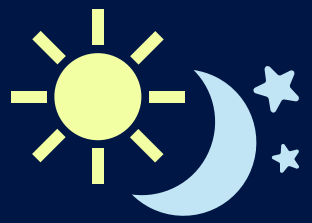


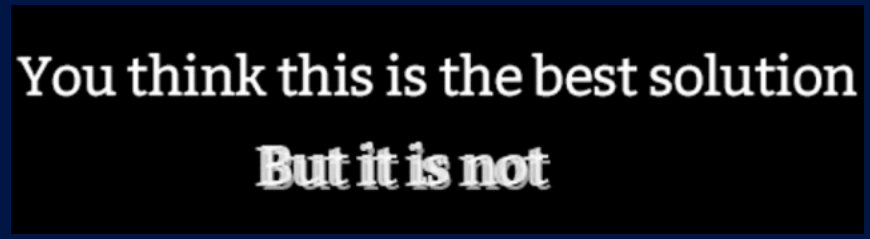
How can we design our webpages to honour the user's preference for light or dark mode?

Seminar by Niya Dobazova

Importance

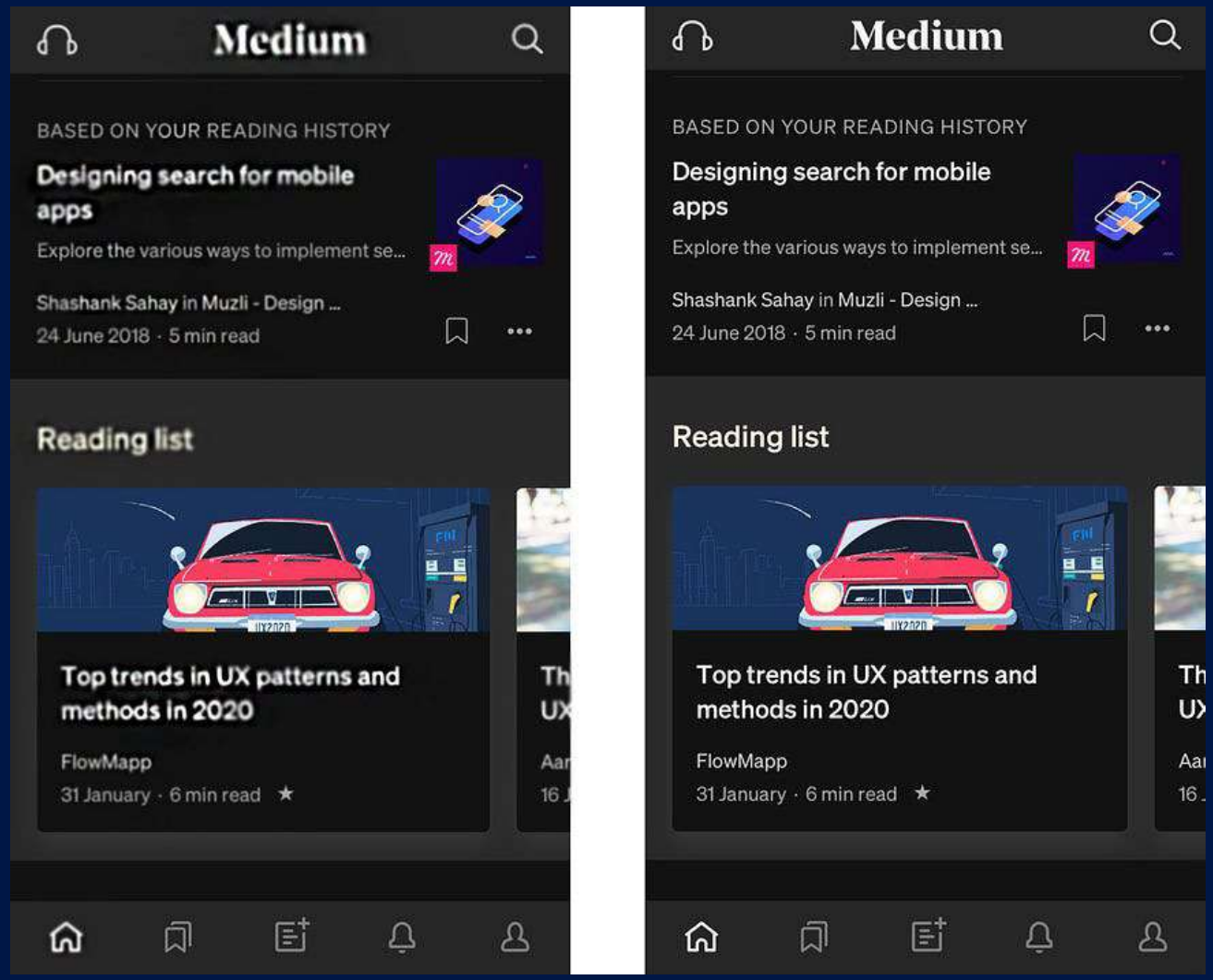
Accessibility needs

- Astigmatism – “halation effect”
- Dyslexia
- Lower vision
- Migraines
- Photophobia – sensitivity to light



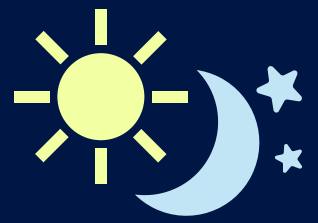
(Steiner, 2019)

“Halation effect”



(Locke, 2021)

Importance



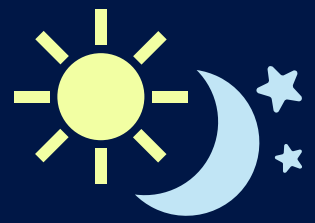
Sustainable (OLED, AMOLED and POLED screens)

- Reduce power usage
- Extend battery life
- Save battery

(Forest Web Design, 2024)

(Budiu, 2020)

Benefits

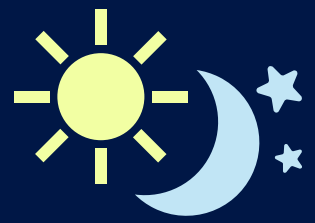


- ✓ Increase readability
- ✓ Customer satisfaction
- ✓ Reduce screen flickering
- ✓ Aesthetics and adaptive branding

(BOIA, 2021)

(Locke, 2021)

