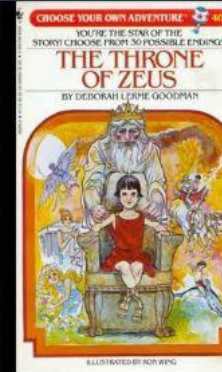
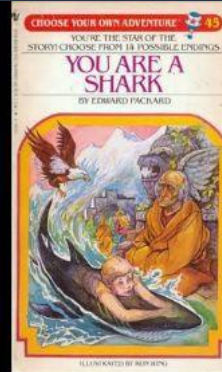
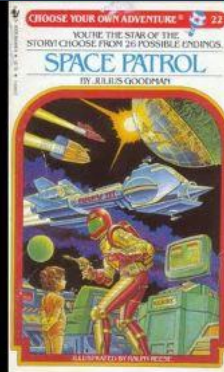
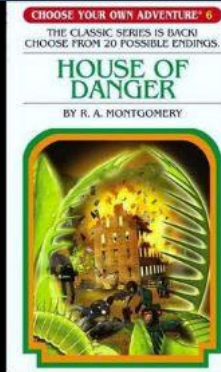
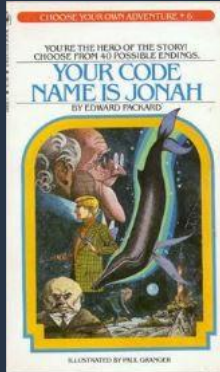
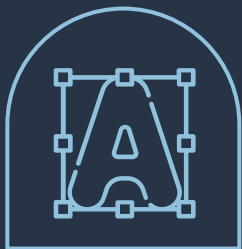




# CSS + Accessibility: Inclusion Through User Choice







**1**

Font family  
(1440)



**69**

Web hex colors  
(1986)



**1**

JavaScript  
frameworks/libraries  
(2023)



**650,000**

Font families  
(2023)



**16,777,216**

Web hex colors  
(2023)



**100+**

JavaScript  
framework  
(1995)



Life is the sum of all  
your **choices**

— Albert **Camus**





What do we mean  
by an **accessible  
choice?**

# THE GREAT YAQUIS

A Guaranteed CURE  
FOR

RHEUMATISM

WHETHER

ACUTE, CHRONIC,  
SCIATIC, NEURALGIC

OR

INFLAMMATORY

50c a Bottle.



PREPARED FROM PURE  
RATTLESNAKE OIL.

THE ONLY COMPANY IN  
THE UNITED STATES  
THAT MAKES THE  
GENUINE  
ARTICLE.

50c a Bottle.

