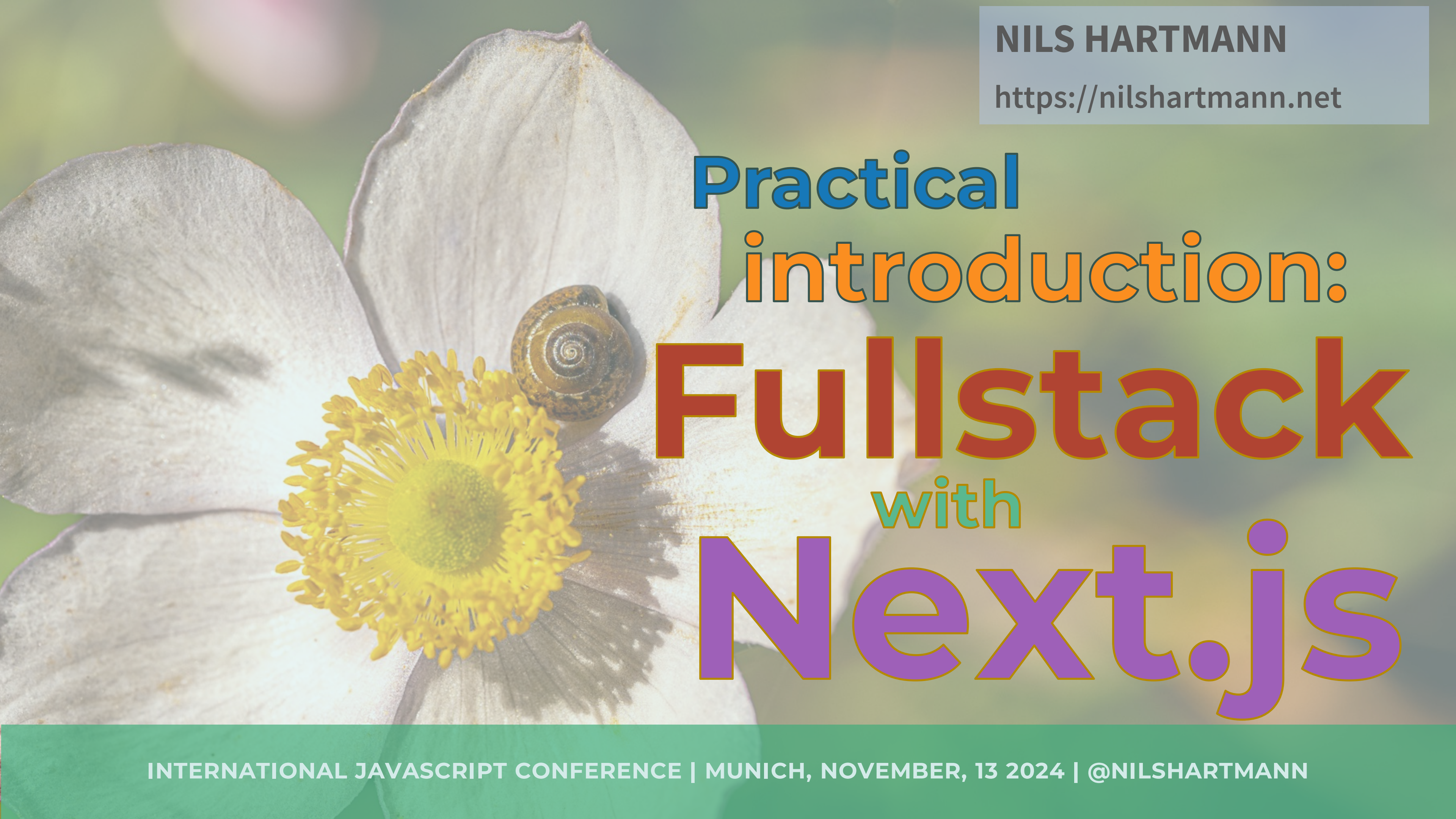


NILS HARTMANN

https://nilshartmann.net

Practical introduction: Fullstack with Next.js

INTERNATIONAL JAVASCRIPT CONFERENCE | MUNICH, NOVEMBER, 13 2024 | @NILSHARTMANN

NILS HARTMANN

nils@nilshartmann.net

Freelance Software Developer, Architect and Trainer from Hamburg

Java, Spring, GraphQL, React, TypeScript

heise Academy

VIDEOKURS

Nils Hartmann

GraphQL

APIs mit Spring Boot entwickeln

Der Praxiskurs für die Web-API-Entwicklung

https://graphql.schule/video-kurs

2. Auflage

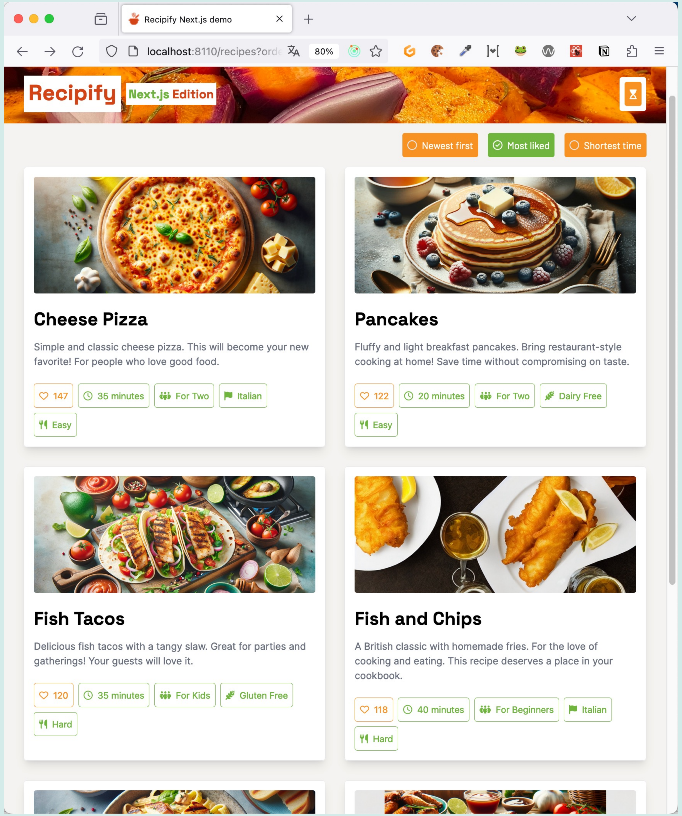
Nils Hartmann · Oliver Zeigermann

React

Grundlagen, fortgeschrittene Techniken und Praxistipps – mit TypeScript und Redux

dpunkt.verlag

https://reactbuch.de



Cheese Pizza

Simple and classic cheese pizza. This will become your new favorite! For people who love good food.

♡ 147 | 35 minutes | For Two | Italian | Easy

Pancakes

Fluffy and light breakfast pancakes. Bring restaurant-style cooking at home! Save time without compromising on taste.