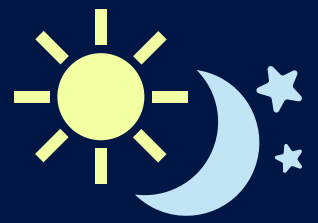
Making light/dark mode available

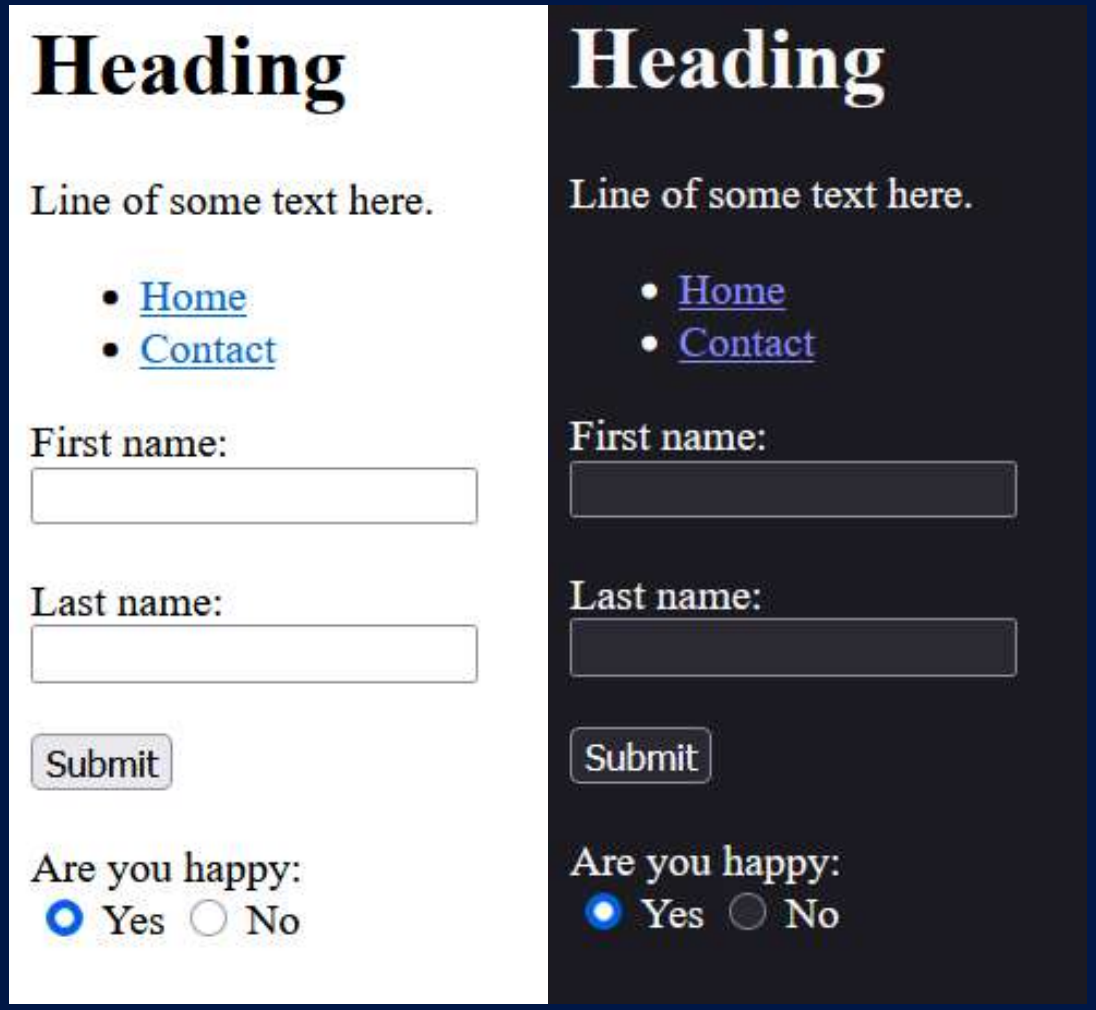


System colours

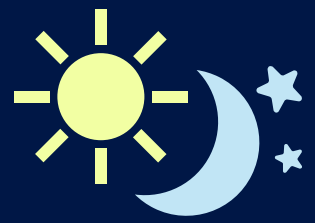
```css
/* CSS */
:root {
  color-scheme: light dark;
}
```

