

The Modern Software Developer

CS146S
Stanford University, Fall 2025
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Automated UI and App Building

This is **not** the “vibe coding” class

...except today

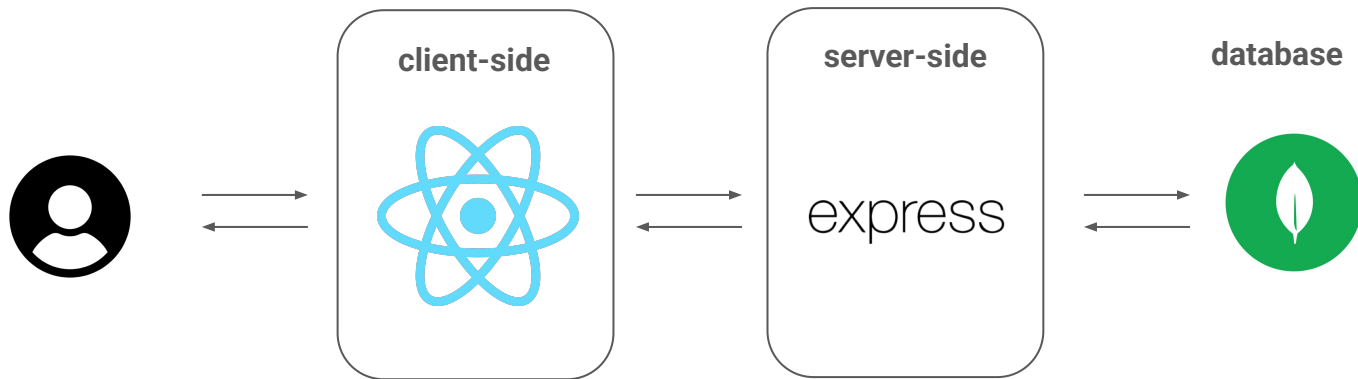
Why

- Modern SaaS development has focused on web apps for over two decades

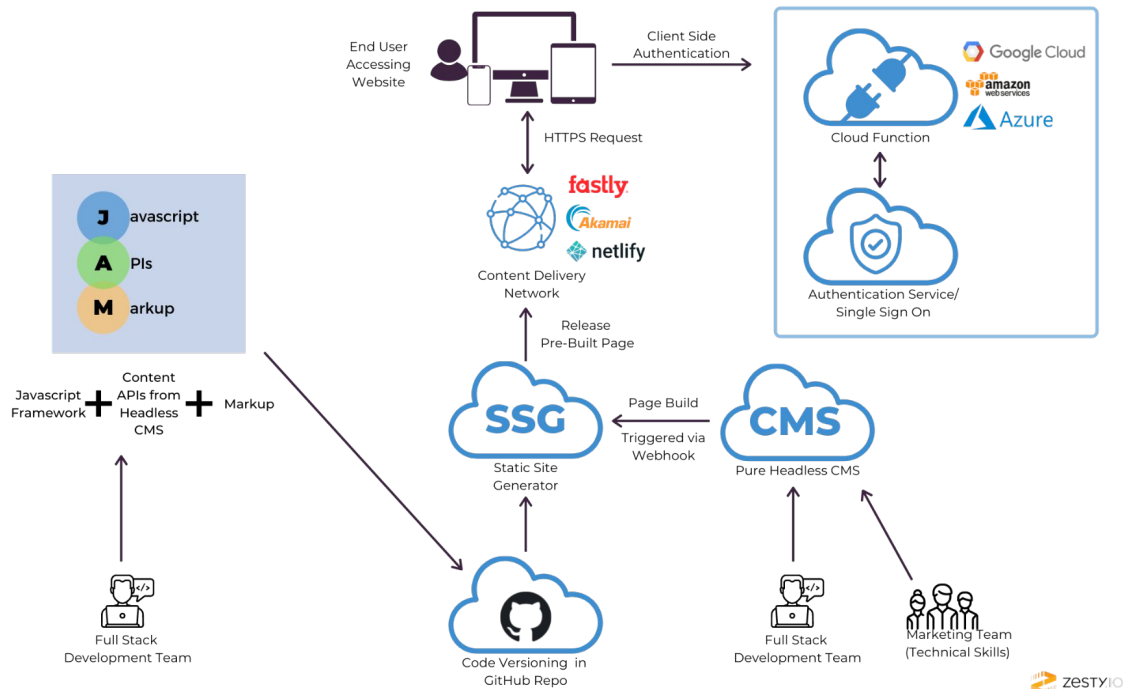
The Old Days

- LAMP
- MERN
- JAM
- Serverless

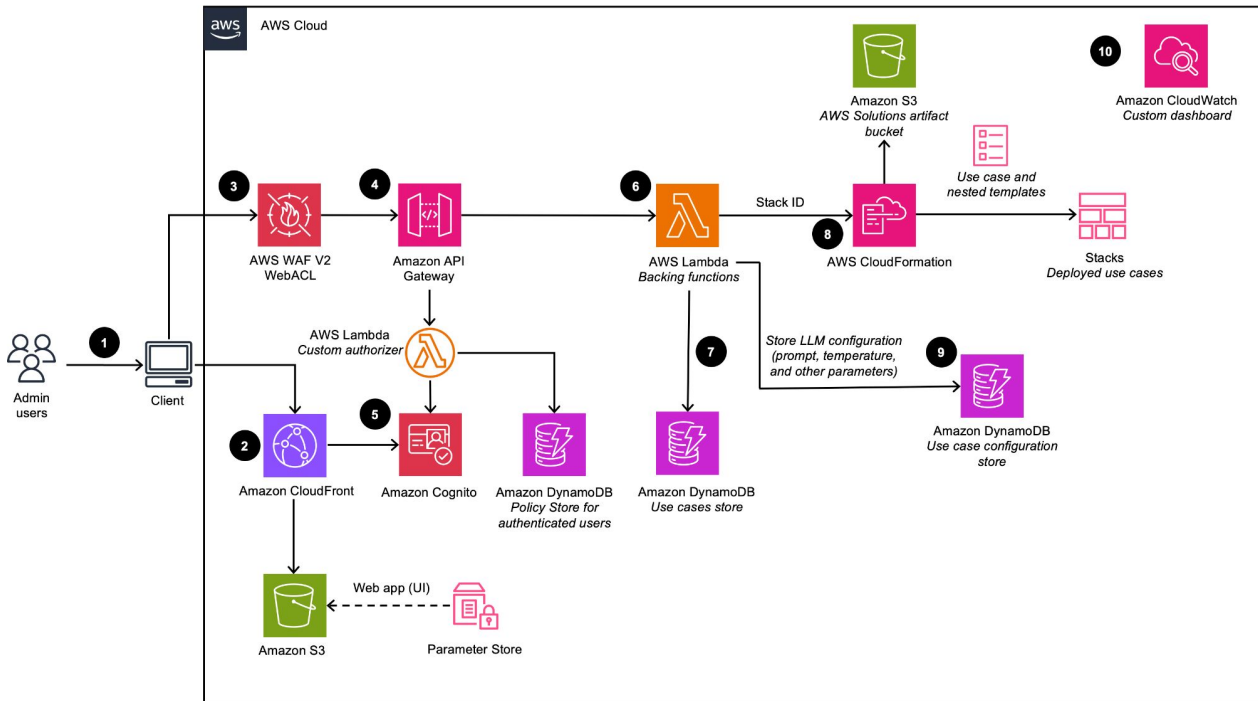
The Old Days



The Old Days



The Old Days



Take #1: Visual Low-code/No-code

- Wix
- Squarespace
- Webflow

The New AI World

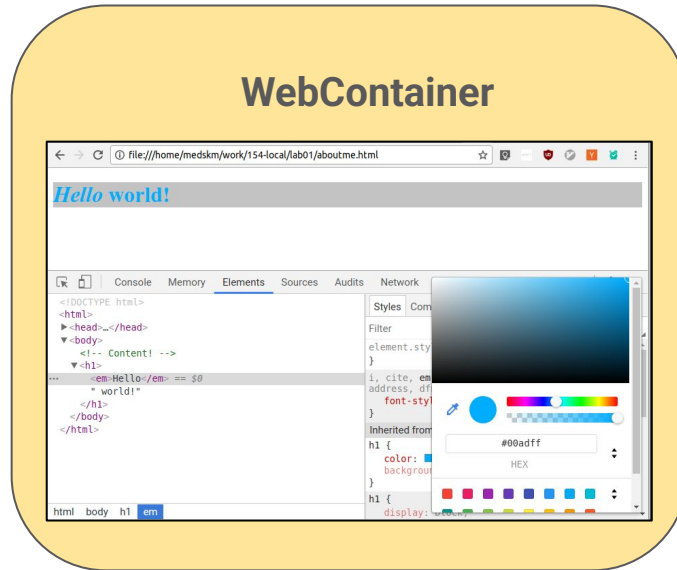
- Lovable
- Replit
- Vercel v0
- Base44
- Cursor/Claude Code/etc

What Has Changed

- Prompt your way to a fully fledged app
- Engineers are becoming more cross-functional
 - Design
 - Product management
- Anyone can build an app now
 - More user-friendly than 1st generation no-code platforms like Webflow, Wix, Squarespace

Let's Make An App Right Now

App Builder Architecture



App Builder System Prompt

Limitations

- Everything is awesome when it works but once things break we're back at square 1
- Prompts are just suggestions. Not every user understands that
- Security has been an [issue in the past](#)
- How do we prevent all these apps from looking the same?
- How complex can these apps realistically get?

Questions?