♡ 122 | 20 minutes | For Two | Dairy Free | Easy

Fish Tacos

Delicious fish tacos with a tangy slaw. Great for parties and gatherings! Your guests will love it.

♡ 120 | 35 minutes | For Kids | Gluten Free | Hard

Fish and Chips

A British classic with homemade fries. For the love of cooking and eating. This recipe deserves a place in your cookbook.

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http://localhost:8110

AN EXAMPLE...

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What makes up the sample application?

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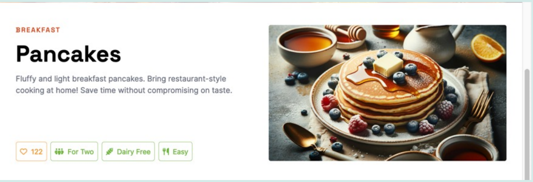
- Lots of food 😋



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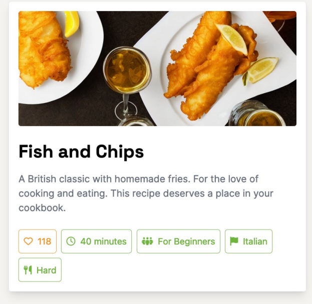

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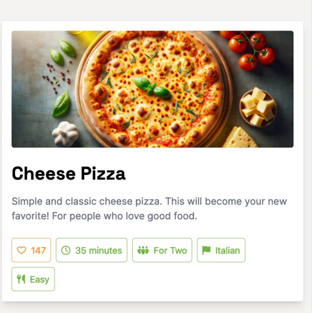

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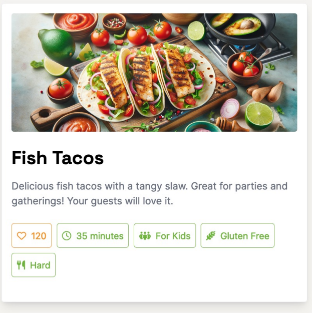

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What makes up the sample application?

