Single Page Application Architecture

A Project-Proven Approach

Jason Brown and Jeff Sallans

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Introductions

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Associate Director, X by 2

Jason Brown
Senior Consultant, X by 2

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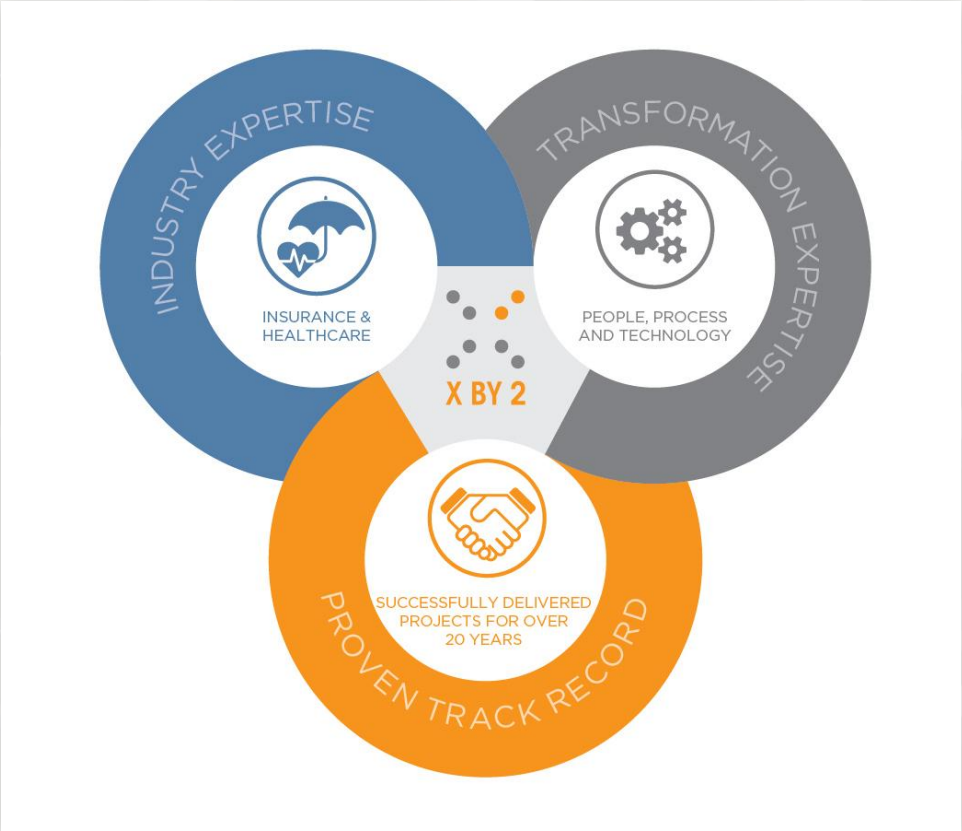
Who We Are

X by 2 develops strategies and executes transformational enterprise initiatives for insurance and healthcare clients.

- **Founded in 1998**
- **Detroit, MI and Toronto, ON**
- **45 employees**



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Agenda

The value a Single Page Application

High-level architecture

Finding the right SPA developer

Unnoticed tech debt

Flux architecture

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The value of a Single Page Application

- Seamless user experience
- Removes full page reloads
- Rich user interactions

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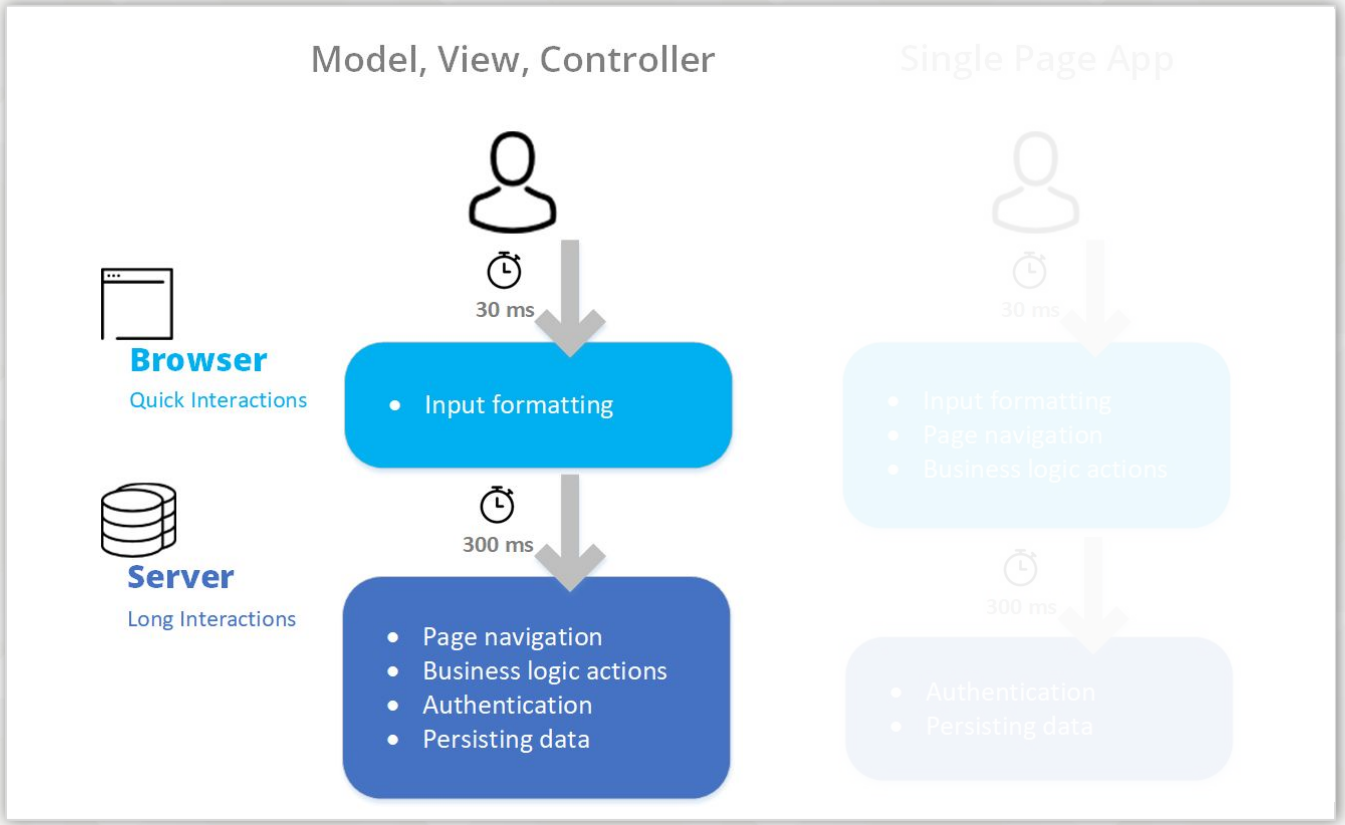
How do we make the web feel like mobile?



