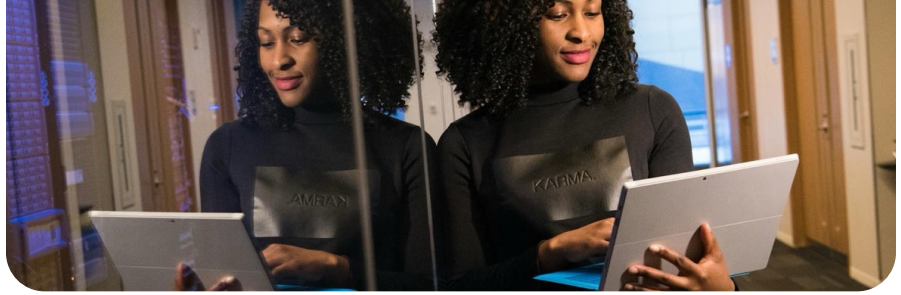

Wie man Javascript aus seinem Stack entfernt

mit HTMX und Kotlin

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Über Mich

- Software Craftsman bei iits
- Team as a Service
- Seit 7 Jahren mit dem Web beschäftigt

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Kumo

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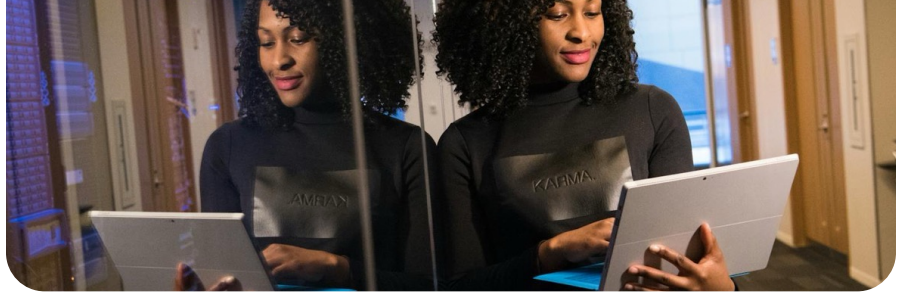

Kapitel 1

Webentwicklung

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Ich bin Webentwickler

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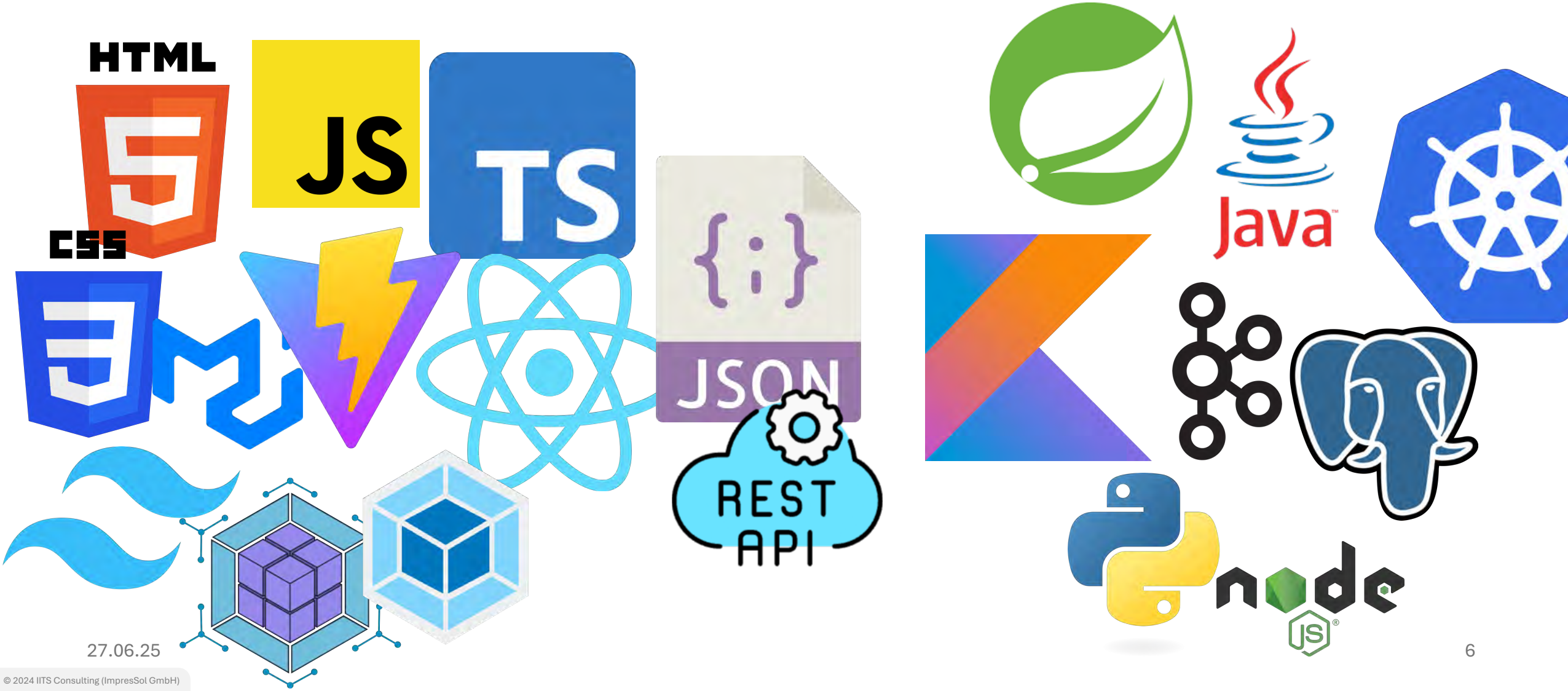
Ich bin Webentwickler