System colours





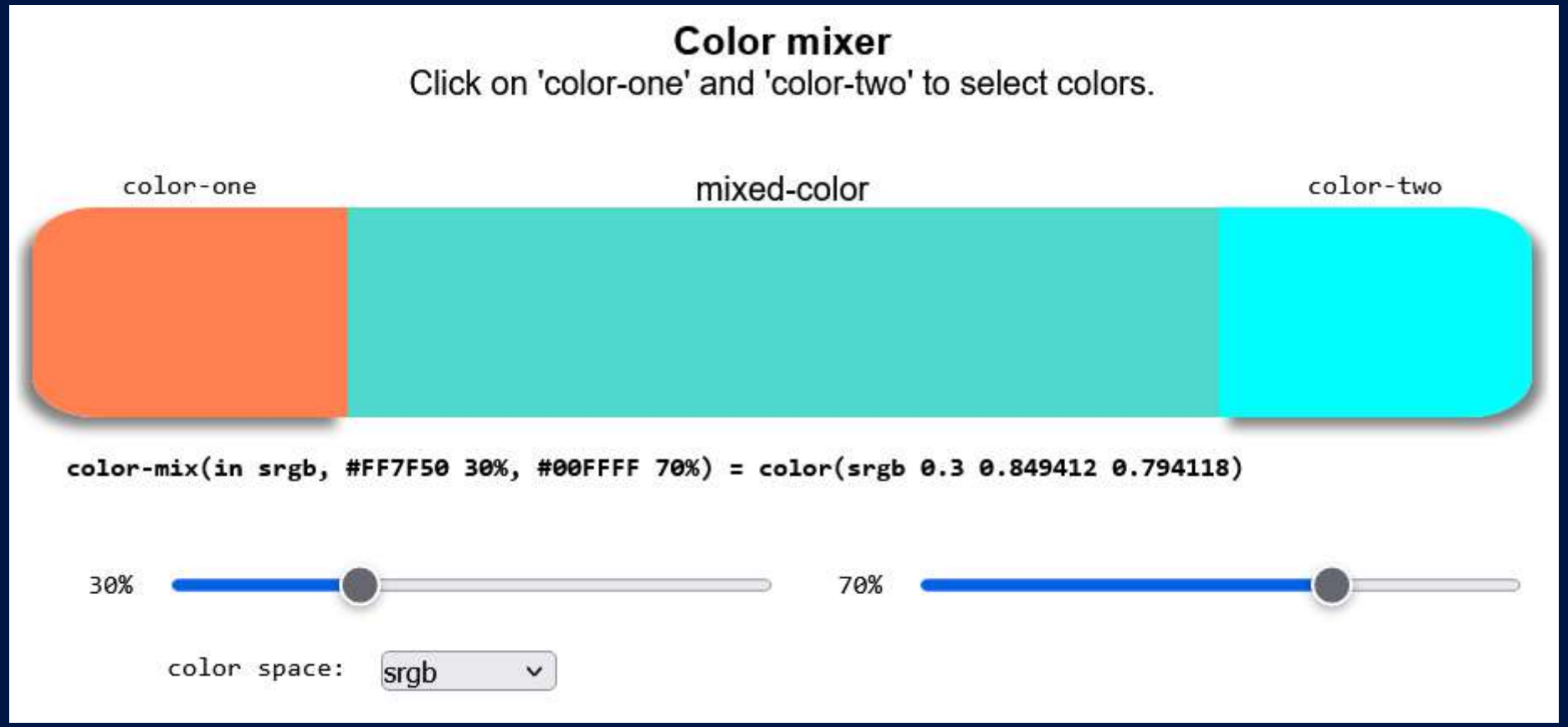
Making light/dark mode available



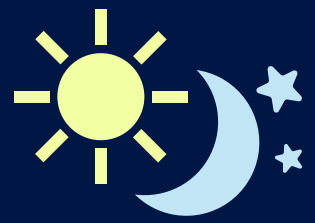
color-mix() *(+ system colours)*

```
/* CSS */
p {
  background-color: color-mix(in srgb, <color>, <color>);
}
```

color-mix()


Color mixer
Click on 'color-one' and 'color-two' to select colors.
color-one
mixed-color
color-two
color-mix(in srgb, #FF7F50 30%, #00FFFF 70%) = color(srgb 0.3 0.849412 0.794118)
30%
70%
color space:
srgb

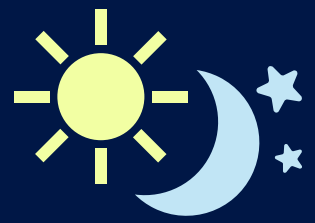
Making light/dark mode available



@media(prefers-color-scheme:)

```css
/* CSS */
:root {
  color-scheme: light dark;
}
@media(prefers-color-scheme:dark){
  p {
    background-color: #cc0000;
  }
}
```