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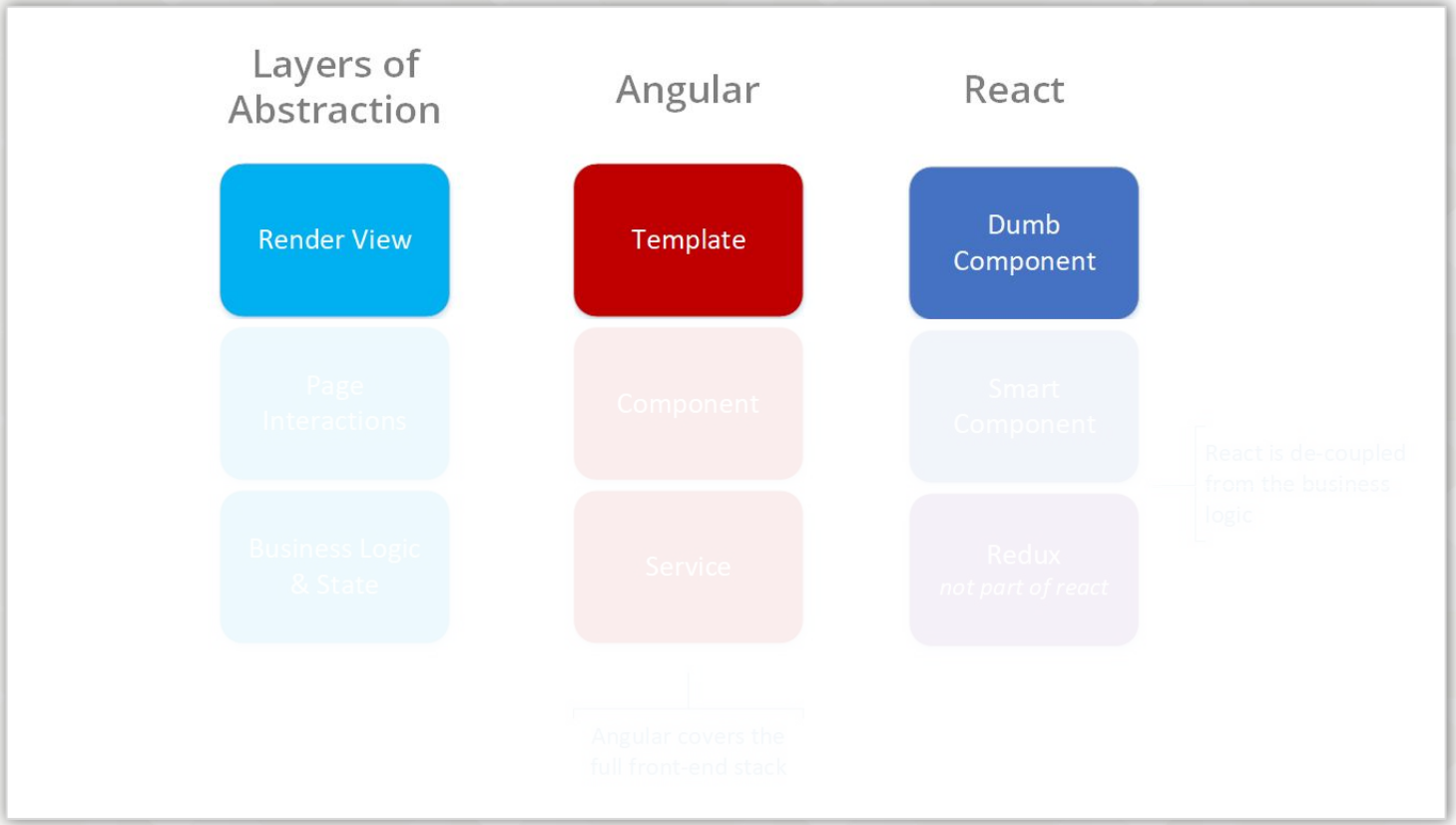
High-level Architecture



