



Web Components in action

Web Components in der Praxis

CSS and Shadow DOM in Event Driven Web Components as a "no-stack, no-dependency" approach at CMS, SPA, and component library environments.

CSS und Shadow DOM in Event Driven Web Components als «No-Stack, No-Dependency»-Ansatz im Umfeld von CMS, SPA und Komponentenlibrary.

About

- Nearly 20 years experience... flash, php, jquery, backbone, typescript, es6 classes, react, angular, vue.js

Migros 6y (met Srdan regarding M4Musics)

- Webnesday: HTML5 Game Development
06. November 2019:

Taru Taro Legends

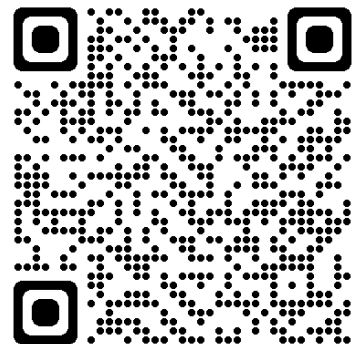
Weedshaker



1+ Downloads

3+ Rated for 3+ ⓘ

Install on more devices

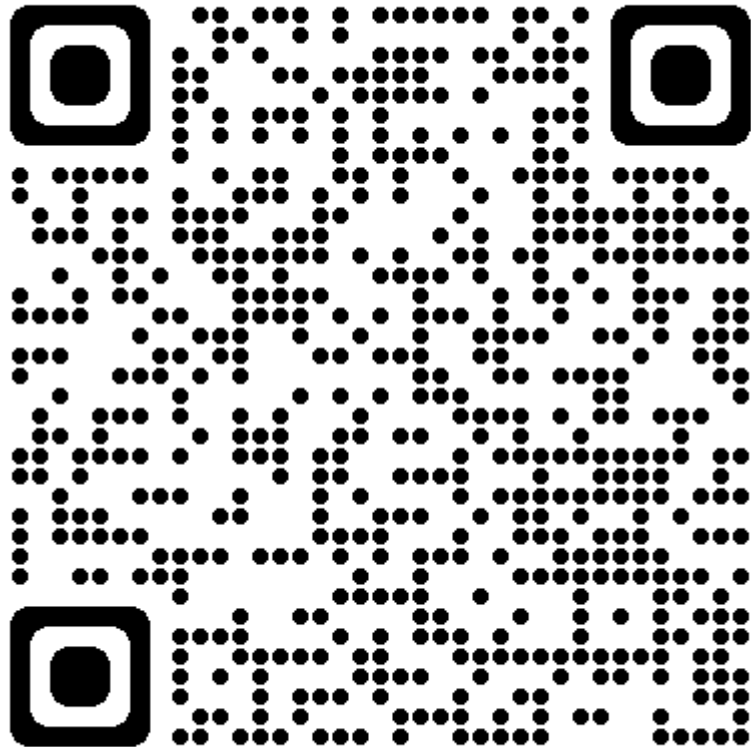


What makes a truly independent component?



Event Driven Architecture – The journey begins

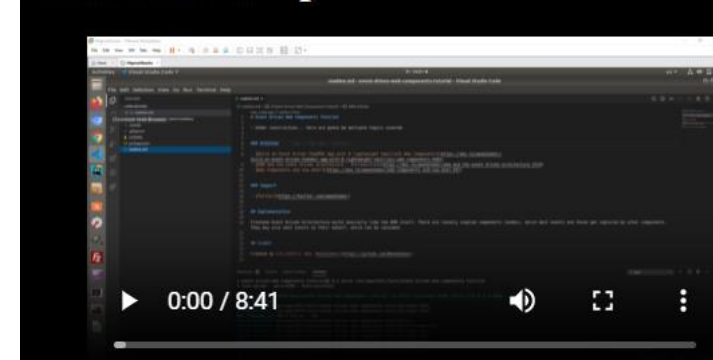
<https://weedshaker.github.io/event-driven-web-components-tutorial>



- Tutorial 1 - Setup
- Tutorial 2 - Make a Web Component
- Tutorial 3 - Load a Web Component
- Tutorial 4 - Structure and Type-Highlighting
- Tutorial 5 - ShadowDom
- Tutorial 6 - Routing
- Tutorial 7 - Event Driven

Great starting point for folks who haven't had much experience with Web Components or haven't been using those in an event driven manner.

