

Fullstack Development

UI Libraries

Why?

- Good-looking + good-UX design takes a lots of work.
- We want to
 - Spend more time on business logic, not UI design and UI logic.
 - Establish common framework for collaboration.
 - Have maintainable and extensible system.

Types

Library Type	CSS/Theme	Functionality
"Style"	✓	✗
"Component"	✓	✓
"Headless-Component"	✗	✓
"Anti-Component"	✓	✓

Consideration

- Ease of use
 - How much code do I need to write?
- Customizability
 - How much can I change down the line?
- Inclusiveness
 - Do I need to install extra things?
- Look and feel
 - Does it make my app look generic?

Disclaimer

- The choices of UI libraries can be opionated.
- At the end of the day, you must choose your own path.
- Anything marked with 🦀 is my opinion. You don't have to take it.

"Style" libraries


"Style" library

- *No library*
- Styled-Components
- Tailwind CSS

No library

- `globals.css`
 - Not recommended
- Inline CSS
 - Can be used as a quick fix
- CSS Module

CSS Module

- Good
 - No name conflicts
 - Separation between style and content
- Bad
 -  Separation between style and content

Styled Component

Styling your way with speed, strong typing, and flexibility.

- Styled components are a CSS-in-JS tool that bridges the gap between components and styling.
- Installation note
 - For NextJS, follow the [instructions](#).

Styled Component

- Good
 - CSS-in-JS
 - Full customizability from pure CSS
- Bad
 - 🦀 CSS-in-JS in separate file (anyway)
 - 🦀 Hard to maintain.

Tailwind CSS

Rapidly build modern websites without ever leaving your HTML

- A utility-first CSS framework
 - Provides several of opinionated, single-purpose utility classes that you can use directly inside your markup.
- Come with NextJS.

Tailwind CSS

- Good
 - Styling in markup
 - 🦀 Less customizability than pure CSS
 - 🦀 Maintainable: *(3 months from now, I can come back and quickly adjust style.)*
- Bad
 - Need to learn syntax
 - Ugly markup
 - Fix: Use VSCode extension or wrap markup in components.

"Component" library

"Component" library

- Bootstrap React
- Mantine
- Others
 - Material UI
 - Ant Design

Bootstrap React

■ The most popular front-end framework, rebuilt for React.

Bootstrap React

- Good
 - Lots of premade components
 - Provided CSS bootstrap classes
- Bad
 - Hard to customize
 - 🦀 Bootstrap classes are verbose.
 - 🦀 Look "Bootstrap"

Mantine

Build fully functional accessible web applications faster than ever –
Mantine includes more than 100 customizable components and 50 hooks
to cover you in any situation

Mantine

- Good
 - Comprehensive lists of components (seriously)
 - Comes with useful hooks
 - 🦀 No CSS class
 - You can use other CSS style libraries (e.g. `Tailwind CSS`)
- Bad
 - 🦀 some frictions when trying to deeply customize.

"Headless-Component" libraries

"Headless-Component" libraries

- Radix UI
- Headless UI

Radix UI

Unstyled, accessible components for building high-quality design systems and web apps in React.

Radix UI

- Good
 - Fully customization (design)
 - Excellent functionality
- Bad
 - Too much code for simple stuffs

"Anti-Component" libraries

"Anti-Component" libraries

This is NOT a component library. It's a collection of re-usable components that you can copy and paste into your apps.

- `shadcn/ui`
- `Flowbite`

shadcn/ui

Re-usable components built using Radix UI and Tailwind CSS.

shadcn/ui

- Good
 - Deeply customizable
 - 🦀 Use Tailwind
 - Lot of components
 - 🦀 Integrate with `React Hook Form` and `Tanstack Table`
- Bad
 - Need to learn Tailwind
 - Not as many components as `Mantine`



- Interactive apps

- Mantine

- shadcn/ui

- Brochure apps

- Tailwind CSS

What is your pick?