Finding the Right SPA Developer

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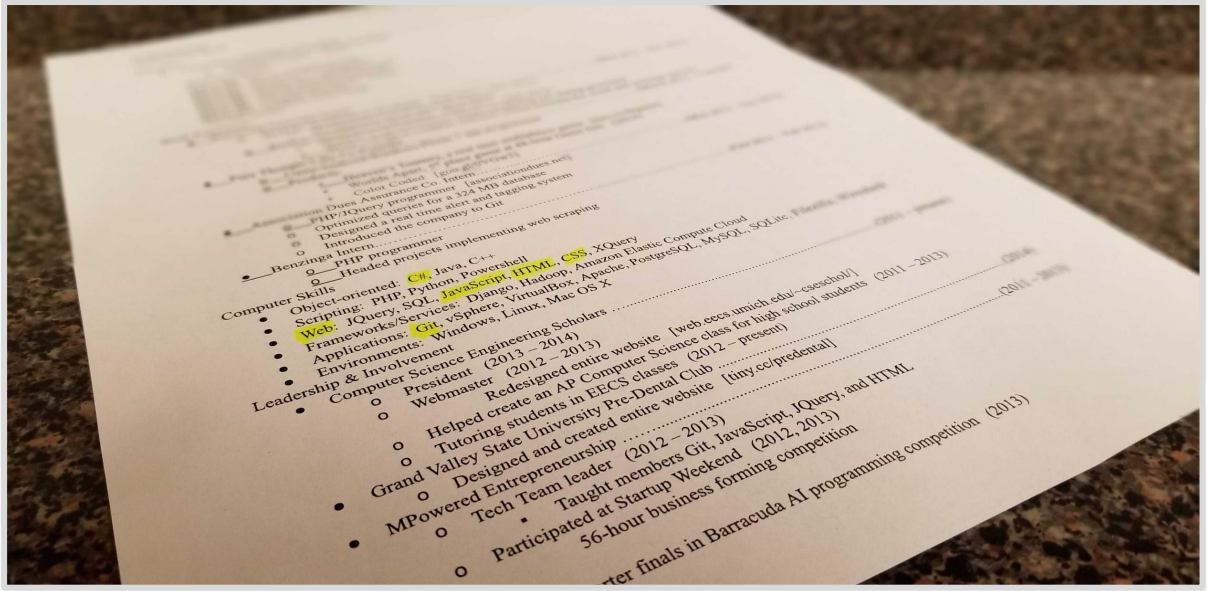
What I have seen in large companies

Keyword Resume Search

Interacting with Human Resources Department



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How did it turn out

- Additional training
- Unnoticed tech debt
- Smaller scope for tasks

My preferred strategy

X by 2 interviewing method

- Do they have enterprise experience
- Do they understand core concepts
- Do they have a process

Why should I train a developer on a technology?

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Training

- Typically 2-3 weeks
- Activities include:
  - Reviewing technical videos
  - Reviewing project documentation
  - Environment setup
  - Testing a pattern in a skeleton project
  - Pair programming