Tutorial 1 - Setup



Event Driven Architecture – Easy example

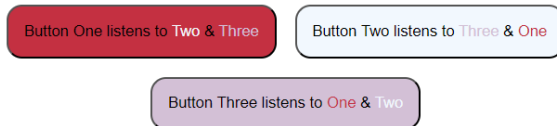
https://github.com/Weedshaker/webnesday2023_event-driven

Live Demo: Event Flow, Event Details

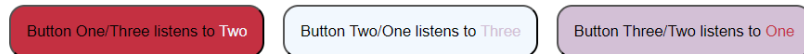
▼ Event: One to One



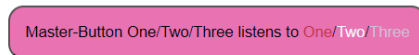
▼ Event: dispatch One and listens to Two



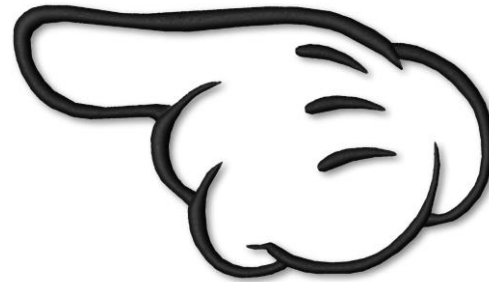
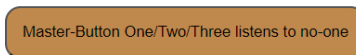
▼ Event: dispatch Two and listens to One



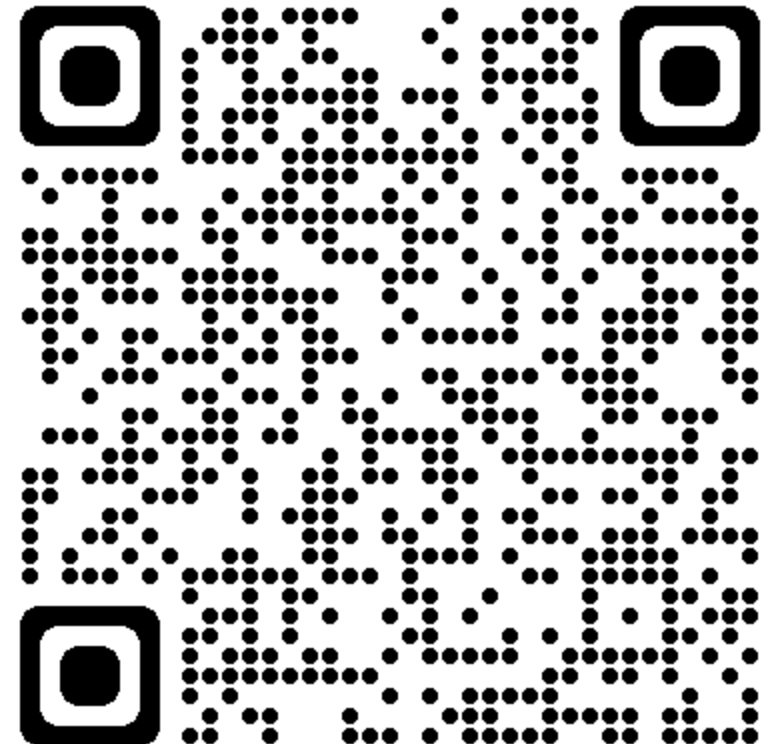
▼ Event: dispatch All and listens to All



