|  |  |
| --- | --- |
| **ch7.ReactJS vs AngularJS, React vs React Native, React vs Vue Js** | **Date: 22-02-2022** |

**Topics**

React vs Angular, React vs React Native, React vs Vue Js

**React vs Angular**

|  |  |  |
| --- | --- | --- |
|  | **AngularJS** | **ReactJS** |
| **Author** | Google | Facebook Community |
| **Developer** | Misko Hevery | Jordan Walke |
| **Initial Release** | October 2010 | March 2013 |
| **Latest Version** | Angular 1.7.8 on 11 March 2019. | React 16.8.6 on 27 March 2019 |
| **Language** | JavaScript, HTML | JSX |
| **Type** | Open Source MVC Framework | Open Source JS Framework |
| **Rendering** | Client-Side | Server-Side |
| **Packaging** | Weak | Strong |
| **Data-Binding** | Bi-directional | Uni-directional |
| **DOM** | Regular DOM | Virtual DOM |
| **Testing** | Unit and Integration Testing | Unit Testing |
| **App Architecture** | MVC | Flux |
| **Dependencies** | It manages dependencies automatically. | It requires additional tools to manage dependencies. |
| **Routing** | It requires a template or controller to its router configuration, which has to be managed manually. | It doesn't handle routing but has a lot of modules for routing, eg., react-router. |
| **Performance** | Slow | Fast, due to virtual DOM. |
| **Best For** | It is best for single page applications that update a single view at a time. | It is best for single page applications that update multiple views at a time. |

**React vs React Native**

|  |  |  |
| --- | --- | --- |
| **SN** | **ReactJS** | **React Native** |
| 1. | The ReactJS initial release was in 2013. | The React Native initial release was in 2015. |
| 2. | It is used for developing web applications. | It is used for developing mobile applications. |
| 3. | It can be executed on all platforms. | It is not platform independent. It takes more effort to be executed on all platforms. |
| 4. | It uses a JavaScript library and CSS for animations. | It comes with built-in animation libraries. |
| 5. | It uses React-router for navigating web pages. | It has built-in Navigator library for navigating mobile applications. |
| 6. | It uses HTML tags. | It does not use HTML tags. |
| 7. | It can use code components, which saves a lot of valuable time. | It can reuse React Native UI components & modules which allow hybrid apps to render natively. |
| 8. | It provides high security. | It provides low security in comparison to ReactJS. |
| 9. | In this, the Virtual DOM renders the browser code. | In this, Native uses its API to render code for mobile applications. |

**React vs Vue Js**

|  |  |  |
| --- | --- | --- |
|  | **ReactJS** | **Vue Js** |
| **Definition** | React is a declarative, efficient, flexible, open-source JavaScript library for building reusable UI components. | Vue is an open-source JavaScript library for building reusable user interfaces and single-page applications. |
| **History** | It was created by Jordan Walke, a software engineer at Facebook. It was initially developed and maintained by Facebook and later used in its products like WhatsApp & Instagram. Facebook developed React in 2011 for the newsfeed section, but it was released to the public on May 2013. | Vue was created by Evan You, a former employee of Google worked on many Angular projects. He wanted to make a better version of Angular, just extracting the part which he liked about Angular and making it lighter. The first release of Vue was introduced in February 2014. |
| **Learning Curve** | React is not a complete framework, and the more advanced framework must be looked for the use of third-party libraries. It makes the learning of the core framework not so easy. It adds some complexity to the learning curve as it differs based on the choices you take with additional functionality. | Vue provides higher customizability, which makes it easier to learn than Angular or React. Vue shares some concepts with Angular and React in their functionality. Hence, the transition to Vue from Angular and React is an easy option. Also, the official documentation is well written and covers everything the developer needs to build a Vue app. |
| **Preferred Language** | JavaScript/JavaScript XML | HTML/JavaScript |
| **Size** | The size of the React library is 100 kilobytes (approx.). | The size of the Vue library is 60 kilobytes (approx.). |
| **Performance** | Its performance is slow as compared to Vue. | Its performance is fast as compared to React. |
| **Flexibility** | React provides great flexibility to support third-party libraries. | Vue provides limited flexibility as compared to React. |
| **Coding Style** | React uses JSX for writing JavaScript Expression instead of regular JavaScript. JSX is similar to HTML code within the JavaScript expressions. React takes everything as Component, and each component has its own lifecycle methods. | Vue coding style is little similar to Angular. It separates HTML, JS, and CSS as like web developers have been used to the web development scenario for years. But, it also allows using JSX if you prefer. Vue's take of the component lifecycle more intuitive than React's. |
| **Data Binding** | React supports one-way data binding. The one-way data binding refers to a single source of truth. React flows in a single direction, and only the model can change the app's state. | Vue supports both one-way and two-way data binding. The two-way data binding is a mechanism where UI fields are bound to model dynamically. If the UI components change, model data is also changed accordingly. |
| **Tooling** | React has great tooling support. It uses third-party CLI tool (create-react-app), which helps to create new apps and components in React Project. It has excellent support for the major IDEs. | Vue provides limited tooling support as compared to React. It has a Vue CLI tool, which is similar to the create-react-app tool. It gives supports for major IDEs but not as good as React. |
| **Current Version** | React 16.8.6 on March 27, 2019 | Vue 2.6.10 on March 20, 2019. |
| **Long Term Support** | It is suitable for long term supports. | It is not suitable for long term support. |