You might have already hired your best SPA developer

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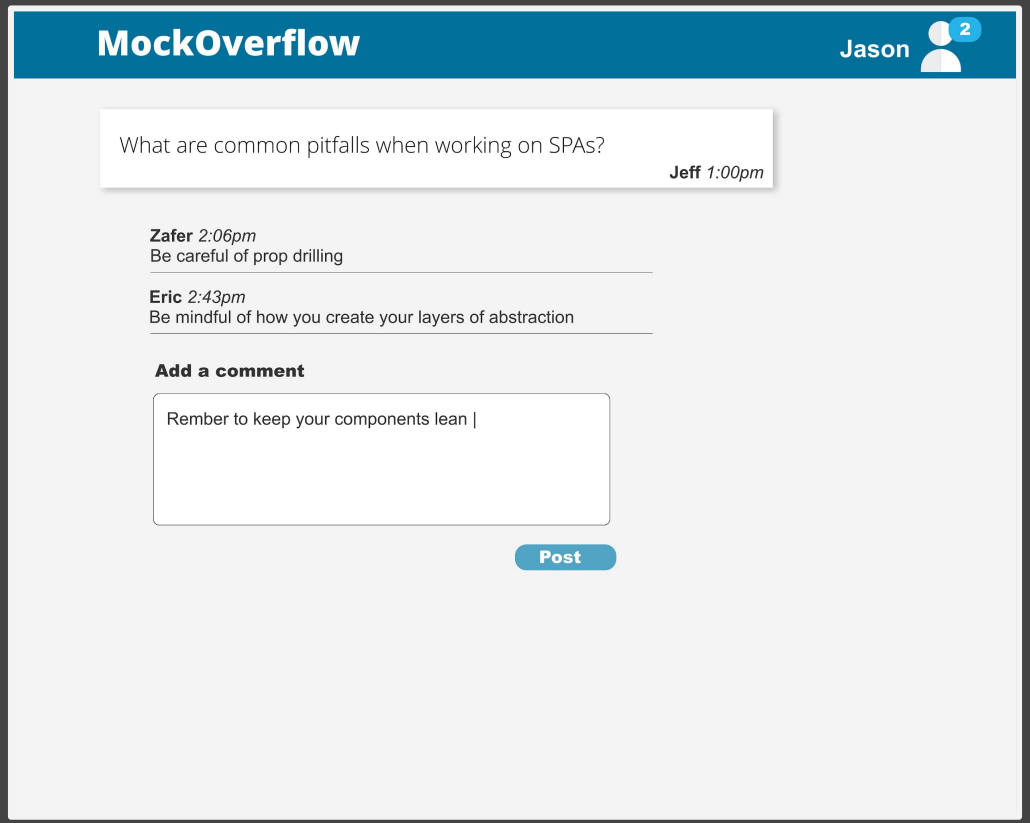
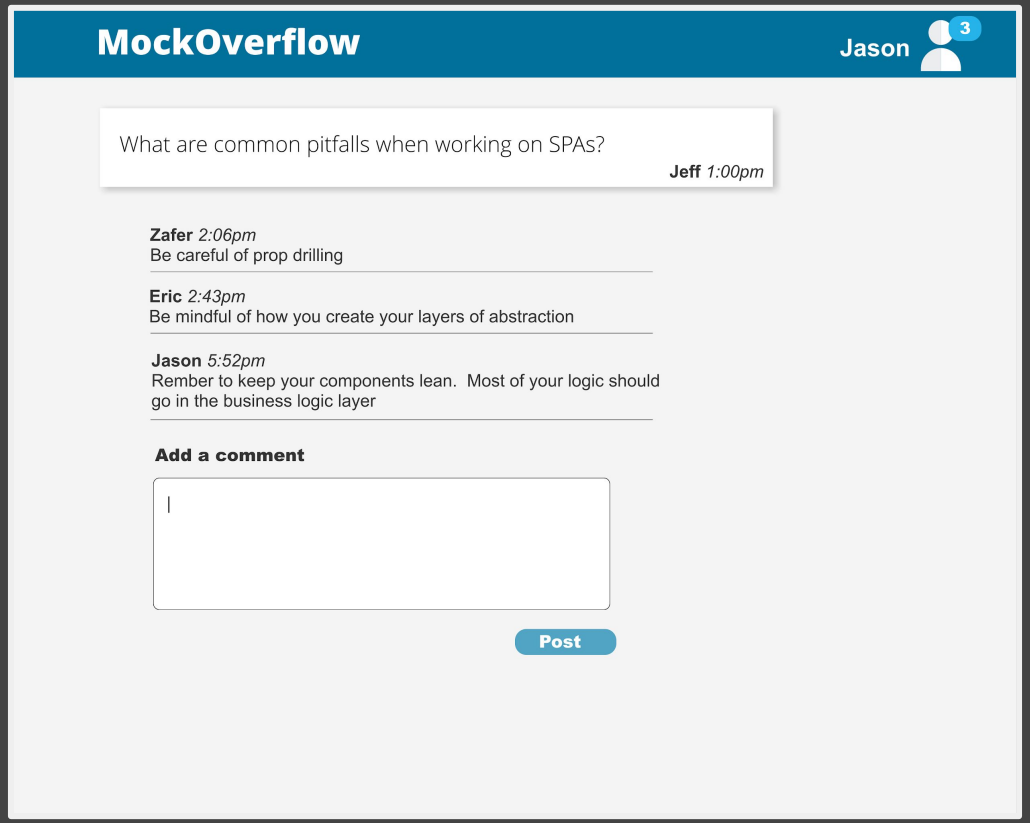
Unnoticed Tech Debt