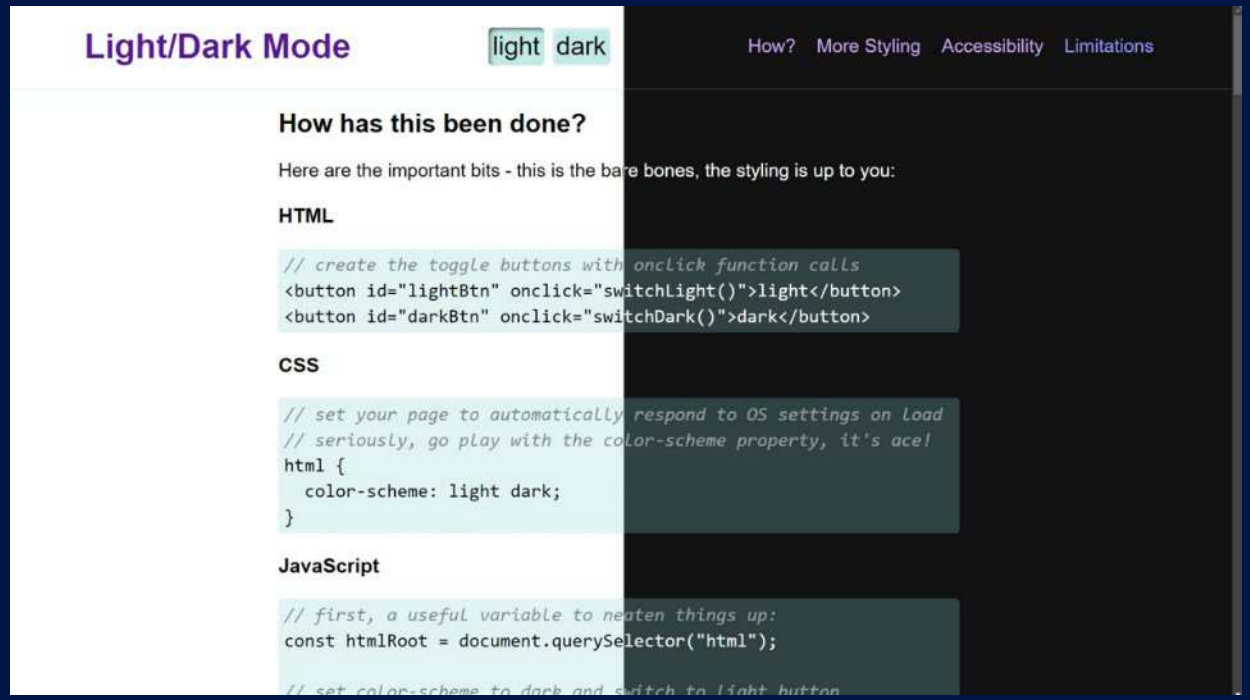
Making light/dark mode available



light-dark()

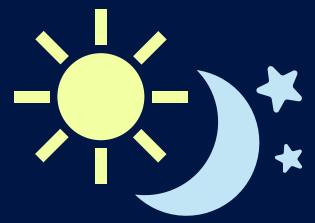
```css
/* CSS */
:root {
  color-scheme: light dark;
}
p {
  background-color: light-dark(<color>, <color>);
}
```

light-dark()


Light/Dark Mode
light dark
How? More Styling Accessibility Limitations
How has this been done?
Here are the important bits - this is the bare bones, the styling is up to you:
HTML
// create the toggle buttons with onclick function calls
<button id="lightBtn" onclick="switchLight()">light</button>
<button id="darkBtn" onclick="switchDark()">dark</button>
CSS
// set your page to automatically respond to OS settings on load
// seriously, go play with the color-scheme property, it's ace!
html {
color-scheme: light dark;
}
JavaScript
// first, a useful variable to neaten things up:
const htmlRoot = document.querySelector("html");

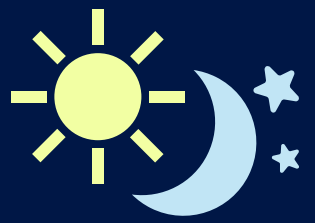

Browser compatibility
Report problems with this compatibility data on GitHub
Chrome
Edge
Firefox
Opera
Safari
Chrome Android
Firefox for Android
Opera Android
Safari on iOS
Samsung Internet
WebView Android
WebView on iOS
light-dark()
123 123 120 109 17.5 123 120 82 17.5 27.0 123 17.5
Tip: you can click/tap on a cell for more information.
Full support
No support
See implementation notes.

In conclusion



Offering both modes...

- ✓ caters to a wider audience
- ✓ satisfies a wider audience
- ✓ shows we care about user accessibility
- ✓ shows consideration for user personalisation



Thank you!

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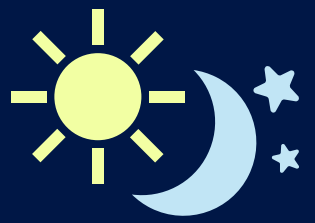

Link to demos
https://codepen.io/niya_d

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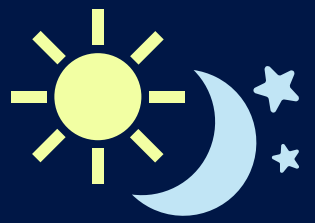

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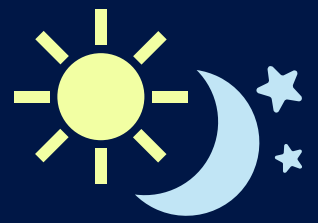

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