



# **WELLNESS PORTAL**

## **FRONT END DECISION DOCUMENT**

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## 1. REQUIRED DECISION

For the wellness portal we are creating, we must develop a front end that users can view and interact with on their web browser. To implement this we must decide on the technologies needed to create and structure web pages, and make them user-friendly, and interactive.

## 2. STATUS

HTML, CSS, and JavaScript have been considered. Since alternatives to this combination do not exist, we have decided to implement the front end using it. As for the framework or library, REACT has been considered along with Angular and Vue. Currently, we are leaning towards using REACT.

## 3. OPTIONS

### 3.1. Structuring the website — HTML

HTML is needed for the basic structure of the webpage, to place various components such as paragraphs, images, buttons, etc. Without HTML, a browser would not know how to display text as elements or load images or other elements.

- Almost all web browsers support it.
- It is open-source.
- It is easy to understand and use.

### 3.2. Beautifying the website — CSS

CSS is needed to control the website's appearance. This includes controlling the appearance of each element on the page, the layout, position of images, etc. Without CSS, websites would be less pleasing to the eye and likely much harder to navigate

- It allows you to create aesthetically pleasing web pages.
- The same CSS file can be reused to style the multiple web pages a website might have.
- It creates a great User Experience.

### 3.3. Bringing the website to life — JavaScript

JavaScript is needed to make the website responsive and interactive. It modifies the behavior of the components.

While no alternative to JavaScript exists, various frameworks and libraries for building web pages exist. Why frameworks/libraries are needed:

- As an application grows, there will be more components to maintain. This will require more modifications to the actual DOM, which is tedious.
- Vanilla JavaScript is weakly typed. This may lead to clashes. Using a framework or library can prevent this.

Some of the frameworks that were considered are given below:

**(a) REACT** - It is a javascript library for building interactive user interfaces. It allows you to build reusable UI components.

#### Benefits:

- React is a Declarative way of programming. So direct manipulation of the DOM is not needed as REACT handles any changes to be made to the DOM automatically.
- React.js apps make use of a virtual DOM, which allows developers to make changes without having to rewrite the full HTML document.
- It ensures speedier performance by rendering updates faster.
- It has a gentler learning curve and is more beginner-friendly.
- It is scalable.
- It uses an extension of Javascript(Javascript X) that has a few more features.
- Since it is a library, updates are simple.

#### Drawbacks:

- Since it provides only a library, decisions have to be made in other parts.
- It will require the usage of other tools.

**(b) Angular** - It is a full-fledged javascript framework for building web applications.

#### Benefits:

- It provides an overall structure for building applications.
- It has many built-in tools or libraries.
- It is suitable for large application development.
- The testing and debugging for a complete project are possible with a single tool.
- Built-in support for AJAX, and HTTP.

#### Drawbacks:

- It has a steep learning curve.
- Typescript must be known.
- It receives new updates every 6 months, which involves major changes leading to large costs.

## 4. DECISION

Decision	Why this decision?		How was the decision made?
Using HTML, CSS, and JavaScript for the front-end development. And REACT as the main tool.	Feature	Use in the wellness portal	HTML, CSS, and JavaScript is supported by all browsers, and no alternatives exist to these.  REACT was chosen over Angular due to it being simpler to learn and more flexible.
	HTML provides the structure to a webpage  CSS styles the layout of the webpage  JavaScript helps to modify the behavior of elements on the webpage	To create an interactive web application for visitors/members of the portal	