---

---

## Snake-Oil Liniment

---

---

RELIEVES INSTANTANEOUSLY



# User-focused **CSS media queries!**






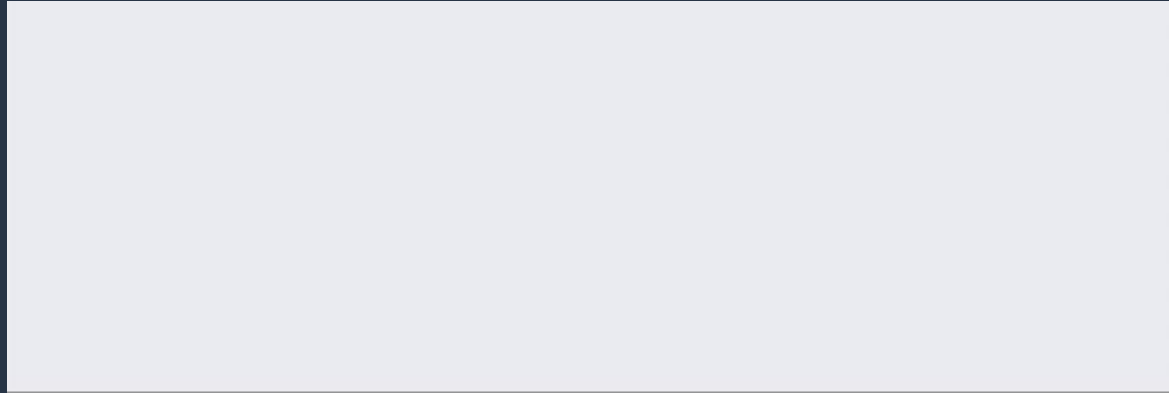
# Color



@prefers-color-scheme  
@forced-colors  
@inverted-colors



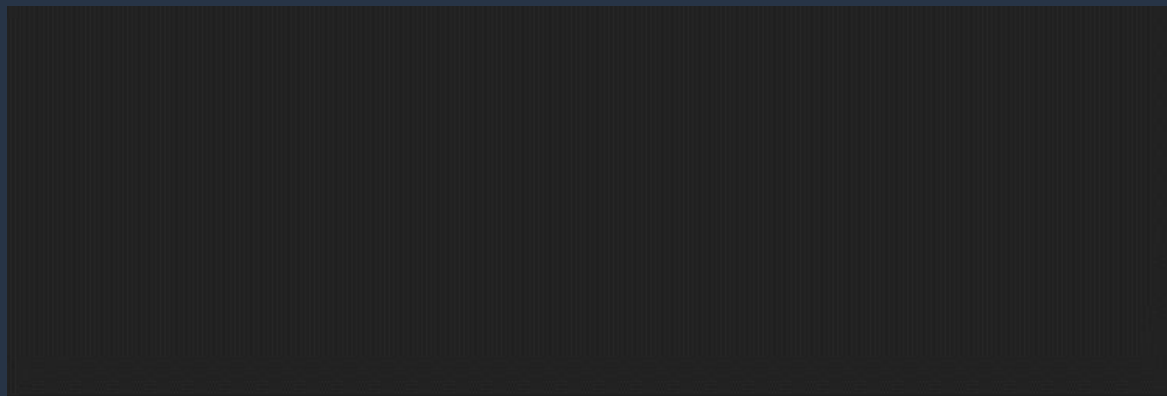
@prefers-color-scheme (default/light)



---

[codepen.io/cariefisher/pen/JjmmRxZ](https://codepen.io/cariefisher/pen/JjmmRxZ)

@prefers-color-scheme (dark)



---

[codepen.io/cariefisher/pen/JjmmRxZ](https://codepen.io/cariefisher/pen/JjmmRxZ)

```
@media (prefers-color-scheme: dark) {
```

```
  body {background-color: #282828;}
```

```
  .without [data-word="without"] .char:before,
```

```
  .without [data-word="without"] .char:after {
```

```
    color: #ffffff;
```

```
  }
```

```
}
```



CSS at-rule: @media: prefers-color-scheme media feature

Usage % of all users

Global 94.02%

Current aligned Usage relative Date relative Filtered All

| Chrome | Edge | Safari | Firefox | Opera | Chrome for Android | Safari on iOS | Samsung Internet | Opera Mini | UC Browser for Android |
|--------|------|--------|---------|-------|--------------------|---------------|------------------|------------|------------------------|
|        |      |        |         |       |                    | 15.6          |                  |            |                        |
|        |      |        |         |       |                    | 16.0          |                  |            |                        |
| 109    |      |        |         |       |                    | 16.1          |                  |            |                        |
| 111    |      | 15.6   |         |       |                    | 16.2          |                  |            |                        |
| 112    | 112  | 16.3   |         |       |                    | 16.3          |                  |            |                        |
| 113    | 113  | 16.4   | 112     | 98    |                    | 16.4          | 20               |            |                        |
| 114    | 114  | 16.5   | 113     | 99    | 114                | 16.5          | 21               | all        | 13.4                   |
| 115    |      | 16.6   | 114     |       |                    | 17            |                  |            |                        |
| 116    |      | 17     | 115     |       |                    |               |                  |            |                        |
| 117    |      | TP     |         |       |                    |               |                  |            |                        |