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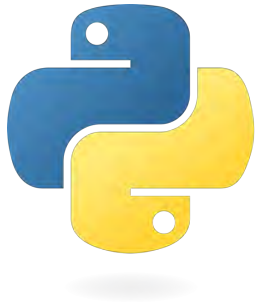

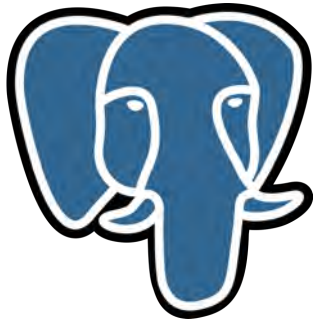

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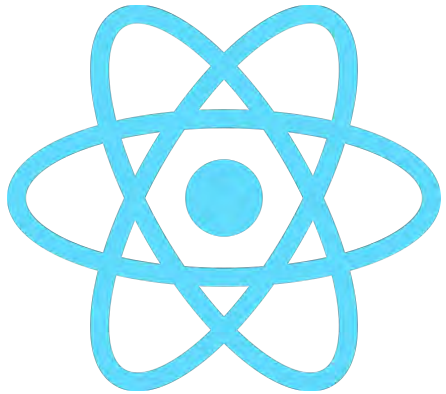
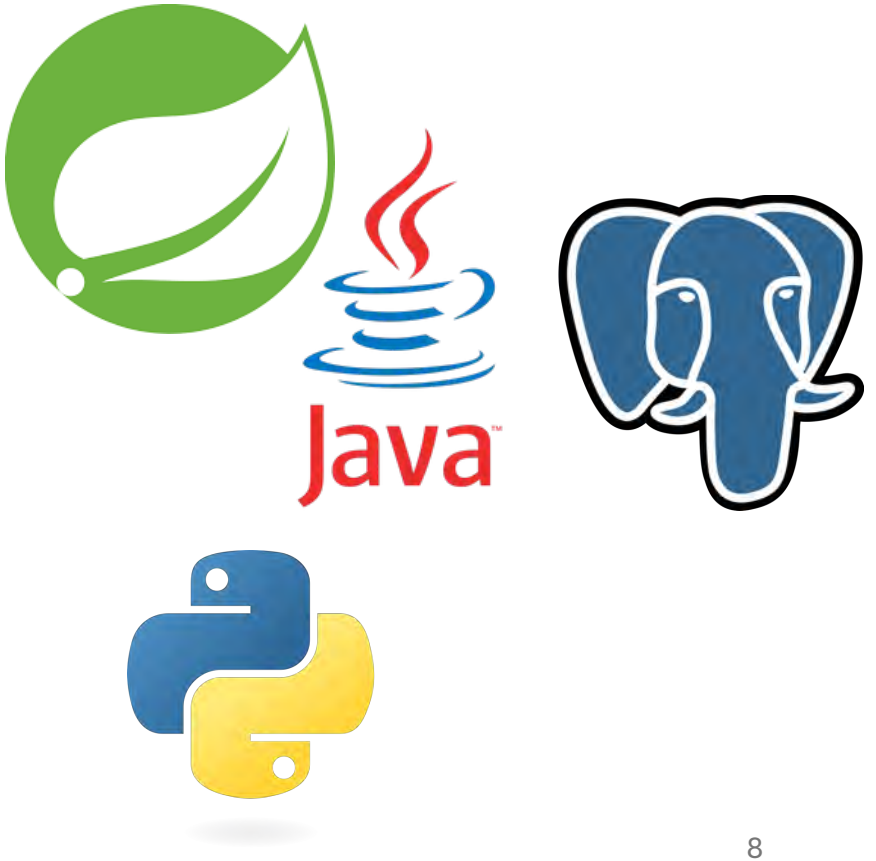
Dann kamen SPAs





