

Foundational Elements of React

Before we dive into the patterns of React, let's revise the building blocks of a React component.

WE'LL COVER THE FOLLOWING ^

- JSX
- The `Render()` function
- Props

JSX

JSX is nothing more than syntactic sugar on top of JavaScript, allowing you to write what seems to be HTML but in JavaScript. Have a look at the following code snippet

```
import React from 'react';
require('./style.css');

import ReactDOM from 'react-dom';
import App from './app.js';

ReactDOM.render(
  <App />,
  document.getElementById('root')
);
```

Lines 6 to 10 use HTML code that gets transpiled into JavaScript and executed.

The `Render()` function

The `render` function is mandatory in all React components. This function is invoked by React in order to generate output, that is, function calls that end up modifying the DOM. Inside `render`, `this` is referencing the component instance (ex: `this.props`, `this.state`)

REMEMBER: `render` must always return something, `JSX` tags or `false/null` in cases where the component should not output any content. JSX syntax must always be enclosed in a single root node. In order to avoid the unnecessary creation of `divs` or other elements, React introduced a special component called `Fragment` that can wrap multiple nodes without creating an actual DOM element around them.

Props

Props represent the input values of a component. They are passed as attributes on `JSX` and are accessed through `this.props`. We'll talk about them in more detail in the next chapter.

```
import React from 'react';

export default class Greeting extends React.Component {
  render() {
    return <span>Hello {this.props.name}!</span>;
  }
}
```

Any valid JavaScript element can be sent as a prop: string, boolean, number, object, function, array, etc. Here we send the `name`, a string on **line 7** as a prop.

REMINDER: Props should never be *modified* by the component!

Now that we have revised a basic component of React i.e. components (pun fully intended), let's move on to how `state` is used in React.