

ReactJS

Session 1

Assignment1.1

Question: Find out 3 other famous frameworks/library to build UI in data driven web app

Top frameworks/library to build UI in data driven web apps:

1. Angular (2.*)
2. ReactJS
3. Ember
4. jQuery
5. Vue
6. Meteor
7. Knockout
8. Polymer

Assignment1.2

Question: Find out about web-component and figure out, how they are different from React Component

Web Components—the new set of standards currently being added to HTML and the DOM (Document Object Model) by the W3C, the main international standards organization for the World Wide Web. These standards can be categorized into four main features that can be used independently or all together when building a website:

- **HTML Imports:** These make it easier to import HTML documents into other documents.
- **HTML Templates:** These allow you to create inert sections of the DOM within the tag.
- **Shadow DOM:** This provides encapsulation of JavaScript, CSS, and templating so that your web component code remains modular and separated from the rest of the DOM.
- **Custom Elements:** These are APIs for building your own HTML elements.

The goal of these new features is to simplify web development by providing low-level APIs that allow developers to build complex web applications from custom made HTML tags and elements.

React - an open-source, isomorphic JavaScript library that was created with the purpose of providing a high-performance solution for the “V” in MVC (Model View Controller). It uses one-way data binding with immutable data structures and server-side rendering to give it a performance edge over competing technologies.

Here are some of the key differentiators of React:

- **The Virtual DOM** is an entirely different technology that helps React achieve its amazing rendering speeds. The Virtual DOM consists of two copies, the original and an updated version that reflects changes received from the view. A React function checks the differences and outputs a stream of DOM operations that only alter the parts of the view that actually changed, saving time and resources that would have otherwise been spent recreating the entire updated view.
- **JSX files** combine HTML and JavaScript code into a single file. This can be counterintuitive to what most web developers learn in school, however React's sleek and simple syntax means you get a single, self-contained component that tells you exactly how it will be rendered.
- **Server-side rendering** speeds up initial page loads by allowing the app to pre-render the initial state of React components on the server. By supporting both client-side and server-side rendering, it's possible to use the Virtual DOM system described above to render changes to the view quickly and efficiently

React and **Web Components** are built to solve different problems. Web Components provide strong encapsulation for reusable components, while React provides a declarative library that keeps the DOM in sync with data. The two goals are complementary. As a developer, one is free to use React in one's Web Components, or to use Web Components in React, or both.

Assignment1.3

Question: Find out other UI data model apart from Relay

1. Falcor
2. Flux
3. Apollo
4. BreezeJS
5. JayData
6. Jetstream

Assignment1.4

Question: List at least 3 libs from React Community, which is trending now days.

1. React Bootstrap
2. React Router
3. Formsy-React
4. Material UI
5. React Foundation
6. React Toolbox
7. Belle
8. Grommet
9. React DnD
10. React Motion
11. A comprehensive list of all react components/libraries/tools at <http://devarchy.com/react-components>