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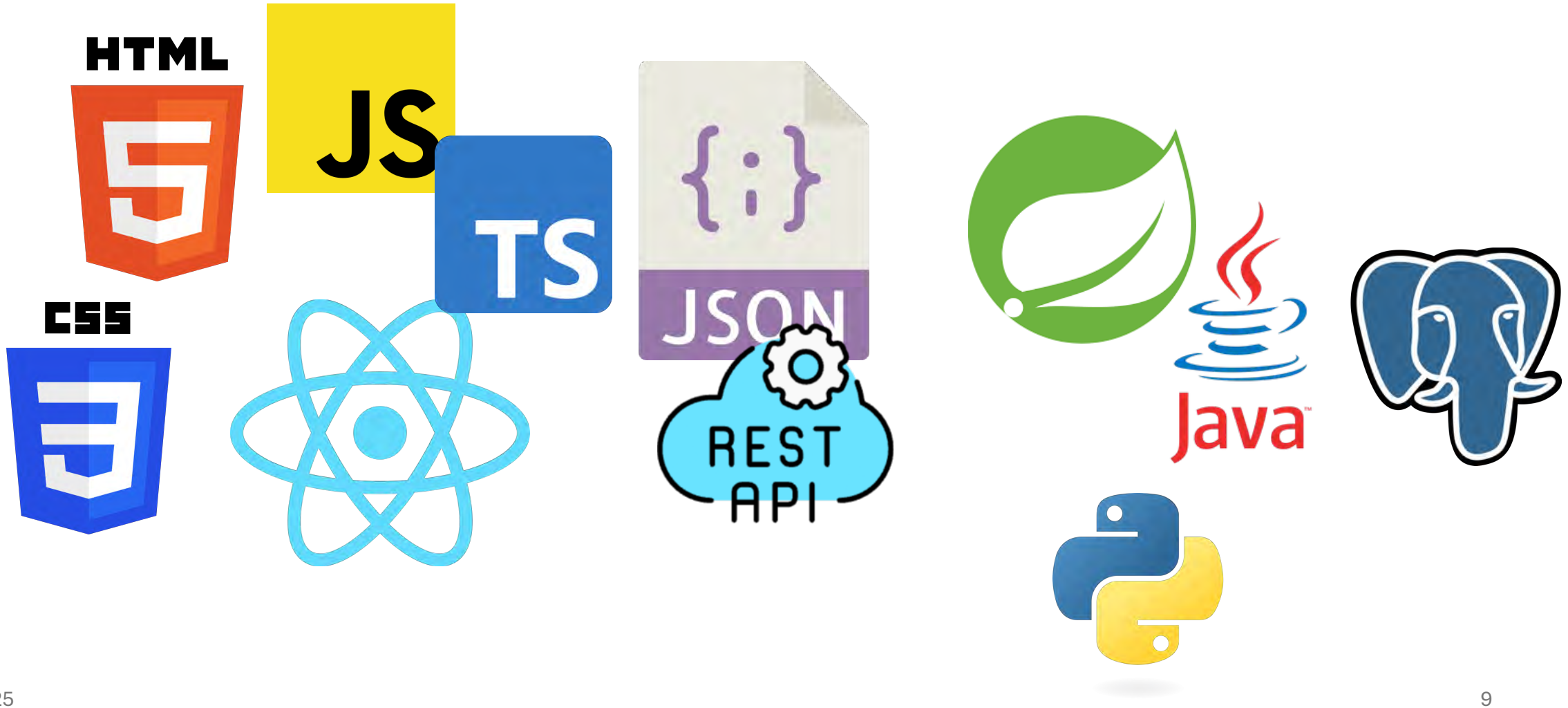
Dann kamen SPAs