- Some bad AI-generated images

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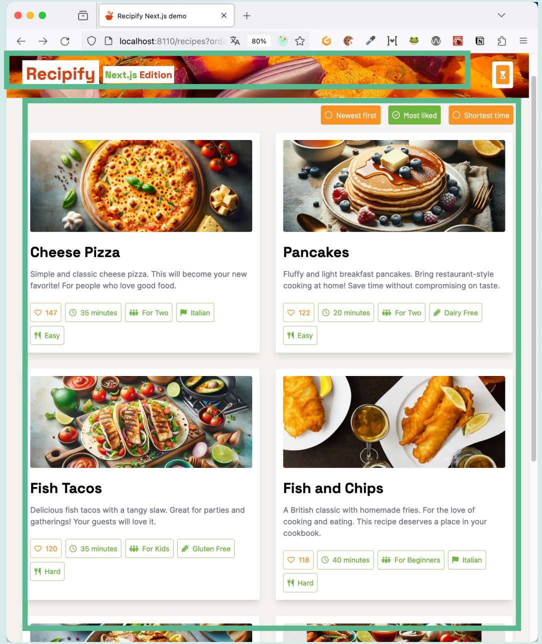
What makes up the sample application… technically?

- Lots of static content ☺️



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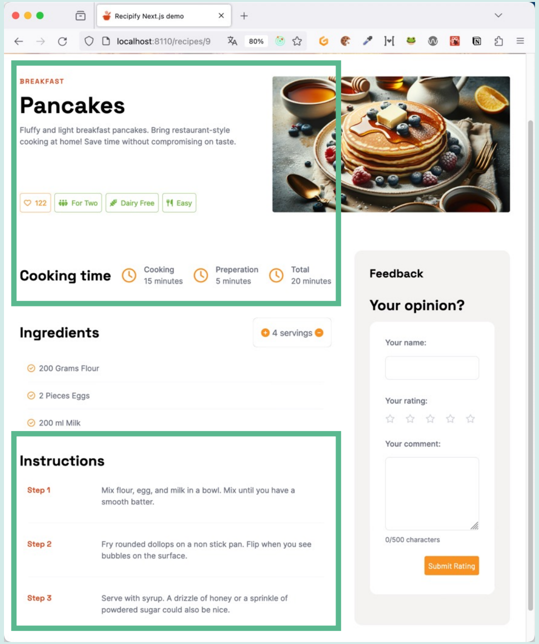

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Cooking time

Cooking 15 minutes | Preperation 5 minutes | Total 20 minutes

Ingredients

4 servings

- 200 Grams Flour
- 2 Pieces Eggs
- 200 ml Milk

Instructions

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Step 2 Fry rounded dollops on a non stick pan. Flip when you see bubbles on the surface.

Step 3 Serve with syrup. A drizzle of honey or a sprinkle of powdered sugar could also be nice.

Feedback

Your opinion?

Your name:

Your rating: ☆ ☆ ☆ ☆ ☆

Your comment:

0/500 characters

Submit Rating

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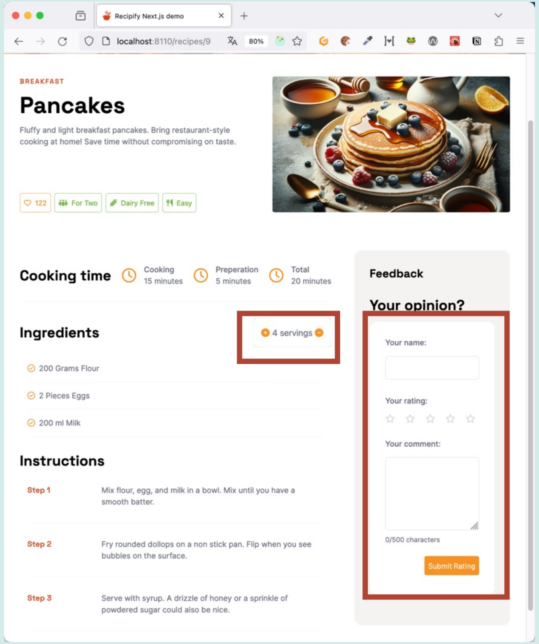
- Lots of static content ☺️
- … only a few interactions 🦥