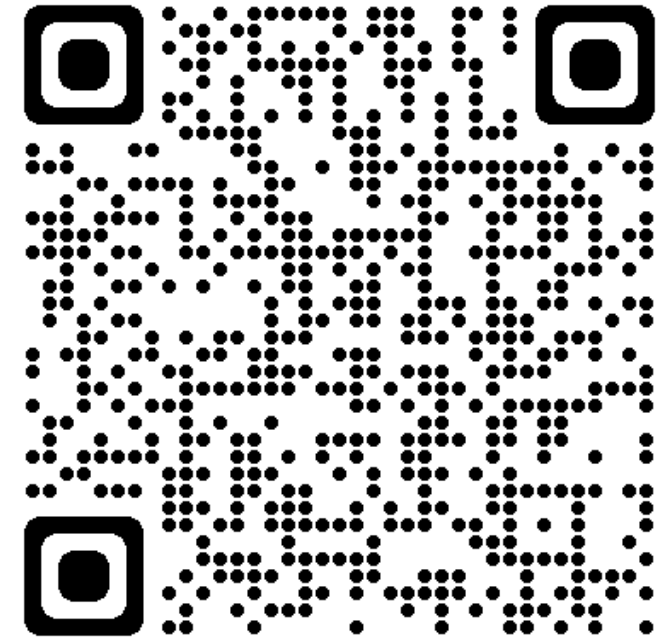
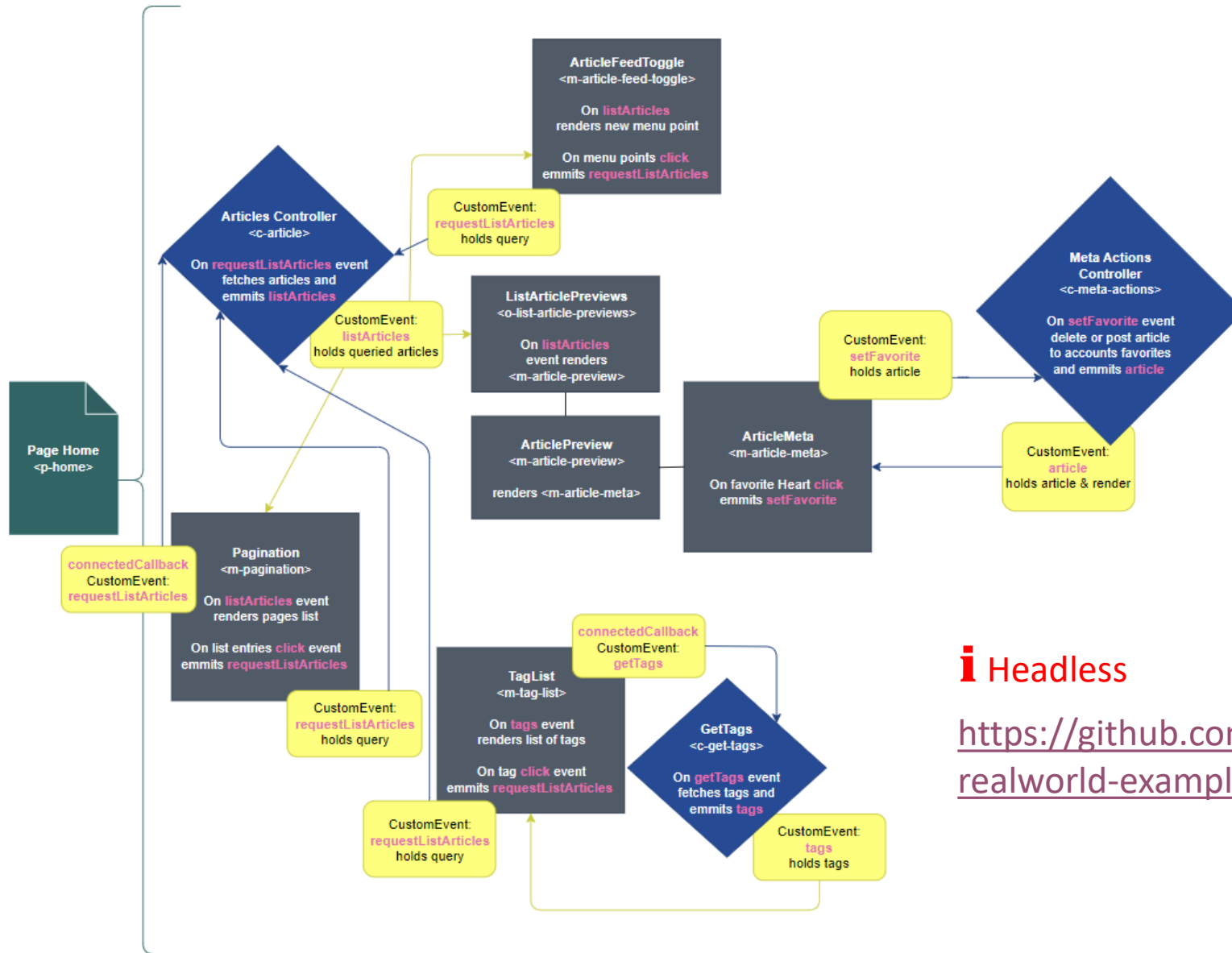
▼ Event: dispatch All and listens to None