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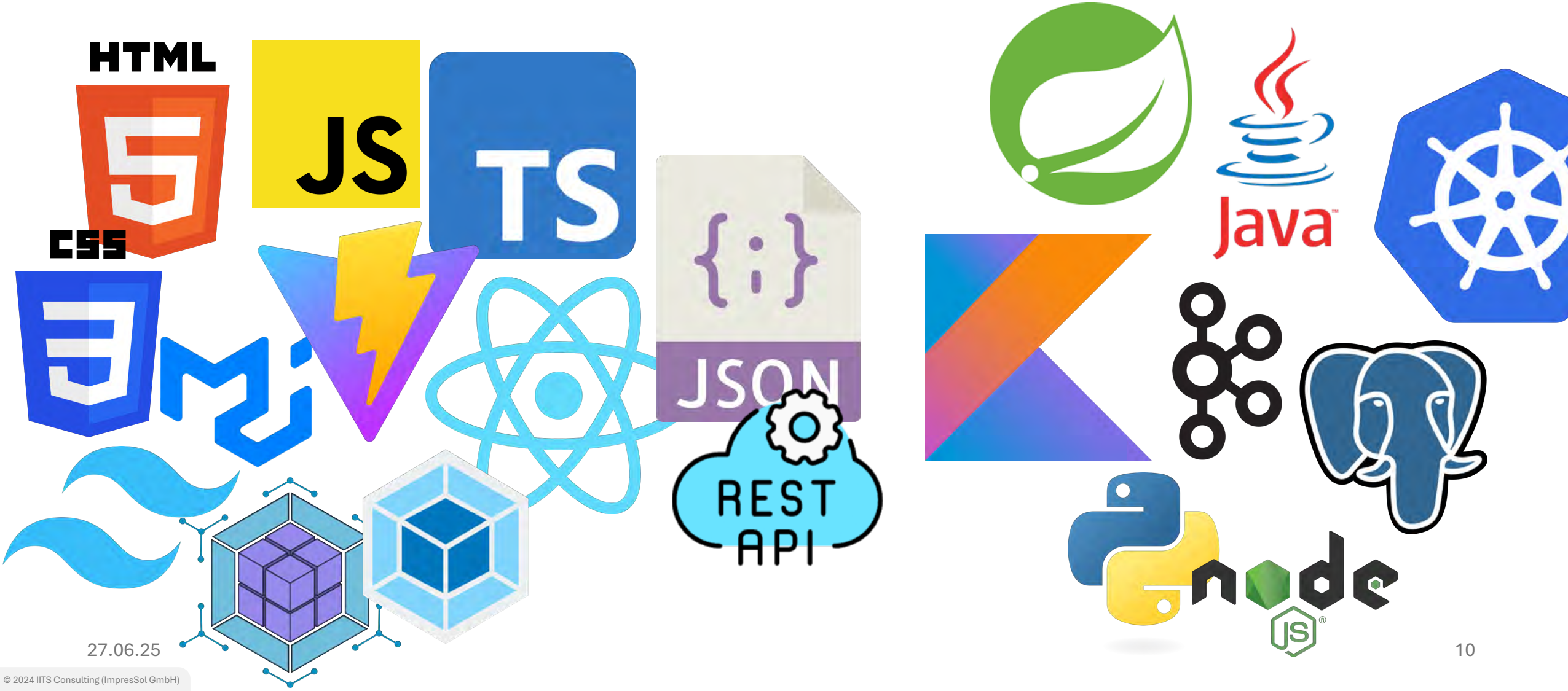
Dann kamen SPAs



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Ich bin Webenwickler

- KISS?
  - Clientseitiges Statemanagement
  - Server Client Synchronisation
- DRY?
  - Modelduplikation
  - Doppelte Validierung
- YAGNI?
  - Form, Tabellen, Listen und Validierung braucht kein Javascript

