JSX

React uses a special syntax called JSX.

- JSX is a language written by Facebook that simplifies the amount of code we have to write.

- JSX allows us to use XML inside of our JavaScript. Like XML, JSX has tags. Tags can have attributes and children.

JSX

- JSX is not something that browsers understand so we have to transpile it to JavaScript before serving it to the browser

- We previously transpiled ES6 code into ES5 code using Babel

- We can also use Babel to transpile our JSX code into JavaScript (more on this to come...)

JSX

JSX is optional. You can use React without it but JSX will make our React code much easier to read and write.

```
// React without JSX
render() {
  return React.createElement(
    "div",
    {className: "foo"},
    "Hello ",
    this.props.name
  );
}

// React with JSX
render() {
  return <div className="foo">Hello {this.props.name}</div>;
}
```

JSX

- React can render HTML tags and React Components. Below is an example of rendering a div tag.

- HTML tags are lowercase. React distinguishes between HTML tags and React components by their casing.

```
var exampleDivElement = <div>
        <h1> Welcome </h1>
        <MyComponent className="foo">Hello World</MyComponent>
    </div>
```

JSX

Why "className" instead of class?

- Since JSX is written in JavaScript, identifiers such as `class` and `for` are discouraged as XML attribute names.

- Instead, React DOM components expect DOM property names like className and htmlFor, respectively

JSX

You can use JavaScript expressions in JSX using curly braces.

```
<h1>Hello {this.user.name}</h1>
```

and also

```
<h1>Total Amount {2 + 2}</h1>
```

Exercise

- Get yourselves setup with 'create-react-app'

- 'create-react-app' to make a sample application

- Get the Hello World application working.