i Static



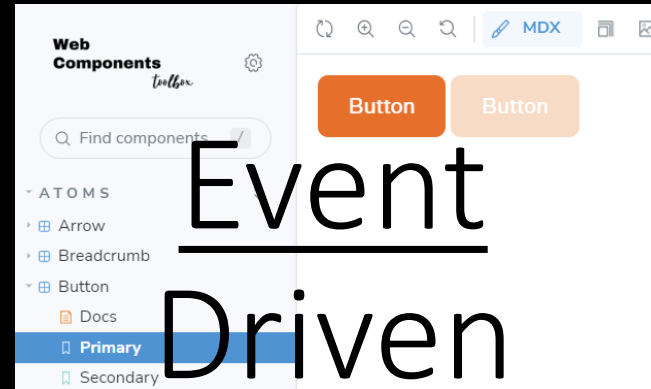
Event Driven Architecture – Complex example



i Headless

<https://github.com/mits-gossau/event-driven-web-components-realworld-example-app> 

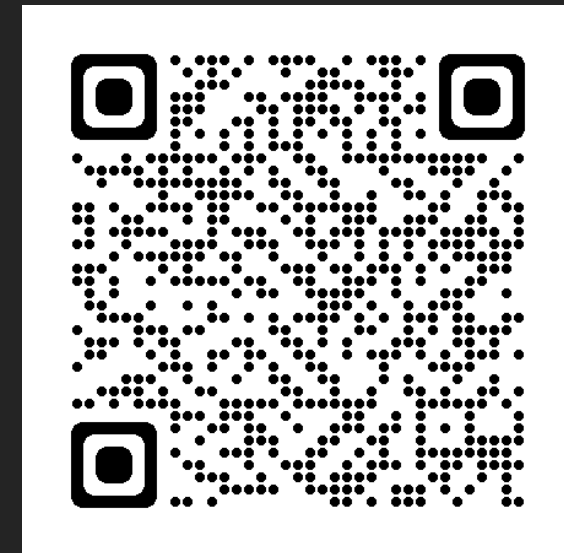
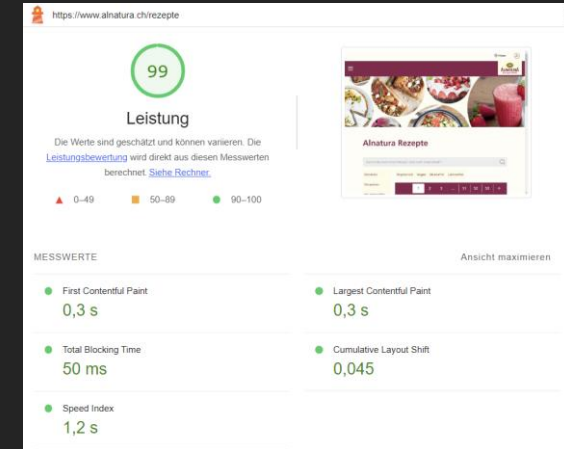
i Hybrid (Static/Headless)



Event Driven Architecture In Action

Alnatura Rezeptfilter 
<https://www.alnatura.ch/rezepte>

SEO: Button becomes link by
requesting URL from controller,
without fetch: [Web Components
Toolbox](#)  (mits-gossau.github.io)



Event Driven Architecture – Pros vs. Cons

- DOM itself is event driven
 - ↳ *Performance*
- 100% Web API compatibility
- No state management needed;
controllers could do so, for their domain...
- Flexible; to break out of app aka. reusable
 - ↳ *Exclusive communication through events except for attributes (similar to react props)*
- Easy to adjust even for fullstacks and backenders
 - ↳ *Submodule, no bundler nor transpiler*
- All async ↳ *no blocking*
- JSDocs Type Annotations
- Great error handling and highlighting

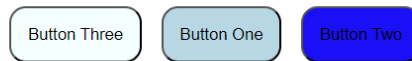
-
- **Event overview**
string event names ↳
 - **Event bubbling**
 - **Community**
 - **No hard architecture guidelines**