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Javascript Fatigue

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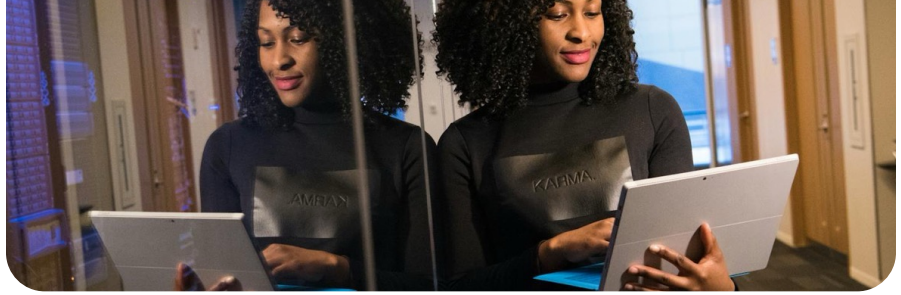

Kapitel 2

Aufbruch

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Ziel

- Server Side Rendern
- Komponenten
- Statische Typisierung
- Gute Editorunterstützung
- Möglichst kein Javascript

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Experimente

Pros:

- SSR
- Komponenten
- ”typisiert” dank TS
- Guter Editor Support

Cons:

- NodeJS
- Fließender Übergang zwischen SSR und CSR

Remix

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Experimente

Pros:

- SSR
- Spring Boot Integration

Cons:

- Keine Komponenten
- Keine statischen Typen
- Begrenzter Editorsupport
- Full Page Reloads

Thymeleaf

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Experimente

</> htmx

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Experimente

- Erweitert HTML
- Requests auf allen Elementen möglich
- Ausgelöst durch mehr als *click* und *submit*
- Einzelne Dom Elemente austauschbar

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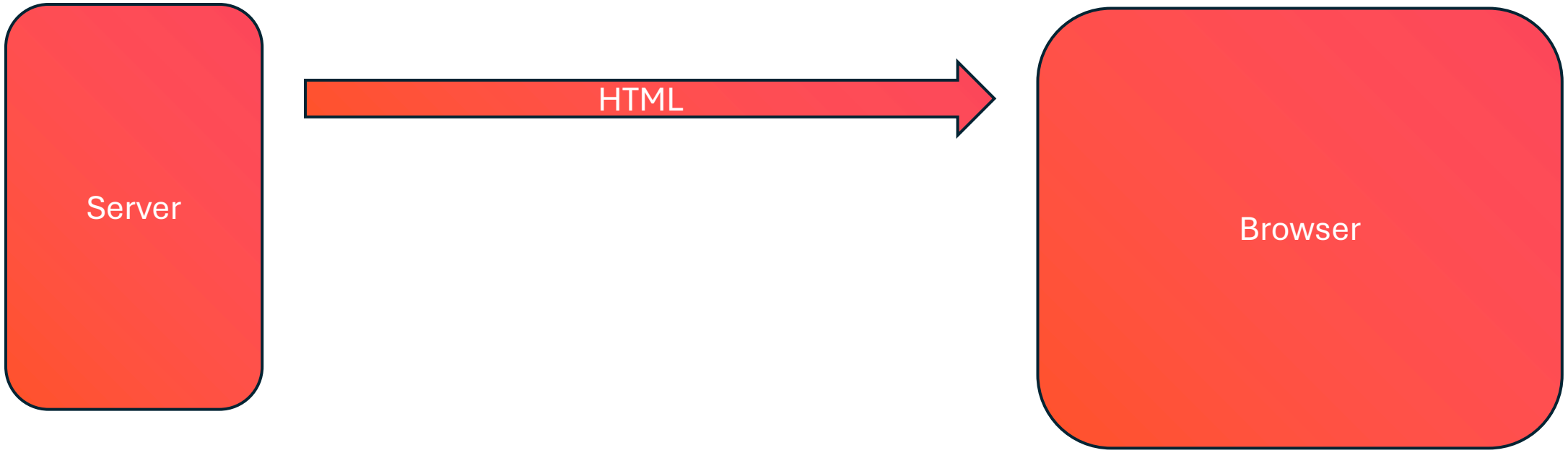
Experimente

