Research document

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# Front-end frameworks

In the sections below I’ll be talking about the advantages and downsides of each front-end framework. Eventually based on the aspects of each framework I’ll chose the one that most fits the implementation within my website.

## Vue.js

### Advantages

* Detailed documentation to make developing a lot easier.
* Uses components to create a webpage instead of creating everything on a single page. This allows for reusability of components and much easier create a webpage.
* Vue.js is a community driven framework, this allows it to be updated more often and thus it is more modern and used in a lot of projects.

### Disadvantages

* There is less community support than React and Angular.
* There is a limited number of plugin availability.

## React

### Advantages

* The principles of SOLID are easier to apply as separation of data and presentation is possible.
* React is an easy to learn library based on JavaScript, so it’s easier for beginners to learn JavaScript.
* A single file contains both the logic and the markup of a page.
* There are a lot of libraries to help assist in creating the project, this helps with creating some functions of the application.

### Disadvantages

* Implementing a MVC structure is not possible with React, therefore Not all principles of SOLID can be implemented into the project.

## Angular

### Advantages

* A very wide known and used framework, this makes updates frequent.
* There is a lot of community support on questions or problems about the framework, this makes problems while developing easier to deal with.
* There is the ability to create a large scale application, which makes expandability easier.
* Angular has an well maintained and good documentation.

### Disadvantages

* Libraries are not very supported by the framework, so its more difficult to easily add new libraries to the project.

## Conclusion

Based on my research I’ll be using Angular, as it is very developer friendly. It gives the developer a lot of options on linking the front-end with the back-end of the project. Angular also has makes it easy to implement the SOLID principles into the project which keeps code clean and easy to read through. This keeps maintainability easy and not a lot of work.

Also because Angular is used by many companies and developers, I want to learn more about this framework. This gives me more skills and more knowledge and more possibilities when I need to search for work after finishing school.

## Sources

Link 1:

<https://javascript.plainenglish.io/angular-vs-react-vs-vue-js-which-is-the-best-choice-for-2022-5ef83f2257ab>

Link 2:

<https://www.altexsoft.com/blog/engineering/pros-and-cons-of-vue-js/>

Link 3:

<https://www.freecodecamp.org/news/why-use-react-for-web-development/>

Link 4:

<https://www.grazitti.com/blog/8-proven-reasons-you-need-angular-for-your-next-development-project/#:~:text=Angular%20is%20a%20highly%20popular,Google%20to%20assist%20web%20development.>

# Back-end frameworks

In the sections below I’ll be talking about the advantages and disadvantages of each back-end framework. Eventually based on the aspects of each framework I’ll chose the one that most fits the implementation within my website.

## Quarkus

### Advantages

* 1

### Disadvantages

* 1

## Kubernetes

### Advantages

* 1

### Disadvantages

* 1

## Spring

### Advantages

* 1

### Disadvantages

* 1