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Week 13 Research Assignment

1. What are some competitors/alternatives to React? What makes them different? List at least 2.

1. **Vue.js:** Vue is often compared to React as they share many similarities, but Vue is considered more beginner-friendly and flexible. Vue's design is inspired by both Angular and React, aiming to pick up the best parts of both. It has a simpler API and better integration capabilities for existing projects, and includes two-way data binding, like Angular. Vue also leverages a virtual DOM, like React, but offers a more comprehensive and accessible set of directives to manipulate components.

2. **Angular:** Developed by Google, Angular is a full-featured, enterprise-grade framework that provides a comprehensive workflow, including features like a built-in HTTP module, form handling, and dependency injection, which React doesn't provide out of the box. Unlike React's library approach that allows developers to choose their tools for different parts of the project, Angular is a one-stop solution, which might be more suitable for large-scale applications but can also be perceived as more complex and harder to learn. Angular uses two-way data binding and a regular DOM, contrasting React's one-way data binding and virtual DOM.

2. What is Webpack and what problem does it solve?

Webpack is a static module bundler for modern JavaScript applications. When Webpack processes your application, it internally builds a dependency graph that maps every module your project needs and generates one or more bundles. The problem Webpack solves is the complexity of working with modular files in JavaScript. Before Webpack and similar tools, developers faced challenges in managing dependencies, optimizing load times, and integrating non-code assets like images or CSS into their projects. Webpack simplifies these tasks by bundling all assets into a single output file, handling load dependencies automatically, and providing powerful features for code splitting and lazy loading. It also allows for the use of loaders and plugins for transpiling, linting, and other tasks, making it a versatile tool for modern web development.

References

<https://webpack.js.org/concepts/>

<https://vuejs.org/v2/guide/>

<https://angular.io/docs>