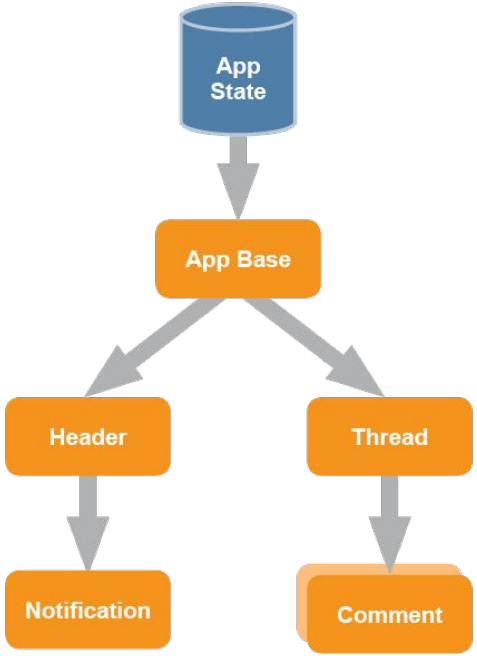


Unnoticed Tech Debt

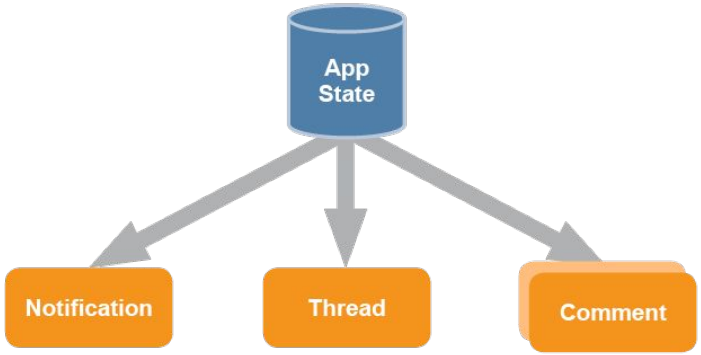


Prop Drilling

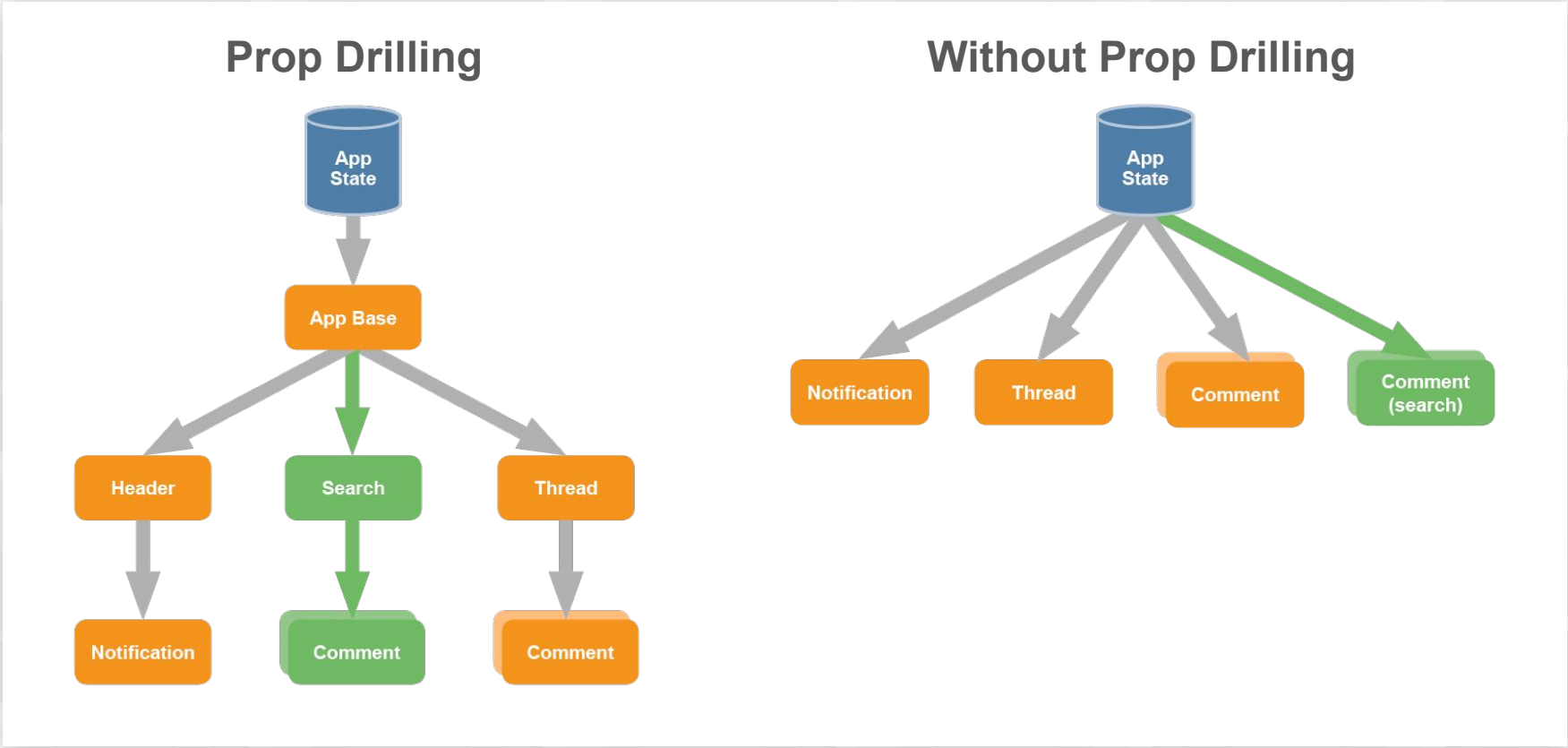
What Developers Fall Into



What Makes Development Faster



Another feature