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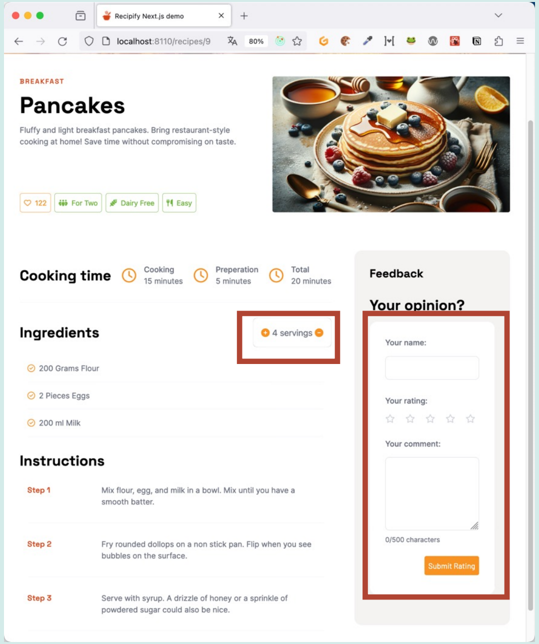

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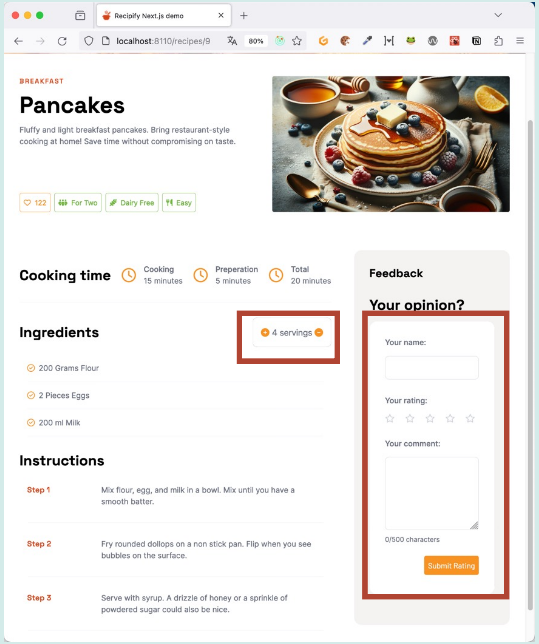
- Lots of static content ☺️
- … only a few interactions 🦥
- … **does that justify a Single-Page-Application? 🤔**
- …huge amount of JS in the browser?
- …no caching of content?
- …not best possible SEO?



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Your comment:

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React Server Components

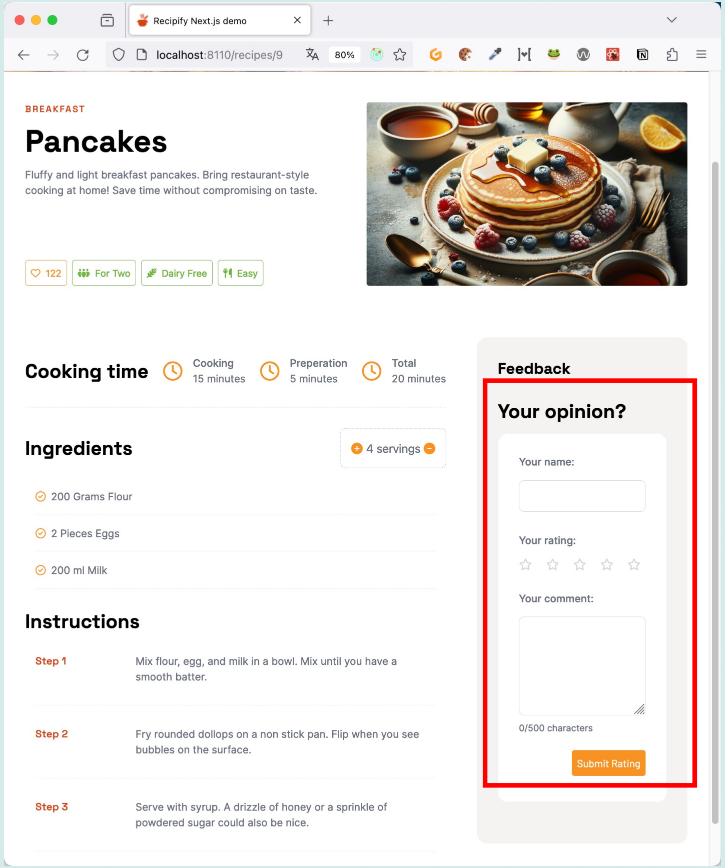
DIFFERENT KINDS OF COMPONENTS

Kinds of components

DIFFERENT KINDS OF COMPONENTS

Client components (as known before)