CSS & Shadow-Dom – Example

https://github.com/Weedshaker/webnesday2023_event-driven

Live Demo: Namespace/Theming

▼ Event: Simple Button



▼ Event: Migros Button

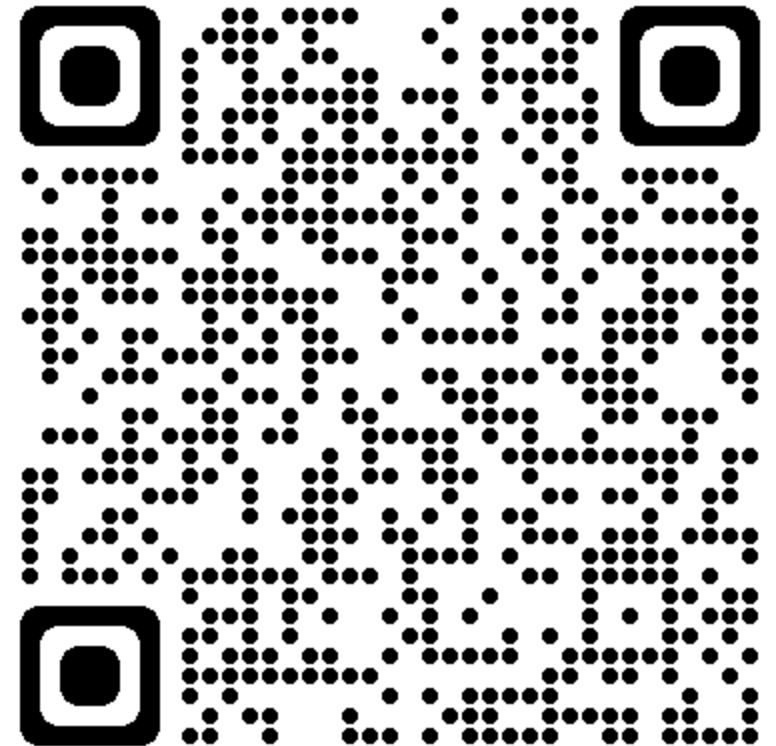
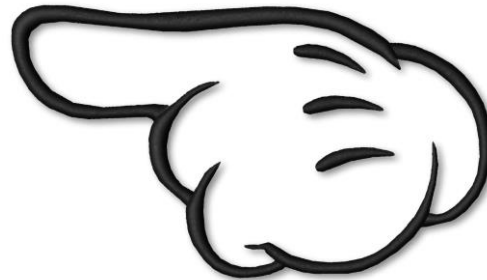


▼ Event: Migros style.css

CAT NAV Lorem ipsum, dolor sit amet consectetur adipisicing elit. Quidem numquam est soluta, quis reiciendis fugiat alias, molestiae doloribus voluptates quia perferendis nemo magnam consequatur nobis sit facere, cum ab quam? Lorem ipsum dolor, sit amet consectetur adipisicing elit. Doloribus, quisquam odit excepturi,

TAG NAV Lorem ipsum dolor sit amet consectetur adipisicing elit. Incidunt veritatis voluptatibus soluta tempora culpa distinctio nisi ratione reiciendis inventore unde rerum cumque, quos autem ipsum exercitationem temporibus vero deserunt voluptas.

CONTENT Lorem ipsum dolor sit amet consectetur adipisicing elit. Voluptatem, hic obcaecati. Magnam corrupti accusamus, dignissimos possimus aliquam ab doloreque mollitia! Odio mollitia consequuntur doloribus repellendus unde amet reiciendis nemo quia! Lorem ipsum dolor sit amet consectetur adipisicing elit. Dolore nisi aliquam dolorem facilis odio quae assumenda vitae, quas eius harum facere ipsum iusto culpa,



[Idee \(migros-kulturprozent-classics.ch\)](https://www.migros-kulturprozent-classics.ch)



IDEE

SPITZENMUSIK ZU FAIREN PREISEN

Die Migros-Kulturprozent-Classics bringen bekannte Orchester, berühmte Dirigent*innen und Starsolist*innen aus aller Welt in die etablierten Schweizer Konzertsäle in Bern, Luzern, Genf und Zürich. Das erlesene Programm garantiert höchsten Musikgenuss – mit den moderaten Preisen ermöglicht das Migros-Kulturprozent Zugang zu Kultur für alle.



CORINA GOLOMOZ
Mozart, Mozart, Mozart — Die Bratschistin widmet zusammen mit dem Freiburger Barockorchester einen ganzen Kon

CSS & Shadow Dom In Action

flexibility / creativity
&
client capability

[m4music Home](#)



m4music

m4music FESTIVAL

SEE YOU NEXT YEAR – 22 & 23 MARCH 2024 IN ZÜRICH

[Unsere Brands | Catering Services Migros \(betriebsrestaurants-migros.ch\)](#)



CATERING SERVICES
MIGROS



Bekannt und beliebt: Die Migros-Gastro-Brands

Für eine genussvolle und gesunde Ernährung im Einklang mit Mensch und Natur.

