



# Swift in the Browser with ElementaryUI

Simon Leeb



**HTML**





# HTML

+ CSS

**Browser**



**Server**

# Browser

# Server

<https://hi-mom.cloud>

Hi Mom!

GET

HTML

CSS

```
<h1>Hi Mom!</h1>
```

```
color: rebeccapurple;
```

# Browser

# Server

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# Hi Mom!

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<button>Leave</button>
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color: rebeccapurple;
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```
onclick="this
```

```
  .previousElementSibling
```

```
  .textContent = 'Bye Mom!'
```

```
"
```

# Browser

# Server

<https://hi-mom.cloud>

# Bye Mom!

Leave

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Server



```
import Elementary

struct MomView: HTML {
  var name = "Mom"

  var body: some HTML {
    h1 { "Hi \ (name)!" }
    button(.on(.click, onClickJS)) { "Leave" }
  }

  private var onClickJS: String {
    "this.previousElementSibling.textContent = 'Bye \ (name)!'"
  }
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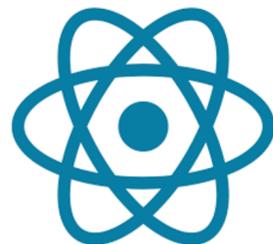
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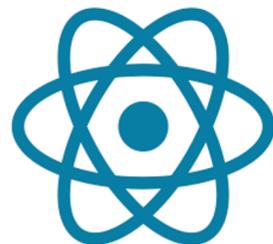
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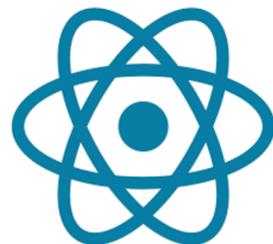
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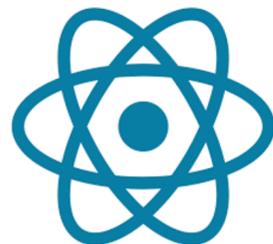
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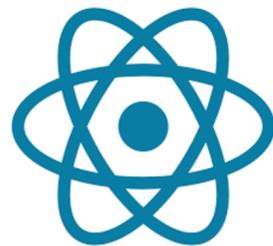
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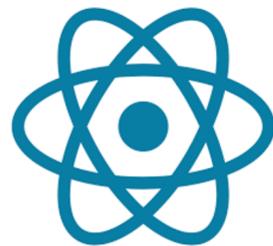
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Hi Mom!

Leave



GET

JS

JS

JS

JS

JS

JS

JS

s



**Use the right tool for the job**



**Uncaught TypeError:**

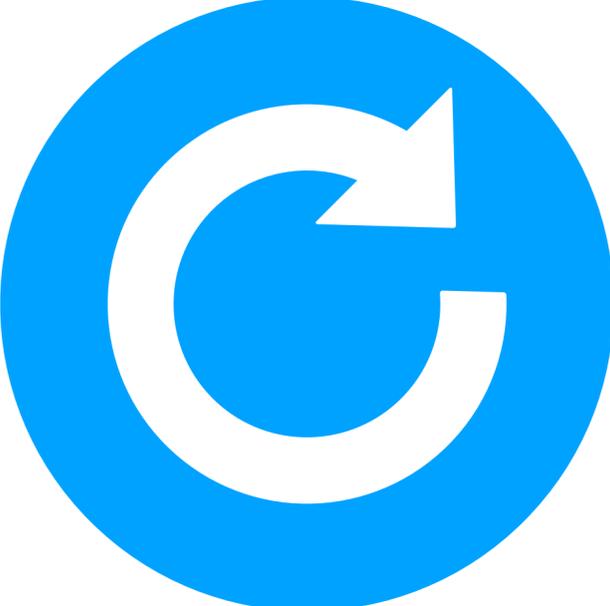
**Cannot read properties of undefined (reading 'nextSlide')**





