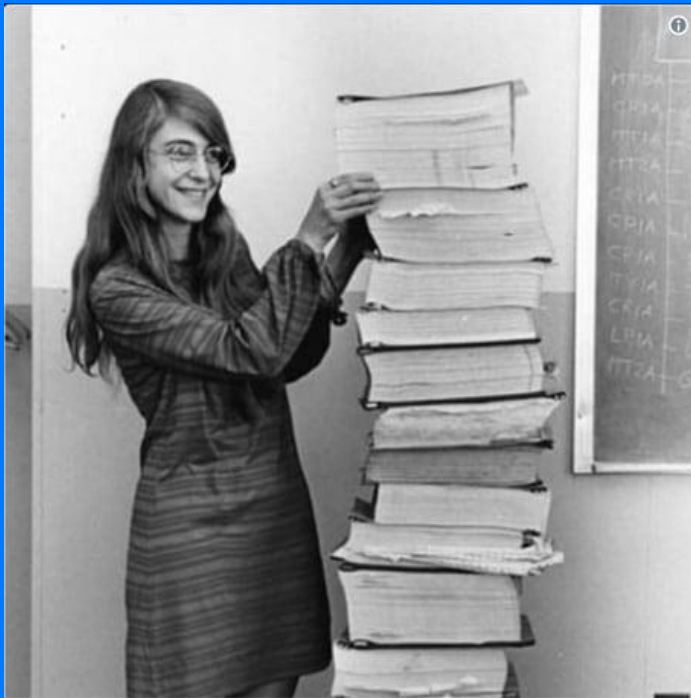


**It's Not About  
Web Components  
vs.  
React**

**Solve Different Problems**



**Thomas Fuchs** 

@thomasfuchs



Legendary Apollo project programmer Margaret Hamilton, next to a printout of the node\_modules directory listing for her first Hello World react app

♡ 15.7K 9:54 AM - Mar 7, 2019

💬 5,105 people are talking about this



**Web App**

# Web Components

**Spec**

**It's not ready**

# Living Document





**No community**

**The community is all of us**

**DOM is Bad**

# Browser API

```
class MyCustomElement extends HTMLElement {  
  constructor() {  
    super();  
    const template = document.createElement('template');  
    const shadowRoot = this.attachShadow({mode: 'open'});  
    template.innerHTML = `

I'm a paragraph in a custom element!</p>`;  
    shadowRoot.appendChild(template.content.cloneNode(true));  
  }  
}  
  
customElements.define('my-custom-element', MyCustomElement)


```

```
document.body.appendChild(  
    document.createElement('my-custom-element')  
)
```

```
get observedAttributes() {  
  return ['theme'];  
}
```

 **Custom Elements API**

```
get attributeChangedCallback(name, oldValue, newValue) {  
  if (name === 'theme') {  
    this.classList.add(newValue);  
  }  
}
```



