

Assignment - 5

* Is JSX mandatory for ReactJS.

JSX is not a mandatory for React. Using React without JSX is especially convenient when you don't want to set up compilation in your build environment.

Each JSX element is just syntactic sugar for calling `React.createElement(Component, props, ...child)`.

* Is ES6 mandatory for React

ES6 is not mandatory for React as React has many pre defined functions which use `.in` support of `class` JavaScript like.

Normally you would define a React Component as a `plain JavaScript class`.

`class Greeting extends class React.Component {`
`render() {`

`return <h1>Hello, {this.props.name}</h1>;`

`}`
`}`

If you don't use ESB you may use the Create-react-class module instead.

```
var CreateReactClass = require('create-react-class')
var Greeting = CreateReactClass({
  render: function () {
    return <h1> Hello, {this.props.name} </h1>
  }
});
```

★ How can I write comments in JSX

JSX comments begin and end with curly braces `{ }`, followed by the opening curly brace `{` of a forward slash and an asterisk. After that is the comment and lastly, an asterisk, a forward slash and the closing curly brace `}`.

`{/* This is a JSX comment */}`

★ Fragments in React

A common pattern in React is for a component to return multiple element fragments. Let you group a list of children without adding extra nodes to the DOM.

With React `> 16`

`return (`

`<React.Fragment>`


```
<div A />  
  <div B />  
    <div C />  
  </React.Fragments />  
};  
};
```

* What is Virtual DOM.

It is a programming concept where an ideal or Virtual representation of a UI is kept in memory and syncs with the "real" DOM by a library such as ReactDOM. This process is called Reconciliation.

This approach enables the declarative API of React. You tell React what state you want the UI to be in and it makes sure the DOM matches that state. This abstracts out the attribute manipulation, event handling, and manual DOM updating that you would otherwise have to use to build your app.

* What is Reconciliation in React?

The Reconciliation makes React work faster. It is the process through which React updates the Browser DOM.

The concept behind the working of Reconciliation process are:

- Diffing Algorithm.
- Virtual DOM

The term rendering in React APP can closely be identified as making or becoming. In traditional Rendering

- Creates a DOM
- Renders any new data to the DOM even if data is similar to previous one.

* What is React fiber.

A fiber in a react is just a plain javascript object with some properties. It is a complete rewrite of react that fixes a few long-standing issues and offers incredible and offers opportunities handling into the future.

* Keys.

Keys help React identify which items have changed, are added, or are removed. Keys should be given to the elements inside the array to give the elements a stable identity:

When you don't have stable IDs for rendered items, you may use the `index` as a key as a last resort.

We don't have to use indexes as the key if the order may change. This can negatively impact performance and may cause issues with component

* What is Props in React? ways to use them.

Props are Arguments of the functional components, whether you declare a component as a function or a class, it must never modify its own props. Consider this sum function.

```
function Sum (a, b) {  
  return (a + b);  
}
```

Such function are called pure because they do not attempt to change their inputs and always return the same result for the same inputs.

All React components must act like pure function with respect to their props.

* What is Config-driven UI

It is a user interface that is built and configured using a declarative configuration file or data structure rather than being hardcoded. The configuration file or data structure typically contains information about the structure of the UI, such as the layout of the element, the properties and behaviours of each element, and any data sources API that the UI interact with.