iits

</> htmx



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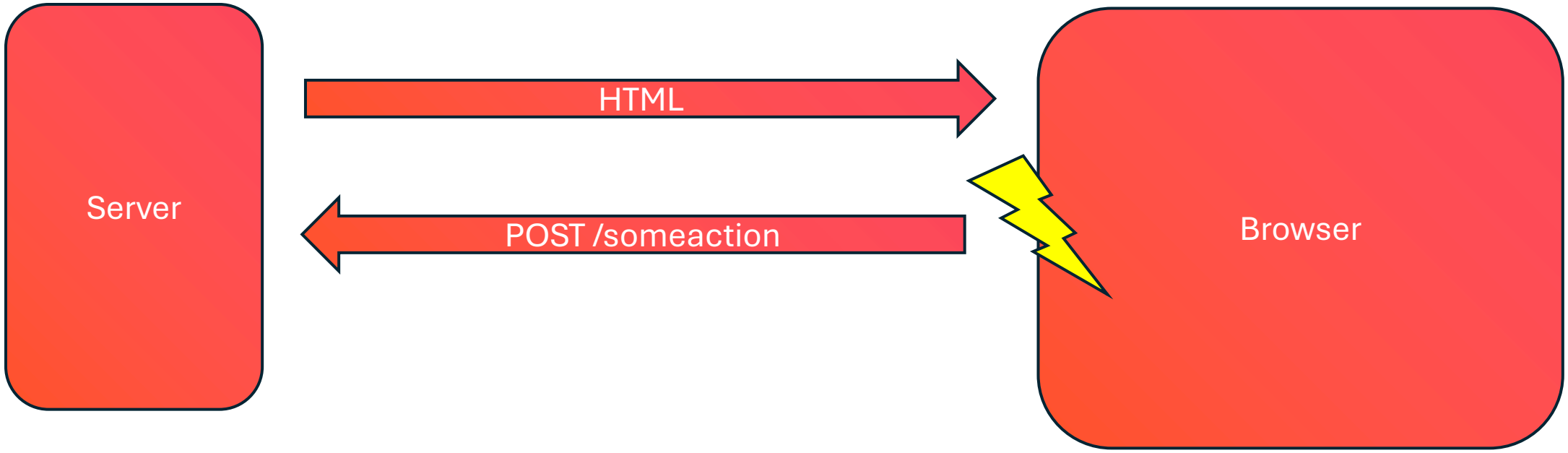
Experimente

iits

</> htmx



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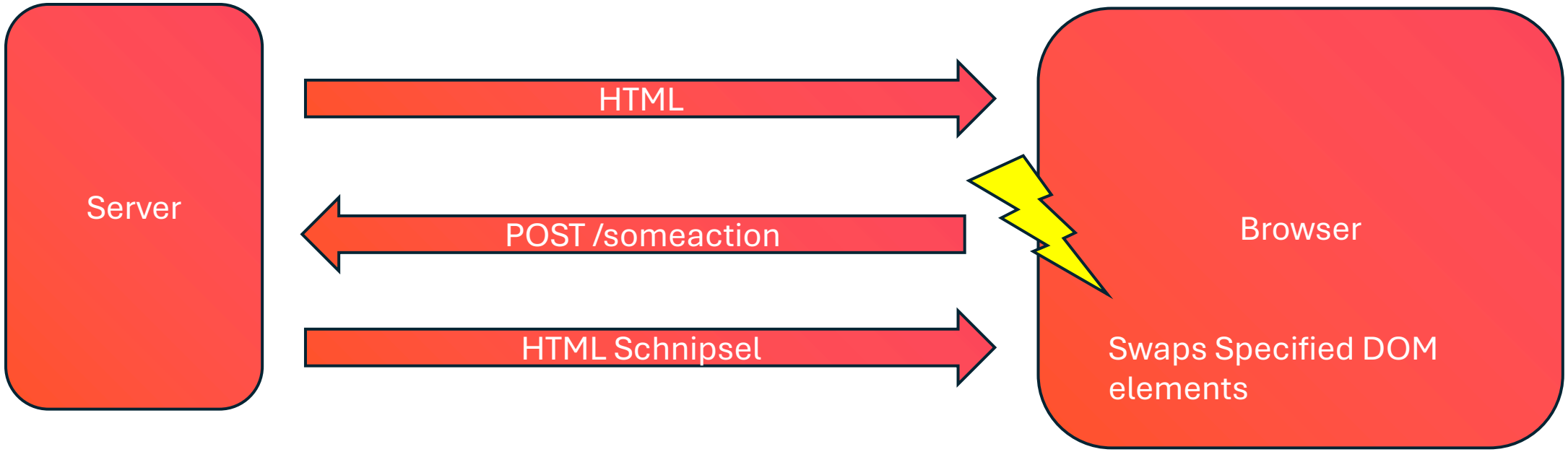
Experimente