**Uncaught TypeError:  
nextSlide is not a function**





**Use the right tool for the job**

# Use the right tool for the job

An error occurred:  
[object Object]

An error occurred:  
[object Object]

**Use the right tool for the job**

**Use the right tool for the job**

Swift

Use the right ~~tool~~ for the job

**Swift**  
Use the right ~~tool~~ for the job



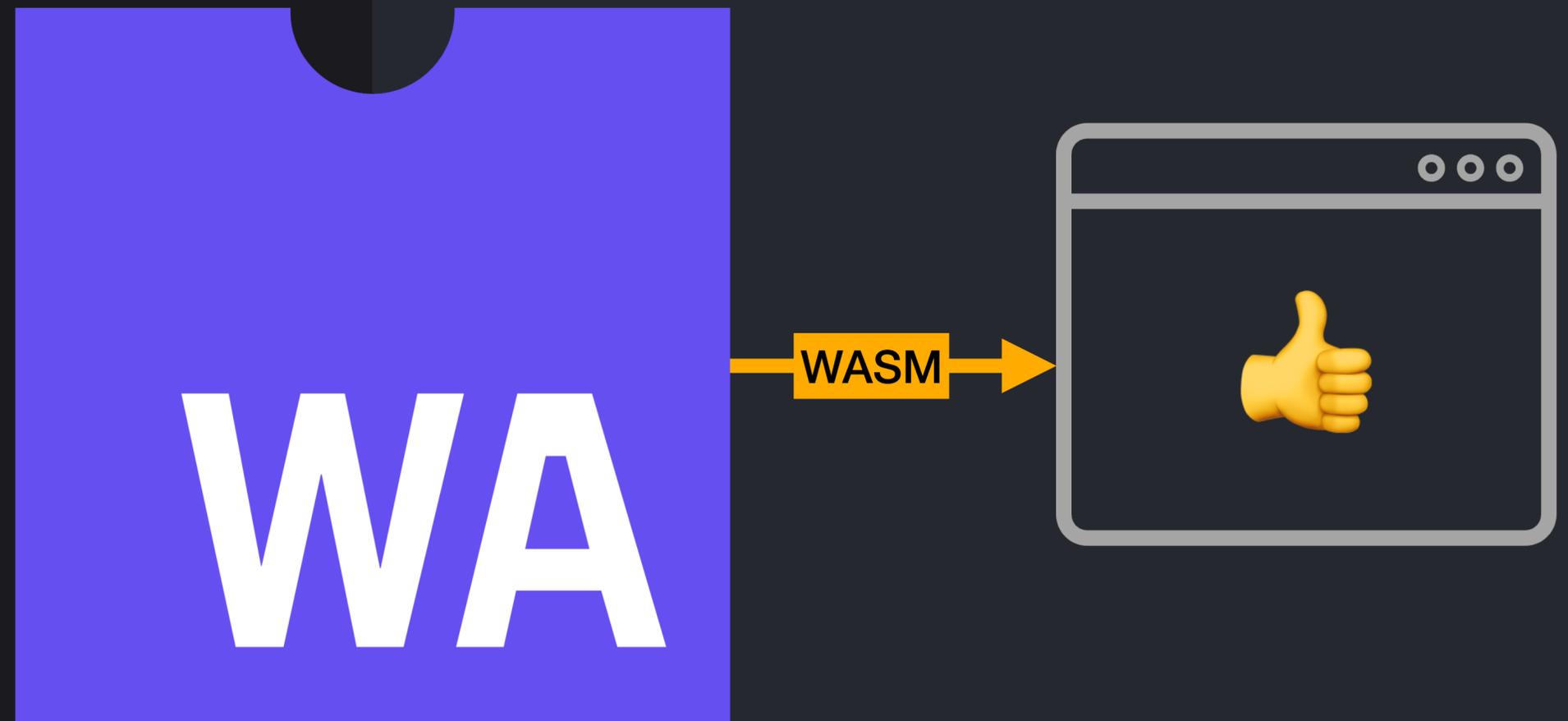


# WebAssembly



**WA**

# WebAssembly



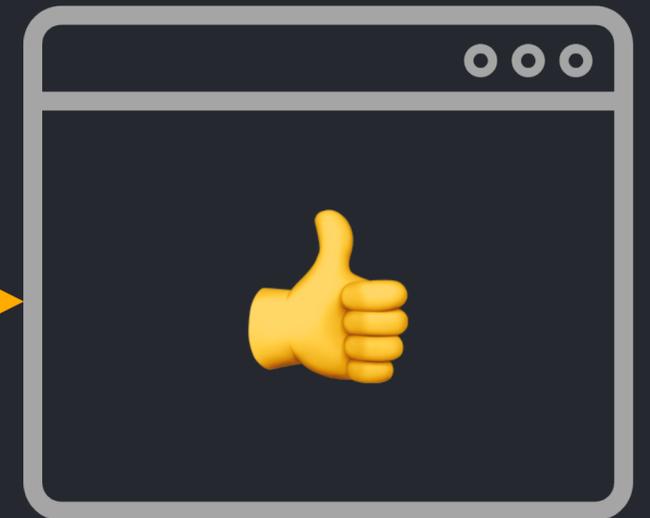
# Swift SDK for WebAssembly



Swift



WASM



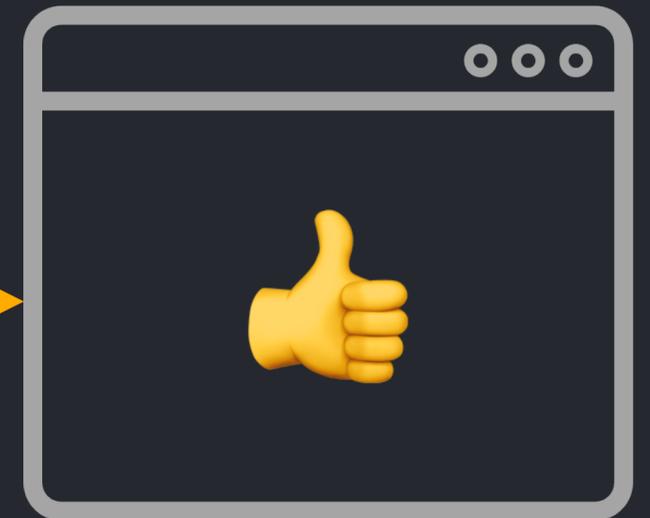
# Swift SDK for WebAssembly



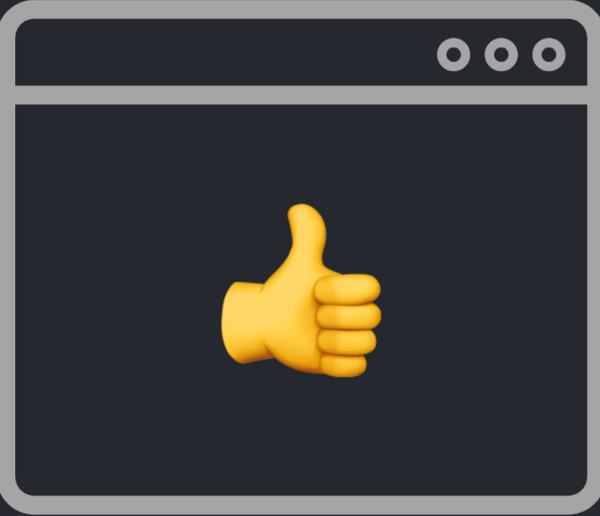
Swift



WASM



# Swift SDK for WebAssembly

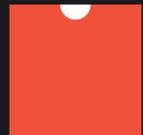


Web APIs

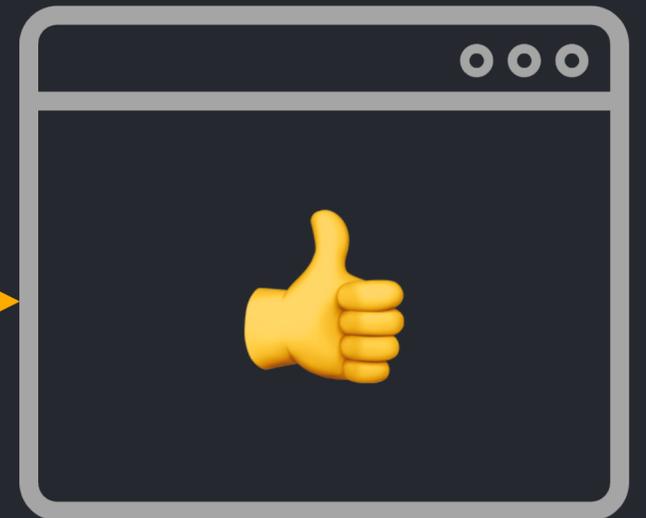
# Swift SDK for WebAssembly



Swift 🎉