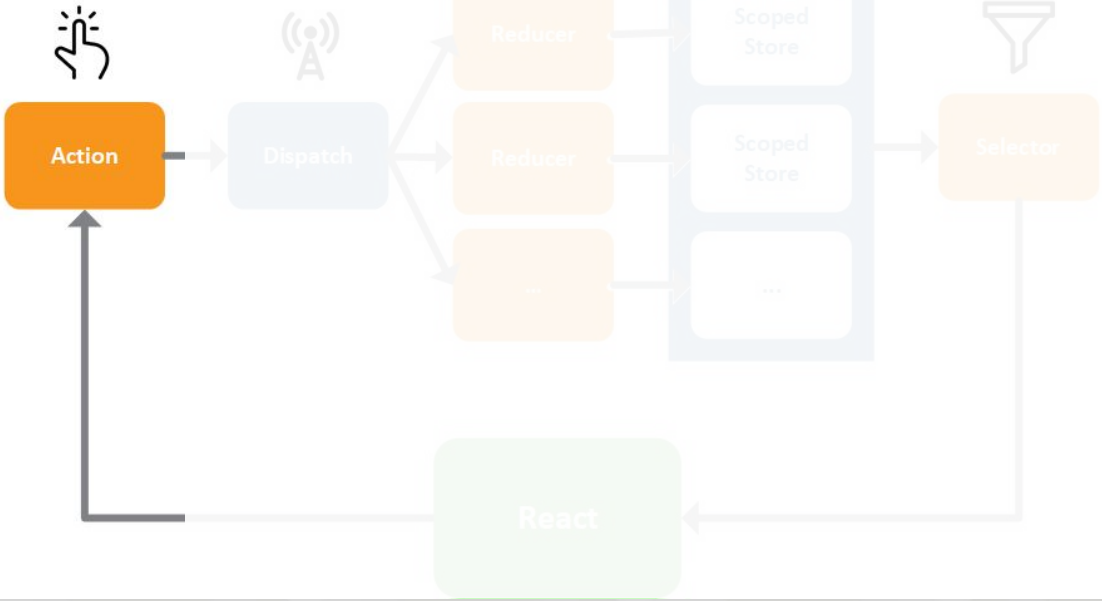


Flux Architecture

How does data flow through this architecture?

Who is responsible for this?

Developer | Library



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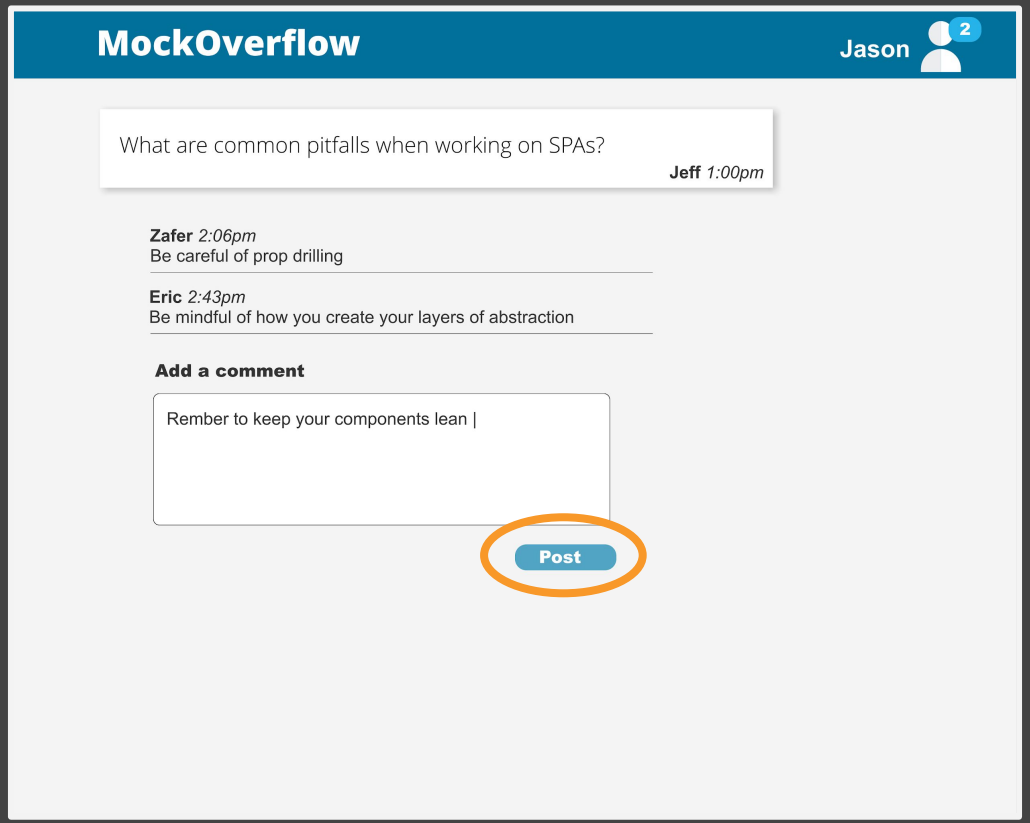