**Composable**  
**Encapsulation**  
**Interoperable**  
**Accessible**  
**Portable**  
**Reusable**  
**Lifetime**

**Use the platform**

**Let's make the browser our  
platform**

**Let's speak the same language**

**Custom Elements**  
**Shadow DOM**  
**ES Modules**  
**HTML Templates**

**Web Components**  
**createTreeWalker**  
**Proxy**  
**CustomEvent**  
**BroadcastChannel**  
**Web Animations**

# Decorators

## HTML Modules

**You Still Need A Framework**



R

```
class MyCustomElement extends HTMLElement {  
  constructor() {  
    super();  
    const template = document.createElement('template');  
    const shadowRoot = this.attachShadow({mode: 'open'});  
    template.innerHTML = `

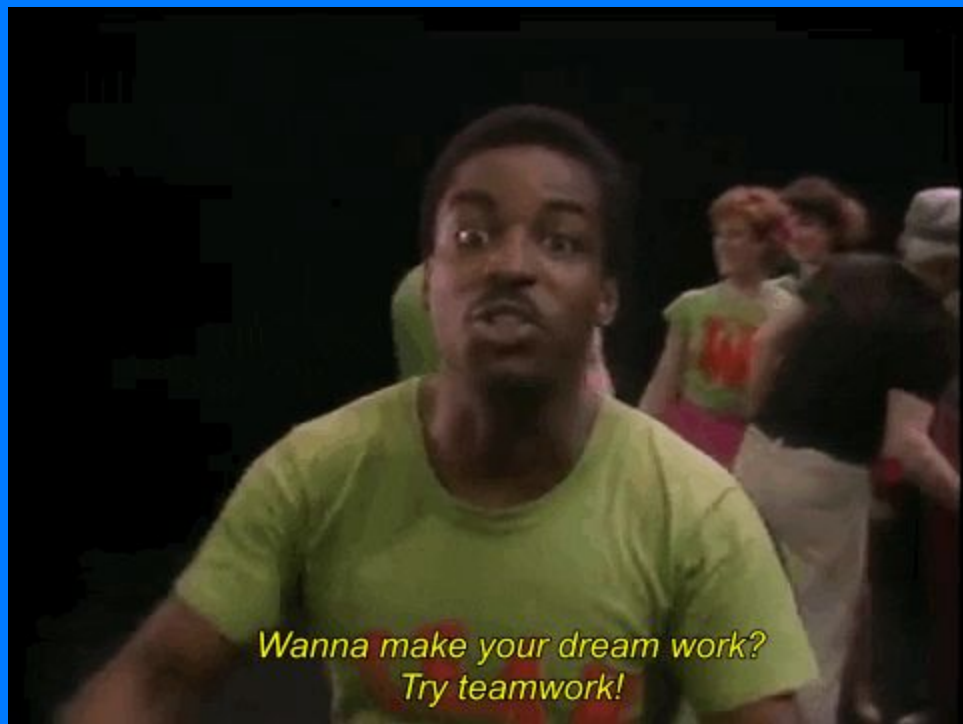
I'm a paragraph in a custom element!</p>`;  
    shadowRoot.appendChild(template.content.cloneNode(true));  
  }  
}  
  
customElements.define('my-custom-element', MyCustomElement)


```

```
@Component({
  template: `<p>I'm a paragraph in a custom element!</p>`,
  style: `:host { background: red }`,
})
class MyComponent extends CustomElement {
  constructor() {}
}
customElements.define('my-custom-element', MyComponent)
```

**~1Kb 'Hello World'**

**I'm not selling anything**



*Wanna make your dream work?  
Try teamwork!*

**This has been a friendly message**

**@iplayitofflegit**



```
import { Component, CustomElement } from '@readymade/core';
```

```
@Component({ ← Decorator
```

```
  template: `<p>I'm a paragraph in a custom element!</p>`,
```

```
  style: `:host { background: red }`,
```

```
})
```

```
class MyComponent extends CustomElement {
```

```
  constructor() {}
```

```
}
```



**Generic Class**

```
class ButtonState {  
    public model: string = 'Click';  
}
```

```
class MyButtonComponent extends CustomElement {  
    constructor() {}  
    @State()  
    public getState() {  
        return new ButtonState();  
    }  
}
```

← **Method Decorator**

```
@Component({
```

```
  template: html`
```

```
    <span>{{model}}</span>
```



**One Way Data Binding**

```
  `
```

```
})
```

```
class MyButtonComponent extends CustomElement {
```

```
  ...
```

```
@Emitter('bang', { bubbles: true, composed: true })
```

```
@Listen('click')
```

```
public onClick(event: MouseEvent) {
```

```
  this.emitter.broadcast('bang');
```

```
}
```

```
@Listen('keyup')
```

```
public onPress(event: KeyboardEvent) {
```

```
  if (event.key === 'Enter') {
```

```
    this.emitter.broadcast('bang');
```

```
  }
```

```
}
```



**Event Binding**

```
@Emitter('bang', { bubbles: true, composed: true })
```

```
@Listen('click')
```

```
public onClick(event: MouseEvent) {
```

```
  this.emitter.broadcast('bang');
```

```
}
```

```
@Listen('keyup')
```

```
public onPress(event: KeyboardEvent) {
```

```
  if (event.key === 'Enter') {
```

```
    this.emitter.broadcast('bang');
```

```
  }
```

```
}
```



**Event Binding**

```
get observedAttributes() {
```

```
  return ['theme'];
```

```
}
```

```
get attributeChangedCallback(name, oldValue, newValue) {
```

```
  if (name === 'theme') {
```

```
    this.classList.add(newValue);
```

```
  }
```

```
}
```



**Custom Elements API**