**Installation:**

Install node and npm.

**Creating project:**

Create folder where you need to create react project.

Execute below command.

react-sample is the project name

npx create-react-app react-sample.

**Build and deploy**

npm run build – will generate production build

npm install – g serve

serve -s build

**Starting the project:**

Go to the project folder and execute below command.

npm start.

**Introducing JSX**

<https://reactjs.org/docs/introducing-jsx.html> check this url about JSX.

**BABEL in React**

Babel is a toolchain that is mainly used to convert ECMAScript 2015+ code into a backwards compatible version of JavaScript in current and older browsers or environments.

React uses [JSX](https://facebook.github.io/react/docs/jsx-in-depth.html) syntax. Babel is a transpiler i.e. it converts the JSX to vanilla JavaScript. You can view babel as an intermediate step between your code and "executable" code.

React also uses ES6, which is not supported by most of the browsers. Babel converts the ES6 code to a code which is compatible with the browsers.

The best combination for a mature React project would be React+babel+Webpack. In order to run babel and webpack, you'll need node

**Install react router:**

npm install react-router@next react-router-dom@next

Key in react helps to keeping track of which items have been changed, added, or removed

<https://www.simform.com/reactjs-vs-reactnative/>

**Props**

props are read-only and must not be changed manually throughout the lifespan of a React application, using only props in your React app doesn’t really make it a dynamic app that can respond to user interactions and render accordingly. In order to do that, you need to use state

PropTypes is a special component property that can be used to validate the props you have in a component

Communication between components using props:

[**https://blog.logrocket.com/the-beginners-guide-to-mastering-react-props-3f6f01fd7099/**](https://blog.logrocket.com/the-beginners-guide-to-mastering-react-props-3f6f01fd7099/)

[**https://blog.bitsrc.io/understanding-render-props-in-react-1edde5921314**](https://blog.bitsrc.io/understanding-render-props-in-react-1edde5921314)

**React life cycles**

[**https://www.w3schools.com/react/react\_lifecycle.asp**](https://www.w3schools.com/react/react_lifecycle.asp)

**React Context:**