

REACT JS

A JavaScript Library

What is React JS

- An open source JavaScript library for building user interfaces
- It runs on browser like normal JavaScript code
- Developed by Facebook and has huge community.
- React is Component-Based focused on building UI
- Create component once and use is multiple times
- React helps us to build Single Page Application (SPA) like mobile app

Component in React

Header

Primary card title

Some quick example text to build on the card title and make up the bulk of the card's content.

Header

Secondary card title

Some quick example text to build on the card title and make up the bulk of the card's content.

What is JSX?

- JSX stands for JavaScript XML.
- JSX allows us to write HTML in React.
- JSX makes it easier to write and add HTML in React.

```
function Car(){
```

```

        return <h2>I am a Car!</h2>;
    }

    function Garage() {
        return (
            <>
                <h1>Who lives in my Garage?</h1>
                <Car />
            </>
        );
    }

```

React Features & Popularity

- React is Declarative which means you just tell what you want and React will build the UI for you, you don't have to tell how it should do that.
- React does the DOM updates very efficiently using the Virtual DOM concept.
- Virtual DOM is a light-weight abstraction of the DOM. You can think of it as a copy of the DOM, that can be updated without affecting the actual DOM.
- It has all the same properties as the real DOM object, but doesn't have the ability to write to the screen like the real DOM.
- The virtual DOM gains its speed and efficiency from the fact that it's lightweight. In fact, a new virtual DOM is created after every re-render.
- React easily integrates with existing applications.
- React Native helps to build native mobile apps
- <https://insights.stackoverflow.com/survey/2021#technology>

Topics we will cover

- React Fundamentals
- HTTP calls with React
- Routing with React
- State management with Redux
- Some Utilities

Local Environment Setup

- <https://nodejs.org/en/download/>
- <https://code.visualstudio.com/>
- <https://reactjs.org/>
- `npx create-react-app <app-name>`