**Making sense of a React component**

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- [Instructor] At the very beginning of the course, I said for a lot of people today, their first interaction with JavaScript is through a JavaScript Framework like React or Vue and I said, if you understand the fundamentals of JavaScript itself, you'll be able to understand what is going on inside a JavaScript Framework like React even if you don't know the framework or the framework specific language. We started out by looking at this React component and now that we're at the end of the course we can revisit the same component to see what is going on so that you can see how all the things you've learned, apply to React as well. Off the top, the component imports two items, React from react and PropTypes from prop-types. You now know what this means, it means somewhere else in the project sits something called react and something called prop-types and we're just importing it into this component so that we can use it in that component. Then there's a constant called imgWithClick that sets up an object that has a single property, cursor and pointer. In React, developers prefer to use objects for pretty much everything. So you'll see a lot of the time when you want to save any kind of data, you save it in an object, subjects are very easy to work with and as you've seen through this entire course objects are the core piece of JavaScript. So placing data and objects just make sense. Scrolling one more line down, we get the main export component from this file. Now, remember how we set up a class earlier and I put the class in a separate file and then export the class out, React components work exactly the same way. So you can think of a React component as a React version of a JavaScript class. Here the developer has defined a const called Photo capitalized. And if we scroll all the way to the bottom you'll see Photo exported down here. So if we call this file, you get the photo component, the photo class and then you can make an instance of it. What happens inside the photo component? Well, first it sets up a series of parameters just like we did with a class. So here, inside the parentheses you have a list of all the parameters or properties that are going to be used inside the photo component. Then there's an arrow function that captures all of these properties and uses them to do different things. Inside the arrow function, we can do myriad of different things. In this case, a new constant is setup that has another object. This one was called imgStyle and has an object that sets some properties for CSS, so margin and display and then below there's a conditional statement that test to see is the current layout, a column or not and if so, it sets some other properties, proposition left and top. Then there's a click handler. This is an arrow function that effectively does the same thing as an event listener. So listens for an onclick event on the current object and then it does something and then the component returns content. So here we have what's known as JSX. JSX is an extension to the JavaScript coding language that allows you to output content in an even simpler way than when we use the template literal. So you can see, it looks very similar to a template literal except you don't have the back ticks and you don't need to put the dollar symbol in front of these curly brackets to make it work. But looking at this you can see the formatting is exactly the same and you recognize that these pieces behave the same way as everything else has been working with so far, just a tiny bit different because it's in React. Scrolling even further down, we have an export of a constant called photoPropType. This one uses the prop-types that was imported at the very top and sets up a shape for the objects. What's happening here is the developer has set up a set of rules for what the different properties in this component must look like. So it says, the key property must be a string. The source property must be a string and it also is required for the components output content and so on and scrolling down we have photo.propTypes and this is a standard object. So here we have a set of properties and then we have a set of methods and these methods uses arrow functions to pass values and you'll notice the methods are using arrow functions in JavaScript. You can't do that because then everything breaks but because this is inside React you can actually use arrow functions inside your methods. That's just an idiosyncrasy of React. And then finally, like I said, we export out to the photo component or the photo class to make it work. Now here's the thing, you don't need to understand what is going on in this particular React component. I mean, I pull this out of a larger React project and it's a standalone piece of code that does nothing. If you run it, it will do nothing. It doesn't work in the current context I'm presenting it. My point with all this is now that we've gone through all these different things in the course you can recognize all the pieces of this component, even though you've never touched React before, even though you don't know JSX and even though you may have never had experience working With JavaScript at all. Understanding the fundamentals of JavaScript gives you the tools and language you need to be able to understand what is going on in JavaScript frameworks because JavaScript frameworks are built on top of Vanilla JavaScript. Now you have the tools and you are ready to get started on your learning journey to extend your knowledge into JavaScript Frameworks as well.