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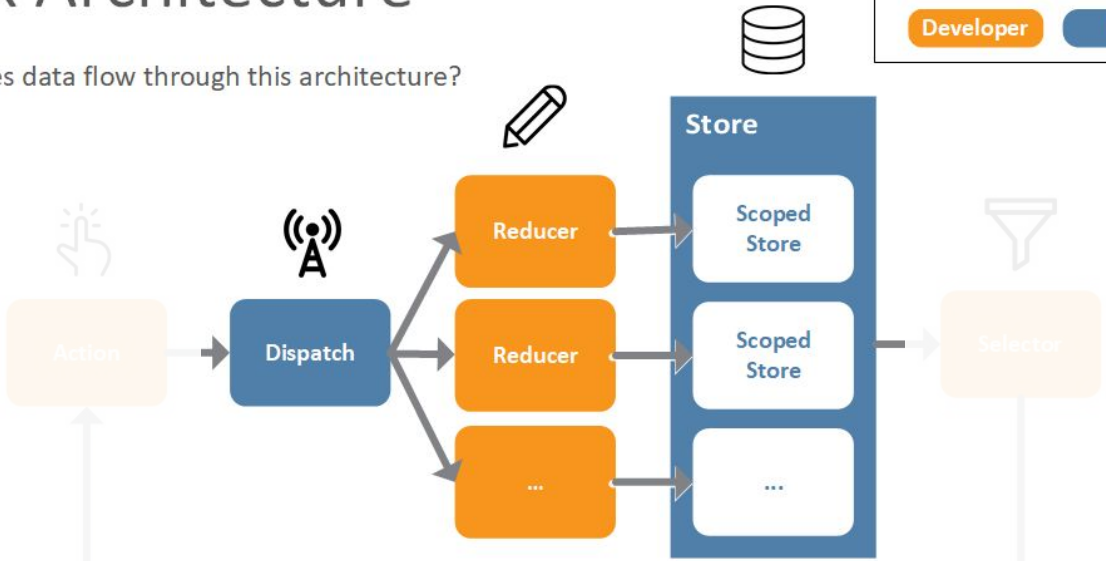

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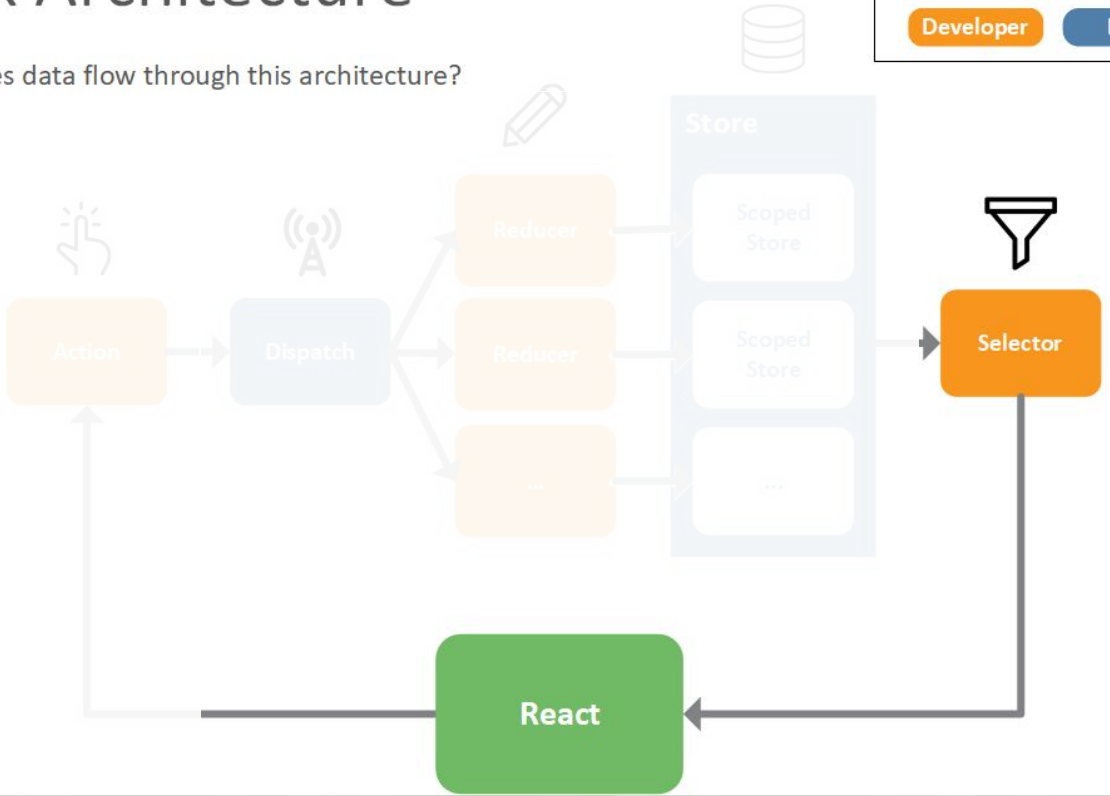