Auch in der Gemeinschaftsgastronomie bauen wir unter dem Brand «Catering Services Migros» Brücken zwischen uns und unseren Kundinnen und Kunden. In den Restaurants, die wir in Ihrem Auftrag führen dürfen, ist die Migros für die Gäste nicht im bekannten orangen Kleid zu sehen. Wir erfreuen unsere Gäste mit einem stylischen und dezenten Outfit sowie einem modernen und gastfreundlichen Interieur. Und doch – Migros ist und bleibt Migros: verlässlich, regional, nachhaltig, frisch und führend im Preis-Leistungs-Verhältnis.

Unsere Brands

Catering Services Migros

Unter dem Brand «Catering Services Migros» pflegen wir Event-Gastronomie auf höchstem Niveau. Wir

CSS & Shadow Dom – Pros vs. Cons

- Shadow-DOM encapsulated
 - 👉 *CSS rendering performance*
- 100% CSS syntax module level standard
- Theming at CSS variable files, inline style tags with variables or through dedicated themes
- CSS in JS, CSS at dedicated themes
- Flexible; to break out of app aka. reusable
 - 👉 *Style encapsulated in both ways (in & out)*
- Easy to adjust even for fullstacks and backenders
 - 👉 *Attributes and/or CSS variables for stylings are pretty straight forward*
- “!important” statements and other bad practices hurt less when encapsulated

-
- **CSS variables overwrite and reassignments**
 - **Important tricks regarding appearance**
:not(:defined) {display: none;} 👉
 - **Browser devtools have bad CSS variables**
“with fallback” highlighting

Shadow.js, other prototypes and the wc-config.js

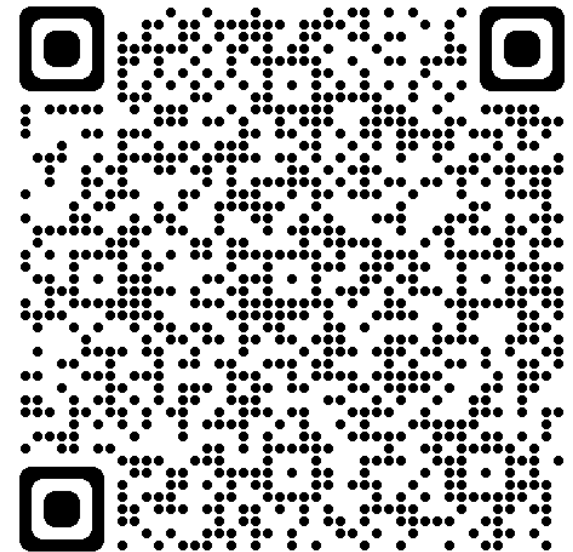
```
1 // @ts-check
2 import { Shadow } from './../prototypes/Shadow.js'
3
4 /* global CustomEvent */
```

```
5
6 /**
7  * Creates an Button
8  * https://www.figma.com/file/np1lQoTULLWLTGM4kMPUtZ/Components-Universal?node-id=2866%3A55901
9  *
10 * @export
11 * @attribute {namespace} namespace
12 * @type {CustomElementConstructor}
13 */
```

[web-components-toolbox/src/es/components/prototypes at master · mits-gossau/web-components-toolbox · GitHub](https://github.com/mits-gossau/web-components-toolbox/tree/master/src/es/components/prototypes)

You, 3 days ago | 5 authors (You and others)

```
4 export default class Button extends Shadow() {
5   static get observedAttributes () {
6     return ['label', 'disabled']
7   }
8
9   constructor (options = {}, ...args) {
10     super({ importMetaUrl: import.meta.url, ...options }, ...args)
```



What makes a truly independent component?

- Independency of brain (event) and body (style)

-> all thanks to regex-namespace-theming and events



- No Framework but Library with pure Standard ECMA Script aka. es6 aka. Vanilla JavaScript

- Zero dependency

-> Futureprove

Statement Srdan

! The only CSS related GIF I found



CSS

Global
HD

Questions?

A cartoon illustration of an elderly man with a balding head, wearing large rectangular glasses and a green long-sleeved shirt. He is holding a brown stick with a purple cloth tied around it. The background is dark blue with a brown horizontal line and a green area at the bottom. A small orange-framed picture is visible on the right side.

**NOW, ARE THERE
ANY QUESTIONS?**

**THE
END**