React JS Notes

What is React JS?

React, sometimes referred to as a frontend JavaScript framework, is a JavaScript library created by Facebook.

React is a tool for building UI components.

How does React Work?

React creates a VIRTUAL DOM in memory.

Instead of manipulating the browser's DOM directly, React creates a virtual DOM in memory, where it does all the necessary manipulating, before making the changes in the browser DOM.

React only changes what needs to be changed!

React finds out what changes have been made, and changes only what needs to be changed.

You will learn the various aspects of how React does this in the rest of this tutorial.

****

React Props

Props are arguments passed into React components.

Props are passed to components via HTML attributes.

props stands for properties.

React Props are like function arguments in JavaScript and attributes in HTML.

To send props into a component, use the same syntax as HTML attributes:

Example
Add a "brand" attribute to the Car element:
const myElement = <Car brand="Ford" />;

React Events

Just like HTML DOM events, React can perform actions based on user events.

React has the same events as HTML: click, change, mouseover etc.

Adding Events

React events are written in camelCase syntax:

onClick instead of onclick.

React event handlers are written inside curly braces:

onClick={shoot} instead of onclick="shoot()".

React:

<button onClick={shoot}>Take the Shot!</button>

HTML:

<button onclick="shoot()">Take the Shot!</button>

Example:

Put the shoot function inside the Football component:

```
function Football() {
  const shoot = () => {
    alert("Great Shot!");
  }

  return (
    <button onClick={shoot}>Take the shot!</button>
  );
}

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(<Football />);
```

• •

React Hooks

Hooks were added to React in version 16.8.

Hooks allow function components to have access to state and other React features. Because of this, class components are generally no longer needed. Although Hooks generally replace class components, there are no plans to remove classes from React.

What is a Hook?

Hooks allow us to "hook" into React features such as state and lifecycle methods.

React useState Hook

The React useState Hook allows us to track state in a function component. State generally refers to data or properties that need to be tracking in an application.

Import useState

To use the useState Hook, we first need to import it into our component.