- Rendered on the Client



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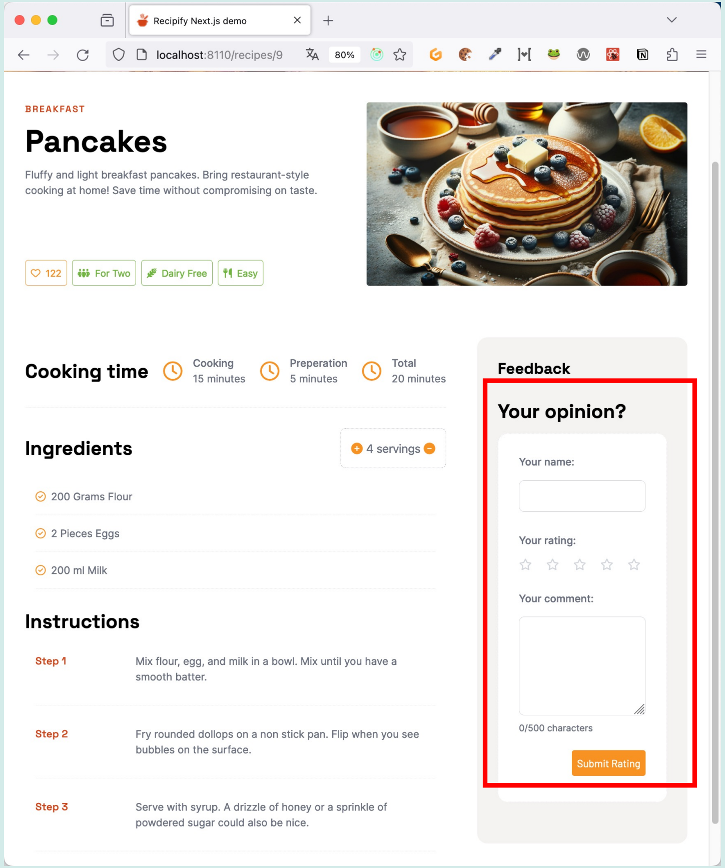

Recipify Next.js demo

localhost:8110/recipes/9

80%

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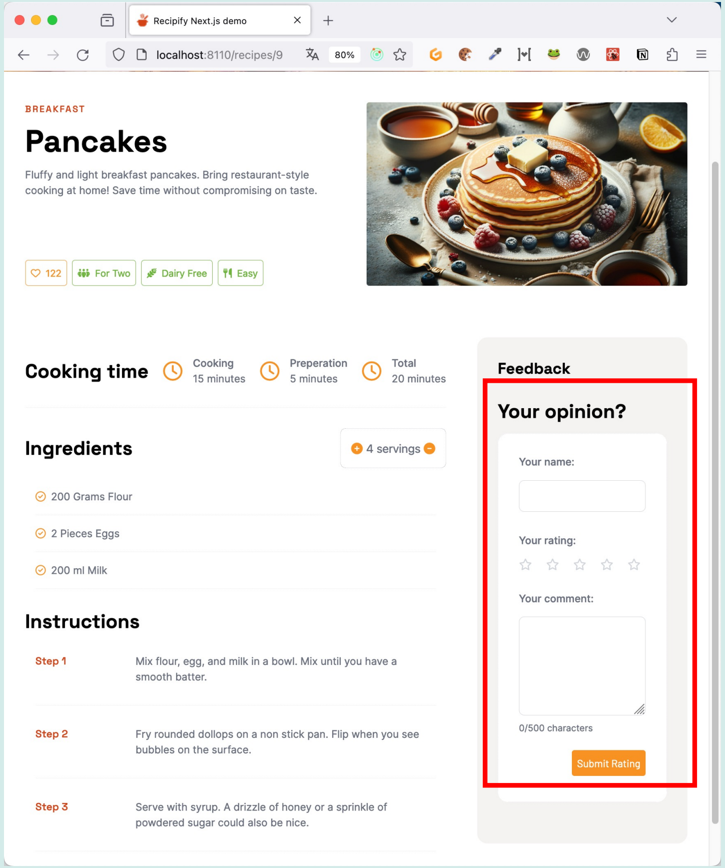
DIFFERENT KINDS OF COMPONENTS

Client componenten (as known before)

- Rendered on the Client
- or on the Server 🙄 (SSR)

- JavaScript-Code is sent to the browser
- They can be interactive and can held state



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New: React Server Components

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New: React Server Components