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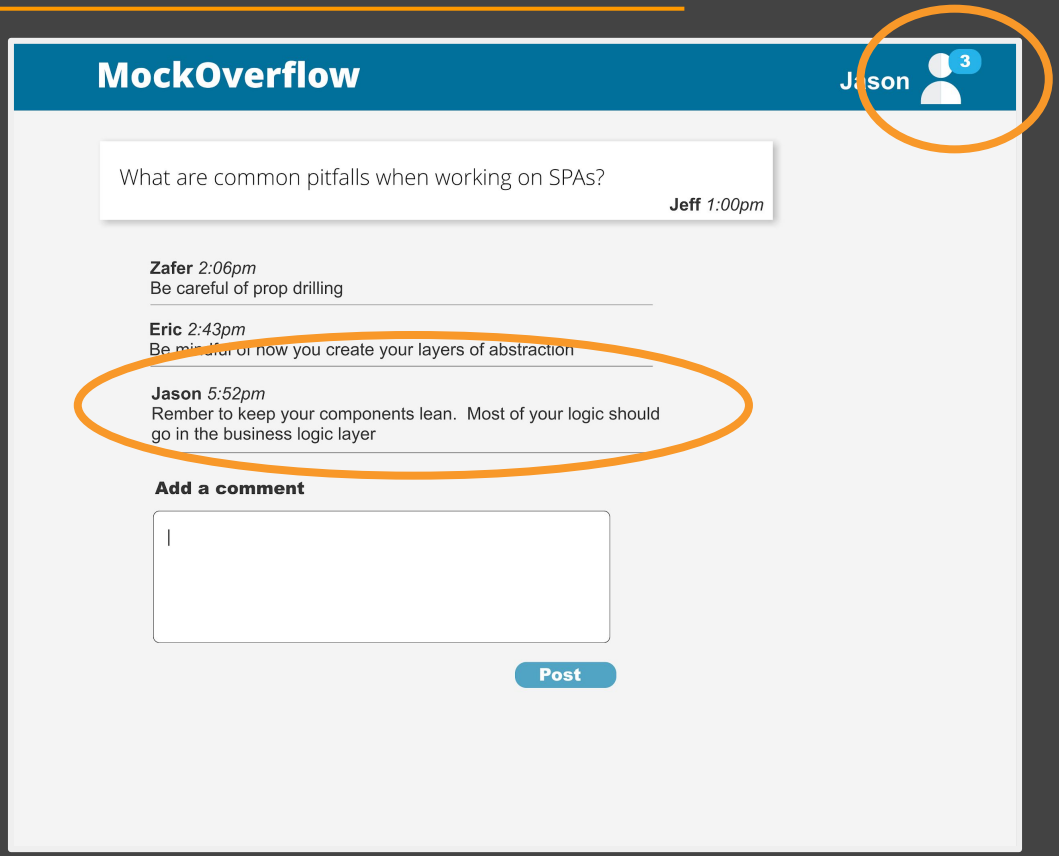

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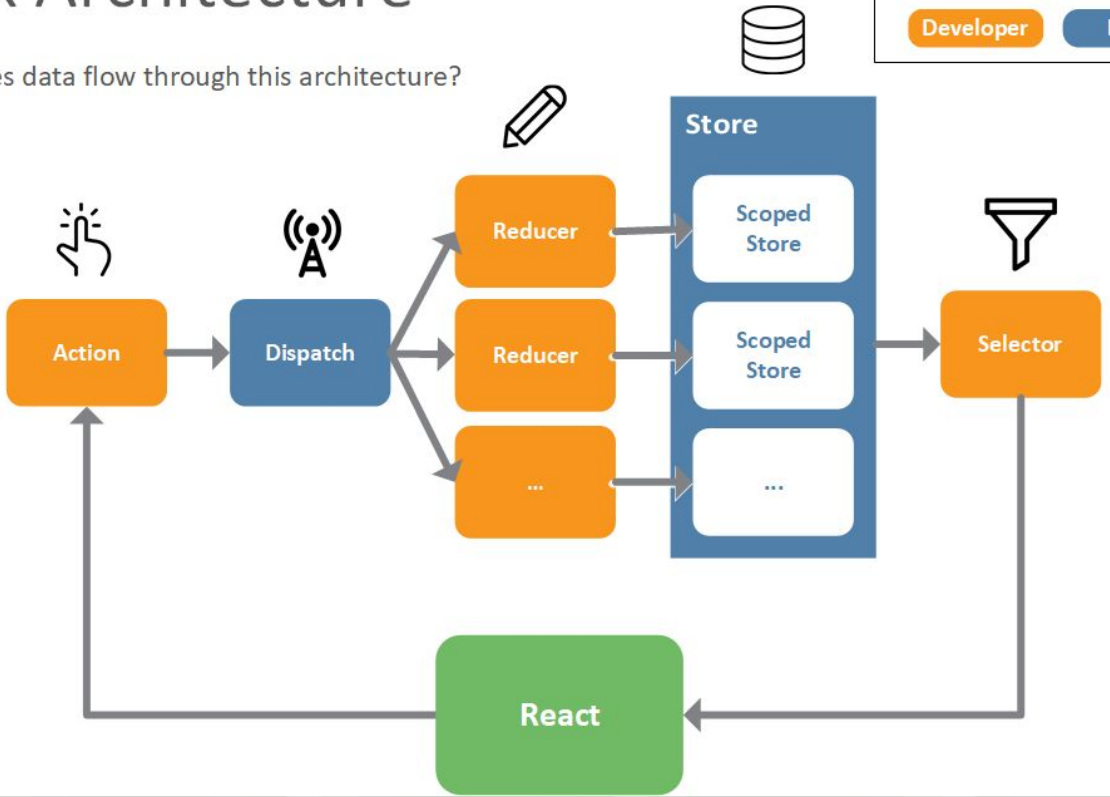

Flux Architecture

- Separates “page interaction” from “business logic”
- More maintainable and flexible
- Easier to test

Q & A

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Thank you and let's continue the conversation

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React vs Angular

API Gateways

Testing

Single Sign-on

Micro Frontends

Server-Side Rendering