React - React is a JS library which is basically used to create UI. It is based on component-based architecture.

React is all about components. Component simply means **a reusable piece of code.**

We can simply refer Component as functions.

or we can say we can create custom HTML element.

Library?

Why ReactJS if we have normal JS?

* Normal JS is **Imperative** **approach** means we have told each step by step approach. In normal JS more code, more details we have give and also low level details. Fetch body element, create child element ,write content into child element and at last append it.
* In React it is **Declarative** **approach** in which we have tell only **end** **state** and react will handle by its own. Less code, easy UI creation, less time.

React follow SPA approach (Single Page Application) means we have single html page and changes according to need dynamically and you are showing different UI and enhanced your performance.

In Netflix when we click on different tab, we see how responsive and smooth it is.

If you want to see the difference check government website and Netflix website.

<p> API call to retrieve temperature and parse it (dynamically change or update) </p>

<p> 102 </p>, here we hard code this value means static value.

React Alternative – Angular and Vue.

**Components –** it is not mandatory that we can reuse your code in components.

**Why React?**

* Reusability increase using components.
* Duplication decreases and follow DRY (Do not repeat yourself) principal.
* We divide our code into component based so our readability increases.
* Separation of concern (due to components), my button code does not impact on my slider code.
* Maintainability increases.

In package.json -> In this file all the dependencies and scripts is listed.

The first file index.js is executed in react App. (Entry point of reactApp)

The first component in React is App component.

npm start – it will convert react code into equivalent html and js code that is browser friendly.

If we want to create component we create js file in src folder and export it to use into another file using import.

This function will return html code not really but jsx code (javascript xml code which is basically html code inside js code). Jsx code is understandable by ourselves but not by browser, so we convert it into browser friendly code using npm start.

We use className in js file because class is already a reserved keyword in js.

**How to make a components?**

1. Create a js file
2. Create a function in that js file
3. In that function we return jsx code
4. Nd then export and import if we want to use that function.

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Refer last 4 min of first lecture of react….

If we want print any text in out custom html element and most appropriate **component** we have to use props.children.

Any text or content is not visible inside component, we have to use props.children to make it visible.