iits

</> htmx



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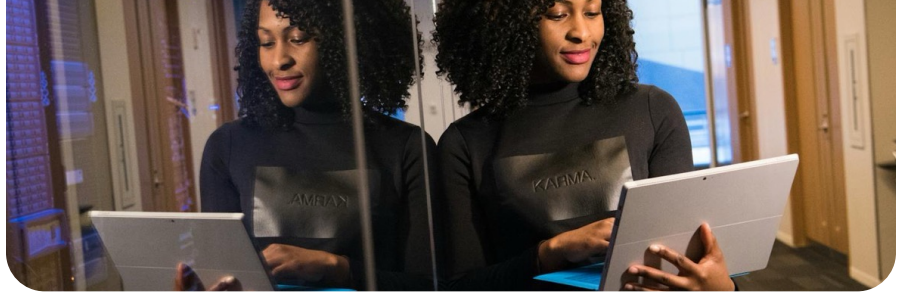

Kapitel 3

Eine neue Hoffnung

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kotlinx.html

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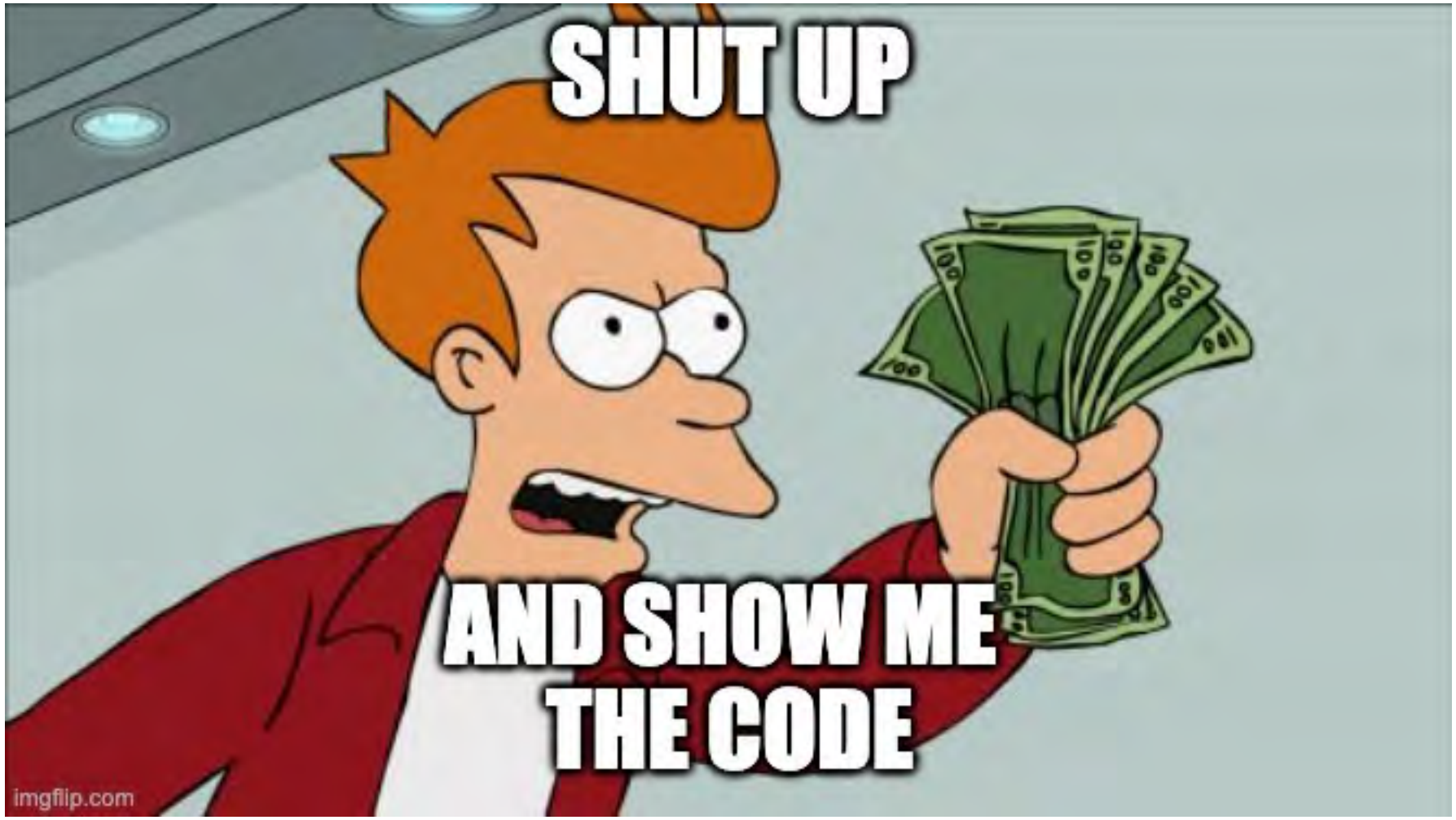