JavaScriptKit



# Swift SDK for WebAssembly



# Swift SDK for WebAssembly



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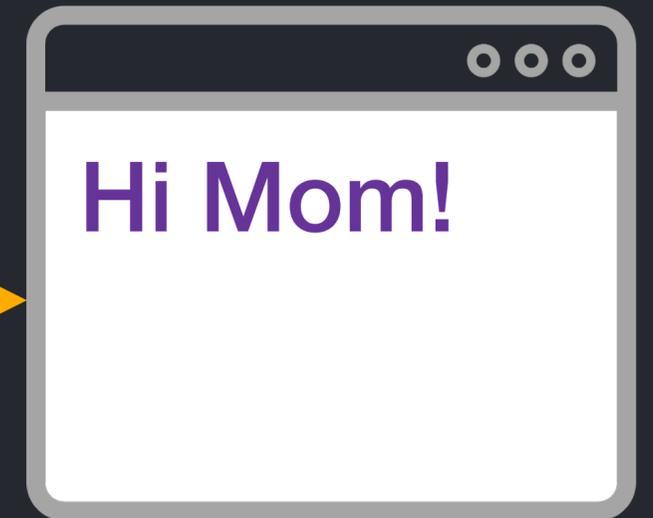
# Embedded Swift SDK for WebAssembly



# Embedded Swift SDK for WebAssembly



# Embedded Swift SDK for WebAssembly





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import Elementary

struct MomView: HTML {
  var name = "Mom"

  @State var isLeaving = false

  var body: some HTML {
    h1 { isLeaving ? "Bye \ (name)!" : "Hi \ (name)!" }
    button { "Leave" }
      .onClick { isLeaving = true }
  }
}
```



```
import ElementaryUI

@View
struct MomView: HTML {
    var name = "Mom"

    @State var isLeaving = false

    var body: some HTML {
        h1 { isLeaving ? "Bye \ (name)!" : "Hi \ (name)!" }
        button { "Leave" }
            .onClick { isLeaving = true }
    }
}
```

# Browser



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import ElementaryUI

@View
struct MomView {
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```

**Demo Time**



# The Road to 1.0

**Fetch API**

@FocusState

**Router**

OpenAPI

SSG + Islands

WebAssembly Reference Types

Navigation

**SSR + Hydration**

**Web Storage API**

JavaScriptKit 1.0

PhaseAnimator

SVG

BridgeJS

**Web Components**

# The to 1.0



**Fetch API**

@Focus

**Router**

OpenAPI

WebAssembly Refe

Islands

Navigation

**SSR + Hydration**

API

JavaScriptKit 1.0

PhaseAnimator

Bridges

**Web Components**

# Swift in the Browser

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Let's make it happen!



<https://elementary.codes>

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