[caniuse.com/mdn-css\\_at-rules\\_media\\_prefers-color-scheme](https://caniuse.com/mdn-css_at-rules_media_prefers-color-scheme)

@forced-colors (active)



---

[codepen.io/cariefisher/pen/JjmmRxZ](https://codepen.io/cariefisher/pen/JjmmRxZ)

```
@media (forced-colors: active) {  
  body {background-color: #fcba03;}  
  
  .without [data-word="without"] .char:before,  
  .without [data-word="without"] .char:after {  
    color: #ac1663;  
  }  
  
  .without {color: #004a72;}  
}
```

CSS at-rule: @media: forced-colors media feature

Usage % of all users

Global 31.69%

Current aligned Usage relative Date relative Filtered All

|     | Chrome | Edge | Safari | Firefox | Opera | Chrome for Android | Safari on iOS | Samsung Internet | Opera Mini | UC Browser for Android |
|-----|--------|------|--------|---------|-------|--------------------|---------------|------------------|------------|------------------------|
|     |        |      |        |         |       |                    | 15.6          |                  |            |                        |
|     |        |      |        |         |       |                    | 16.0          |                  |            |                        |
|     |        |      |        |         |       |                    | 16.1          |                  |            |                        |
| 109 |        |      |        |         |       |                    | 16.2          |                  |            |                        |
| 111 |        |      | 15.6   |         |       |                    | 16.3          |                  |            |                        |
| 112 |        | 112  | 16.3   |         |       |                    | 16.4          |                  |            |                        |
| 113 |        | 113  | 16.4   | 112     | 98    |                    | 16.4          | 20               |            |                        |
| 114 |        | 114  | 16.5   | 113     | 99    | 114                | 16.5          | 21               | all        | 13.4                   |
| 115 |        |      | 16.6   | 114     |       |                    | 17            |                  |            |                        |
| 116 |        |      | 17     | 115     |       |                    |               |                  |            |                        |
| 117 |        |      | TP     |         |       |                    |               |                  |            |                        |



**@inverted-colors (inverted)**

**Visual of the code before inverted**



@inverted-colors (inverted)

Visual of the code after inverted



---

[codepen.io/cariefisher/pen/JjmmRxZ](https://codepen.io/cariefisher/pen/JjmmRxZ)

```
@media (inverted-colors: inverted) {  
  body {background-color: #fcba03;}  
  
  .without [data-word="without"] .char:before,  
  .without [data-word="without"] .char:after {  
    color: #ac1663;  
  }  
  
  .without {color: #004a72;}  
}
```

```
@media (inverted-colors: inverted) and  
(prefers-color-scheme: dark) {
```

```
  body {background: #99cc66;}
```

```
  .without [data-word="without"] .char:before,  
  .without [data-word="without"] .char:after {  
    color: #ee1166;  
  }
```

```
  .without {color: #111111;}
```

```
}
```

# CSS at-rule: @media: inverted-colors media feature

Usage % of all users  
Global 20.26%

Current aligned Usage relative Date relative Filtered All

| Chrome | Edge | Safari | Firefox | Opera | Chrome for Android | Safari on iOS | Samsung Internet | Opera Mini | UC Browser for Android |
|--------|------|--------|---------|-------|--------------------|---------------|------------------|------------|------------------------|
|        |      |        |         |       |                    | 15.6          |                  |            |                        |
|        |      |        |         |       |                    | 16.0          |                  |            |                        |
| 109    |      |        |         |       |                    | 16.1          |                  |            |                        |
| 111    |      | 15.6   |         |       |                    | 16.2          |                  |            |                        |
| 112    | 112  | 16.3   |         |       |                    | 16.3          |                  |            |                        |
| 113    | 113  | 16.4   | 112     | 98    |                    | 16.4          | 20               |            |                        |
| 114    | 114  | 16.5   | 113     | 99    | 114                | 16.5          | 21               | all        | 13.4                   |
| 115    |      | 16.6   | 114     |       |                    | 17            |                  |            |                        |
| 116    |      | 17     | 115     |       |                    |               |                  |            |                        |
| 117    |      | TP     |         |       |                    |               |                  |            |                        |

