Introduction to React JS

Agenda

- What is React.js?

- Why was React developed?

- React : The Good

- Why should I use React?

- Virtual DOM

- How It Works …

- Most important terms in React

- Create React App

What is React.js?

- Developed by Facebook

- React is a view layer library, not a framework like Backbone, Angular etc.

- It is used as a base in the development of single-page or mobile applications.

Why was React developed?

- Complexity of two-way data binding

- Bad UX from using "cascading updates" of DOM tree

- A lot of data on a page changing over time

- Complexity of Facebook's UI architecture

- Shift from MVC mentality

React : The Good

- Easy to understand what a component will render.

- Easy to mix HTML and JS.

- No complex two-way data flow.

- React is fast!

- React dev tools

Why should I use React?

- Easy to read and understand views

- Concept of components is the *future* of web development

- If your page uses a lot of fast updating data or real time data - React is the way to go

- Once you and your team is over the React's learning curve, developing your app will become a lot faster

Virtual DOM

- A virtual DOM object is a *representation* of a DOM object, like a lightweight copy.

- It has the same properties as a real DOM object, but it lacks the real power to directly change what's on the screen.

- Manipulating the virtual DOM is much faster.

How It Works ...

1. The entire virtual DOM gets updated.

2. The virtual DOM gets compared to what it looked like before you updated it. React figures out which objects have changed.

3. The changed objects, and the changed objects only, get updated on the *real* DOM.

4. Changes on the real DOM cause the screen to change.

Most important terms in React

- Component

- Unidirectional Data Flow

- State

- Props

- JSX

- Virtual DOM

Create React App

For React Setup :

- setting up Babel to transpile JSX into browser-ready code.
- configuring Webpack to bundle your project assets.

But, to saves you from time-consuming setup and configuration

1. Open your Terminal or console and run: npm install -g create-react-app

2. create-react-app name

3. npm start

CODE DEMO

Any Queries ?

Exercise :

1. i) Create a layout containing Header,Main,Aside and Footer Component.

   ii) Create a Button in Main Component.

   iii) On Click of the button in Main Component every time, change the counter in the Header Component.