Brief Introduction to Front-end Architecture

	front-end architecture
web browser	HTML/CSS/JS (single page application, modules loaded on demand)
	Page Route
	Request Access Filter Middleware
	Individual Page Module Front Page Sign In System Management network element Other Modules Vue Page Component Pinia Status Management tools
Vue Applications	common page1 page2 page3 component library chart library Other information Third Party Library
	Service Requests API Module Management Request data processing Middleware
	Backend Service API
API Datasheet	Authentication API Data Management API
	Other Module Management API

Front-end technology selection

Vue3 and React have many similarities in terms of functional features, such as virtual DOM and component-based features. However, Vue3 has some advantages over React in terms of performance, such as faster rendering speed, smaller code size, better typescript support, etc. In terms of benchmark scores, Vue performs much better in js-framework-benchmark than React and Angular. In this benchmark test, it is also on par with some of the fastest non-virtual DOM frameworks in production environments.

Compared to the familiarity within the development team, lower entry barriers, and excellent documentation, it can significantly reduce the onboarding and training costs for novice developers. The trend of the surrounding community ecology continues to grow, so choosing

Vue3 is more advantageous. Finally, the overall architecture is determined using the technology stack.

- 1. Vue The progressive JavaScript framework for building modern web UI.
- 2. Vite Native-ESM powered web dev build tool
- 3. Pinia Intuitive, type safe and flexible Store for Vue
- 4. Vue-router page routing management
- 5. Vue-i18n Page Internationalization
- 6. TypeScript is a language for application scale JavaScript development
- 7. Xlsx SheetJS Spreadsheet data parser and writer
- 8. Dayis date time library alternative to Moment. is with the same modern API
- 9. Fetch's promise-based HTTP library is natively supported in the browser
- 10. Ant Design of Vue An enterprise-class UI design language and Vue-based implementation
- 11. Echarts Apache ECharts is a powerful, interactive charting and data visualization library for browser
- 12. Antv G6 A Graph Visualization Framework in JavaScript

Browser support: Supports common browsers on the market, does not support IE, and does not support versions below Chrome 97.