[caniuse.com/mdn-css\\_at-rules\\_media\\_inverted-colors](https://caniuse.com/mdn-css_at-rules_media_inverted-colors)



# Contrast



@prefers-contrast

@prefers-reduced-transparency



@prefers-contrast (no preference)



**Some disabilities**  
are invisible

---

[codepen.io/cariefisher/pen/GRYYmoR](https://codepen.io/cariefisher/pen/GRYYmoR)



@prefers-contrast (more)

**Some disabilities  
are invisible**

---

[codepen.io/cariefisher/pen/GRYYmoR](https://codepen.io/cariefisher/pen/GRYYmoR)



```
@media (prefers-contrast: more) {  
  .title2 {color: var(--clr-6);}   
  
  .aurora2__item:nth-of-type(1),  
  .aurora2__item:nth-of-type(2),  
  .aurora2__item:nth-of-type(3),  
  .aurora2__item:nth-of-type(4) {  
    background-color: var(--clr-6);  
  }   
}
```

@prefers-contrast (less)

**Some disabilities  
are invisible**

---

[codepen.io/cariefisher/pen/GRYYmoR](https://codepen.io/cariefisher/pen/GRYYmoR)

```
@media (prefers-contrast: less) {  
  .title {color: var(--clr-5);}  
  
  .aurora__item:nth-of-type(1),  
  .aurora__item:nth-of-type(2),  
  .aurora__item:nth-of-type(3),  
  .aurora__item:nth-of-type(4) {  
    background-color: var(--clr-5);  
  }  
}
```



@prefers-contrast (custom)

**Some disabilities  
are invisible**

---

[codepen.io/cariefisher/pen/GRYYmoR](https://codepen.io/cariefisher/pen/GRYYmoR)

```
@media (prefers-contrast: custom) {
  .aurora2__item:nth-of-type(1) {
    background-color: var(--clr-1);
  }
  .aurora2__item:nth-of-type(2) {
    background-color: var(--clr-2);
  }
  .aurora2__item:nth-of-type(3) {
    background-color: var(--clr-3);
  }
  .aurora2__item:nth-of-type(4) {
    background-color: var(--clr-4);
  }
}
```



# CSS at-rule: @media: prefers-contrast media feature

Usage % of all users  
Global 91.9%

Current aligned Usage relative Date relative Filtered All

|     | Chrome | Edge | Safari | Firefox | Opera | Chrome for Android | Safari on iOS | Samsung Internet | Opera Mini | UC Browser for Android |
|-----|--------|------|--------|---------|-------|--------------------|---------------|------------------|------------|------------------------|
|     |        |      |        |         |       |                    | 15.6          |                  |            |                        |
|     |        |      |        |         |       |                    | 16.0          |                  |            |                        |
|     |        |      |        |         |       |                    | 16.1          |                  |            |                        |
| 109 |        |      |        |         |       |                    | 16.2          |                  |            |                        |
| 111 |        |      | 15.6   |         |       |                    | 16.3          |                  |            |                        |
| 112 |        | 112  | 16.3   |         |       |                    | 16.4          |                  |            |                        |
| 113 |        | 113  | 16.4   | 112     | 98    |                    | 16.4          | 20               |            |                        |
| 114 |        | 114  | 16.5   | 113     | 99    | 114                | 16.5          | 21               | all        | 13.4                   |
| 115 |        |      | 16.6   | 114     |       |                    | 17            |                  |            |                        |
| 116 |        |      | 17     | 115     |       |                    |               |                  |            |                        |
| 117 |        |      | TP     |         |       |                    |               |                  |            |                        |


