

Class 2: App Prototyping Methods

1. What's an “app”?
2. Prototyping Methods Overview
3. Prototyping with Vue.js

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Review: Course Policy

Activity: “Whitenoise” Maker App

Working at the board with your peers, design a “whitenoise” maker app.

- The app has at least 4 different sounds (i.e. rain, ocean, wind, fire), but no more than 8.
- Each sound can be turned on or off independently of the other sounds.
- The user combines the sounds to create a “whitenoise” that they like.

Sketch your own design of the whitenoise app on your handout. You will implement this design in Homework 1.

Discussion: What is an App?

Discuss with your peers what an app is.

Definition: App

App, short for application, is an **interactive program** for **computational devices** (i.e. phones) typically designed to **support users with tasks**.

Discussion: Is a website an app? It depends...

Discussion: Should We Build Your App?

- UX designer/engineer
- Project manager
- iOS developer/engineer
- Android developer/engineer
- Backend developer/engineer
- QA tester/engineer

We should know whether the app is worth building **before** we invest!

App's are **Expensive!**

- ~\$100,000 to \$250,000 (and increasing)
- ~3 months to 12 months
- Significant expertise required
- 2 major mobile platforms (iOS and Android)
- 2 major laptop/desktop platforms (Windows and macOS)
- *Extensive* LLM/Claude token budget (\$10,000s)

Prototype

“ A user interface prototype is a hypothesis — a candidate design solution that you consider for a specific design problem. ”

- NN/Group

Prototyping Methods

- Low-Fidelity (e.g. Paper Prototypes, Sketches, Wireframes)
 - lower cost
 - less interactive (often static)
- Medium-Fidelity (e.g. Digital Wireframes, Clickable Prototypes)
 - moderate cost
 - somewhat interactive
- High-Fidelity (e.g. Interactive/Functional Prototypes)
 - higher cost
 - more interactive (often dynamic)

Low-Fidelity Prototyping: Paper Prototype

A paper prototype is a **low-fidelity** representation of a user interface that is **hand-drawn** (or printed) on paper.

Pro: Quick and cheap to make; Easy to iterate and modify.

Pro: Users are more likely to provide **honest** feedback.

Con: Not interactive (static).

Medium-Fidelity Prototyping: Figma

Medium-fidelity prototypes are **digital wireframes** or **clickable prototypes** that are created using a **design tool** such as Figma.

- Limited interactivity
- Content is static (no dynamic data)

Discussion: Should we build a Figma of your app?

Pro: More realistic representation of the final product.

Con: Time intensive (though less so with AI assistance).

Con: Users may be less likely to provide **honest** feedback.

High-Fidelity Prototyping: Interactive Prototype

“ A high-fidelity (sometimes referred as high-fi or hi-fi) prototype is a computer-based interactive representation of the product in its closest resemblance to the final design in terms of details and functionality.

<https://blog.prototypr.io/high-fidelity-prototyping-what-when-why-and-how-f5bbde6a7fd4>

”

Pro: Feasibility of the final product can be evaluated.

Con: Time intensive (though less so with AI assistance).

Con: Users may be less likely to provide **honest** feedback.

High-Fidelity Prototyping Methods

- Adobe XD
- Figma (with plugins)
- InVision
- Proto.io
- Claude Code (code me an app)
- **Web-based (HTML/CSS/JS)**
- ...

Vue.js

“ Vue.js is an approachable, performant and versatile framework for building interactive **web-based** (HTML, CSS, JavaScript) user interfaces. ”

- <https://vuejs.org/>

How to Learn Vue.js?

Learning Objective

Learn how to independently approach problems and technologies that are new to you.

Strategies for Learning New Technologies

Learning is more effective when it requires significant effort and active engagement. Passive strategies (e.g. reading, watching, listening) feel easier and more productive, yet they are less effective than active strategies (e.g. exploring, experimenting, creating).

Passive Strategies

- Tutorials
- Examples
- Documentation
- Claude or ChatGPT

Active Learning

- **Exploration**
- **Experimentation**

Studio: Explore Vue.js

1. Start your Homework 1.
2. Once you (and your peer) have your Codespace up and running, explore the code in `App.vue` **together**.
 - What do you notice about the code?
 - What do you wonder about the code?
3. Can you start to modify the code to implement your app design?

ChatGPT vs. GitHub Copilot

ChatGPT is a general-purpose conversational AI.

GitHub Copilot is a coding-specific AI.

Discussion:

- Do you need to know industry/domain-specific AI tools?
- Can you get by with copy-pasting from ChatGPT or Claude?

What's Next

- Due Monday, 8/31/2026, 11:59pm: Homework 1
- Due before next class: Class 3 Preparation