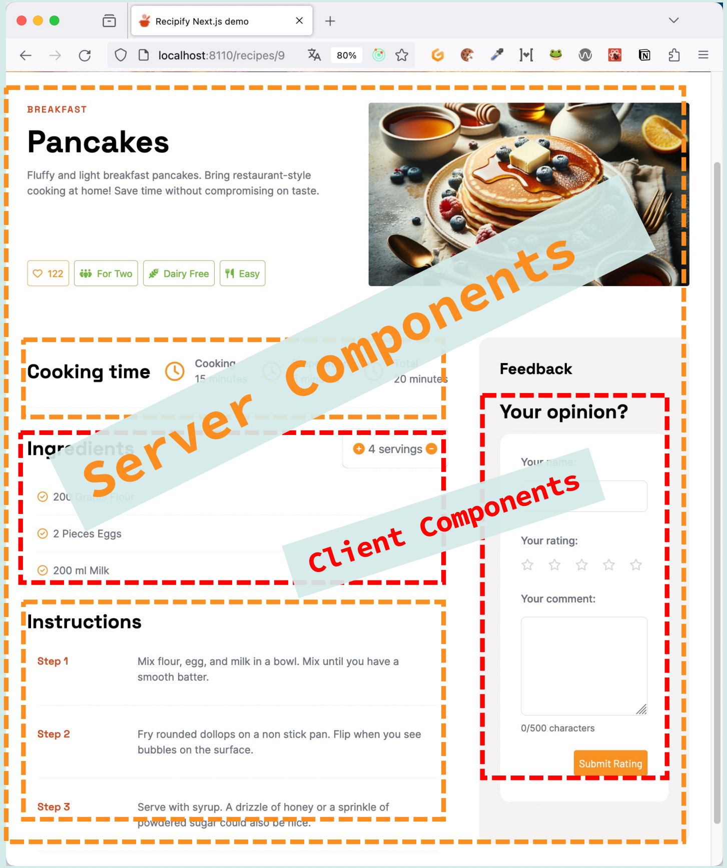
- are rendered on the Server
- or during Build 🙄

- returning UI (!) to the browser (but no JavaScript-Code)

DIFFERENT KINDS OF COMPONENTS

Different kinds can be used together

- From JSX perspective they look the same



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Submit Rating

Server Components

Client Components

Next.js

Next.js

- sits on top of React

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- Some features are React standard, mainly React Server Components

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- in the demo we will see Next.js and React features
- This features are available in the App Router (Next.js 14+)

Next.js

- You need to run Next.js in production on a server

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- that's a big difference to single-page-applications

Next.js

- You need to run Next.js in production on a server
- that's a big difference to single-page-applications
- Both Next.js and React are also running in the browser

👩‍🍳

Demo

DEMO

Server Components #1

- /recipes with fetchRecipes `rlp`
- where is the component rendered?
  - Console.log
  - React Dev Tools
- how can we order and filter the list? we do not have state here!
- what is refetched when we re-order the list? -> Network tab!
- what is fetched when we re-load the page -> Network tab!

DEMO

Next.js: Layout component

- /recipe/layout.tsx `la`
- Look at the timer!

DEMO

Server Components #2: Suspense

- /recipe/[recipeId]/page.tsx. `rp`
- notFound
- slow_down in demo-config.ts
- Add loading.tsx

DEMO

Server Components #2: Avoid waterfalls

- In RecipePageContent, Feedbacks are fetched
- slowdown_feedback
- Add Suspense Boundary
- What do we have now: Request takes Recipe-Request + Feedback-Request

DEMO

Server Components #2: Avoid waterfalls

- Move fetchFeedback to [recipeId]/index.tsx
- Pass feedbackPromise to RecipePageContent
- Adjust <FeedbackList ...> in RecipePageContent
- Adjust FeedbackList to await promise

DEMO

Server Actions: A very simple form

- LikeWidget "use server"
- This works without JavaScript!
- Note: with the new React 19 Hooks useActionState, useFormStatus, useOptimistic we could also build "real" forms that are progressively enhanced

DEMO

Client Components: Now we need JavaScript in the Browser

- Show desired result in working application
- RecipePageContent: replace IngredientsSection with ConfigurableIS
- Note:
  - we pass props "as normal" from server to client components
  - that even works for promises!
  - we can use Server Functions to execute code on the server (no endpoint required)

Thank you very much!

Slides & Code: https://react.schule/ijs-nextjs

Questions and contact:

nils@nilshartmann.net

https://nilshartmann.net/contact