[caniuse.com/mdn-css\\_at-rules\\_media\\_prefers-contrast](https://caniuse.com/mdn-css_at-rules_media_prefers-contrast)

@prefers-reduced-transparency (reduce)


**Some disabilities  
are invisible**

---

[codepen.io/cariefisher/pen/GRYYmoR](https://codepen.io/cariefisher/pen/GRYYmoR)



```
@media (prefers-reduced-transparency: reduce) {  
  .title,  
  .title2 {  
    opacity: 0.7;  
  }  
}
```





CSS at-rule: @media: prefers-reduced-transparency media feature

Usage % of all users  
Global 0%

Current aligned Usage relative Date relative Filtered All

| Chrome | Edge | Safari | Firefox | Opera | Chrome for Android | Safari on iOS | Samsung Internet | Opera Mini | UC Browser for Android |
|--------|------|--------|---------|-------|--------------------|---------------|------------------|------------|------------------------|
|        |      |        |         |       |                    | 15.6          |                  |            |                        |
|        |      |        |         |       |                    | 16.0          |                  |            |                        |
| 109    |      |        |         |       |                    | 16.1          |                  |            |                        |
| 111    |      | 15.6   |         |       |                    | 16.2          |                  |            |                        |
| 112    | 112  | 16.3   |         |       |                    | 16.3          |                  |            |                        |
| 113    | 113  | 16.4   | 112     | 98    |                    | 16.4          | 20               |            |                        |
| 114    | 114  | 16.5   | 113     | 99    | 114                | 16.5          | 21               | all        | 13.4                   |
| 115    |      | 16.6   | 114     |       |                    | 17            |                  |            |                        |
| 116    |      | 17     | 115     |       |                    |               |                  |            |                        |
| 117    |      | TP     |         |       |                    |               |                  |            |                        |


[caniuse.com/mdn-css\\_at-rules\\_media\\_prefers-reduced-transparency](https://caniuse.com/mdn-css_at-rules_media_prefers-reduced-transparency)



# Motion



@prefers-reduced-motion  
@prefers-reduced-data



@prefers-reduced-motion (no preference)



---

[codepen.io/cariefisher/pen/zYmmZZZ](https://codepen.io/cariefisher/pen/zYmmZZZ)

@prefers-reduced-motion (reduce)



---

[codepen.io/cariefisher/pen/zYmmZZZ](https://codepen.io/cariefisher/pen/zYmmZZZ)

```
@media @media (prefers-reduced-motion: reduce) {
  .bg-rainbow {animation: none;}

  .perfection {
    .word {
      .char {
        animation: slide-down 5s cubic-bezier(0.75, 0, 0.25, 1) both;
        animation-delay: calc(#{$delay} + (0.5s * var(--word-index)));
      }
    }
  }

  [data-word="perfection"] {
    animation: slide-over 4.5s cubic-bezier(0.5, 0, 0.25, 1) both;
    animation-delay: $delay;
  }
}
```

```
.char {
  animation: none;
  visibility: hidden;
}

.char:before,
.char:after {
  animation: split-in 4.5s cubic-bezier(0.75, 0, 0.25, 1) both
alternate;
  animation-delay: calc(
    3s + -0.2s * (var(--char-total) - var(--char-index))
  );
}
}
}
}
```