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kotlinx.html

- Server Side Rendern
- Statische Typisierung
- Gute Editorunterstützung
- Möglichst kein Javascript
- Komponenten?

```
div( classes = "max-w-lg") {
    h1( classes = "text-5xl font-bold") {
        +" Hello $conferenceName $conferenceYear!"
    }
    p( classes = "p-6") {
        +"This is a demo showing the power of kotlinx.html and HTMX!"
    }
    a(href = "/form", classes = "btn btn-primary") {
        +"Get started"
    }
}
```


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kotlinx.html

```
fun FlowContent.fieldset(props: FieldsetProps, attributeBuilder: InputAttributeBuilder = {}) =
  fieldSet( classes: "fieldset w-full") {
    props.id?.let { this.id = it }
    legend { +props.label }
    val classes = "w-full input" + if (props.error != null) " input-error" else ""
    input(type = props.type, name = props.name, classes = classes) {
      props.placeholder?.let { this.placeholder = it }
      attributeBuilder()
    }
    if (props.error != null) p( classes: "fieldset-label text-red-500") {
      +props.error
    }
    else props.helperText?.let {
      p( classes: "fieldset-label") {
        +it
      }
    }
  }
```


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kotlinx.html

```
form(classes = "flex flex-col gap-4 w-sm lg:w-lg m-auto") {
    h4( classes = "text-2xl text-center font-bold text-primary") {
        +"Register as a $conferenceName Visitor"
    }
    fieldset(
        props = FieldsetProps(
            label = "Name",
            name = "name",
            placeholder = "Max Mustermann",
            helperText = "Please enter your full name"
        )
    ) {
        required = true
    }
```


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kotlinx.html

```kotlin
@Test
fun `it renders a fieldset properly`() {
    val rendered : String  = renderSnippet {
        fieldset(
            FieldsetProps(
                label = "Name",
                name = "name",
                placeholder = "Enter your name",
                helperText = "Please enter your full name",
            )
        )
    }
    rendered shouldMatch """
        <fieldset class="fieldset w-full">
            <legend>Name</legend>
            <input type="text" name="name" class="w-full input" placeholder="Enter your name">
            <p class="fieldset-label">Please enter your full name</p>
        </fieldset>
    """.trimIndent()
}
```


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Spring MVC

```
@Controller @ResponseBody @RequestMapping("/form")
class FormController(private val visitorService: VisitorService) {
    @GetMapping
    fun basicForm() : HTMLResponseProvider  = respondHtml { registerPage() }

    @PostMapping
    fun submitForm(model: RegisterFormSubmission): HTMLResponseProvider {
        visitorService.addVisitor(model.toVisitor())
        return respondHtmlSnippet {
            registerForm()
        }
    }
}
```


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HTMX

```
fun FlowContent.registerForm(action: String = "/form") {
    form(classes = "flex flex-col gap-4 w-sm lg:w-lg m-auto") {
        id = "registerForm"
        hxTrigger = "submit"
        hxPost = action
        hxTarget = "#registerForm"
        hxSwap = "outerHTML"
```


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HTMX Extensions

```
@PostMapping
fun submitForm(session: HttpSession, model: RegisterFormSubmission): HTMLResponseProvider {
    val visitor : JavalandVisitor  = visitorService.addVisitor(model.toVisitor())

    websocketSessionHolder.sendHtmlSnippet(session.id) {
        successfullAlert(visitor)
    }

    return respondHtmlSnippet {
        registerForm()
    }
}
```


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Demo

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Source Code

github.com/frederikpietzko/htmx-demo-javaland

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Honorable Mentions

- JTE
- Alpine JS + Alpine-ajax
- Hotwire Turbo
- fixi.js
- Datastar
- Trypitch
- JQuery

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Kontakt

- linkedin.com/in/frederik-Pietzko
- Oder demnächst
  - Java Forum Stuttgart
  - We Are Devlopers
  - CNS Munich

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