

Website		Mobile	
Pros	Cons	Pros	Cons
<ul style="list-style-type: none"> • Cross-Platform compatibility • Independent of which operating system is the user using • Independent of version of environment the user is using • The user's data is stored in a cloud server, which is more secured and in sync. • Low development cost 	<ul style="list-style-type: none"> • Require stable internet 	<ul style="list-style-type: none"> • Can have a local database, independent of the internet • Back-end programming languages have better performance 	<ul style="list-style-type: none"> • Compatibility across all platforms • Compatibility across all versions of systems • The APP store may have specific regulations

Front-end		
Vue	React	Angular
<ul style="list-style-type: none"> • Best rated on git hub repository • A teammate has previous experience • Most intuitive • UI and behavior are perfectly binded • Highly customizable • Two-way binding simplifies the codes, the state changes are synced. • Good runtime performance • Fast compile and runtime on DOM 	<ul style="list-style-type: none"> • Most-used • Good for large scale project • Difficult to learn 	<ul style="list-style-type: none"> • Size of library is the largest • Longer loading time

Back-end		
Springboot (java)	Express(js)	Flask(Python)
<ul style="list-style-type: none"> • Using java, a well known, static, and stable language • IoC, AoP • Flexible dependence injection • Great efficiency • Large community and easy to get help 	<ul style="list-style-type: none"> • Connected with front-end easier since it is using a front end language 	<ul style="list-style-type: none"> • Lack of database support • Require more learning about the previous framework • Maintenance cost high

CI/CD		
Travis CI	CircleCI	Github Action
<ul style="list-style-type: none"> • Created earlier • Only free for open-source projects 	<ul style="list-style-type: none"> • Runtime problem • Difficult to learn • Documentation is not easy to understand 	<ul style="list-style-type: none"> • UI is easy to use • Since the codes are uploaded to Github, this tool is very convenient to use

Database		
PostgreSQL	MySQL	MongoDB
<ul style="list-style-type: none"> • A relational database management system that supports more data types • monolithic architecture • Uses SQL • Work well with a high number of client connections • supports materialized views • Have better performance for complex queries 	<ul style="list-style-type: none"> • purely relational • support plans from Oracle are paid 	<ul style="list-style-type: none"> • document database • distributed architecture • Uses BSON