CSS at-rule: @media: prefers-reduced-motion media feature

Usage % of all users  
Global 94.65%

Current aligned Usage relative Date relative Filtered All

|     | Chrome | Edge | Safari | Firefox | Opera | Chrome for Android | Safari on iOS | Samsung Internet | Opera Mini | UC Browser for Android |
|-----|--------|------|--------|---------|-------|--------------------|---------------|------------------|------------|------------------------|
|     |        |      |        |         |       |                    | 15.6          |                  |            |                        |
|     |        |      |        |         |       |                    | 16.0          |                  |            |                        |
|     |        |      |        |         |       |                    | 16.1          |                  |            |                        |
| 109 |        |      |        |         |       |                    | 16.2          |                  |            |                        |
| 111 |        |      | 15.6   |         |       |                    | 16.3          |                  |            |                        |
| 112 |        | 112  | 16.3   |         |       |                    | 16.4          |                  |            |                        |
| 113 |        | 113  | 16.4   | 112     | 98    |                    | 16.4          | 20               |            |                        |
| 114 |        | 114  | 16.5   | 113     | 99    | 114                | 16.5          | 21               | all        | 13.4                   |
| 115 |        |      | 16.6   | 114     |       |                    | 17            |                  |            |                        |
| 116 |        |      | 17     | 115     |       |                    |               |                  |            |                        |
| 117 |        |      | TP     |         |       |                    |               |                  |            |                        |

[caniuse.com/mdn-css\\_at-rules\\_media\\_prefers-reduced-motion](https://caniuse.com/mdn-css_at-rules_media_prefers-reduced-motion)

@prefers-reduced-data (reduce)

A graphic consisting of a blue and green background with a white box in the center. The text 'Progress over perfection' is written in the box, with 'Progress over' in green and 'perfection' in purple. The word 'perfection' is also written in a lighter purple color below it.

Progress over perfection

---

[codepen.io/cariefisher/pen/zYmmZZZ](https://codepen.io/cariefisher/pen/zYmmZZZ)



```
@media (prefers-reduced-data: reduce) {
```

```
  .bg-rainbow {animation: none;}
```

```
  .perfection {
```

```
    .word {
```

```
      .char {
```

```
        animation: none;
```

```
      }
```

```
    }
```

```
[data-word="perfection"] {
```

```
  animation: none;
```

```
.char {  
  animation: none;  
  visibility: hidden;  
}
```

```
.char:before,  
.char:after {  
  animation: none;  
}
```

```
}
```

```
}
```

```
}
```



CSS at-rule: @media: prefers-reduced-data media feature

Usage % of all users  
Global 0%

Current aligned Usage relative Date relative Filtered All

| Chrome | Edge | Safari | Firefox | Opera | Chrome for Android | Safari on iOS | Samsung Internet | Opera Mini | UC Browser for Android |
|--------|------|--------|---------|-------|--------------------|---------------|------------------|------------|------------------------|
|        |      |        |         |       |                    | 15.6          |                  |            |                        |
|        |      |        |         |       |                    | 16.0          |                  |            |                        |
|        |      |        |         |       |                    | 16.1          |                  |            |                        |
|        |      |        |         |       |                    | 16.2          |                  |            |                        |
|        |      |        |         |       |                    | 16.3          |                  |            |                        |
| 109    |      |        |         |       |                    | 16.4          |                  |            |                        |
| 111    |      | 15.6   |         |       |                    | 16.4          |                  |            |                        |
| 112    | 112  | 16.3   |         |       |                    | 16.4          |                  |            |                        |
| 113    | 113  | 16.4   | 112     | 98    |                    | 16.4          | 20               |            |                        |
| 114    | 114  | 16.5   | 113     | 99    | 114                | 16.5          | 21               | all        | 13.4                   |
| 115    |      | 16.6   | 114     |       |                    | 17            |                  |            |                        |
| 116    |      | 17     | 115     |       |                    |               |                  |            |                        |
| 117    |      | TP     |         |       |                    |               |                  |            |                        |

[caniuse.com/mdn-css\\_at-rules\\_media\\_prefers-reduced-data](https://caniuse.com/mdn-css_at-rules_media_prefers-reduced-data)



## Color

@prefers-color-scheme  
@forced-colors  
@inverted-colors



## Contrast

@prefers-contrast  
@prefers-reduced-  
transparency



## Motion

@prefers-reduced-  
motion  
@prefers-reduced-data

---



0

User choices

---

---



# 256



User choices

---



Our job is to provide  
options and let people  
choose their own  
**adventure**



**Thanks!**

---



@cariefisher