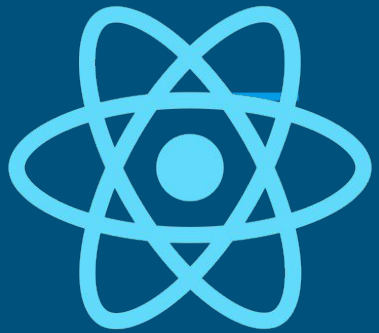
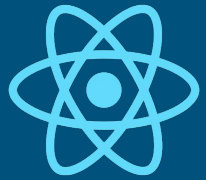
Intro to React

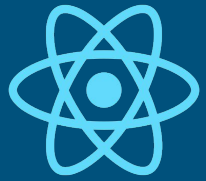


What is React?



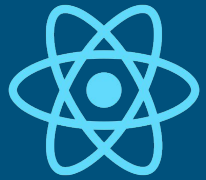
- React is a javascript library for building UI components
- 3 main concepts
  - Declarative
  - Component-Based
  - Learn Once, Write Anywhere
-

Setup and installation



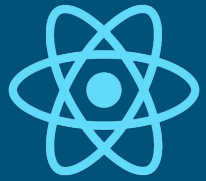
- Just get node: nodejs.org
- And some text editor, recommend vs code

Basic project



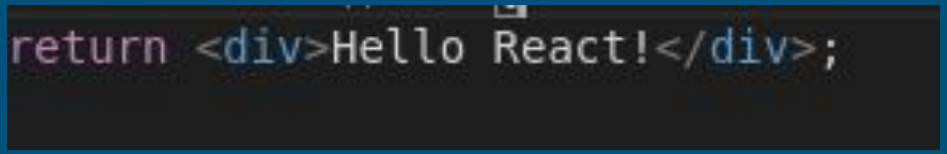
- If you want a project immediately to play around with run following commands:
  - npm install -g create-react-app
  - create-react-app my-app
- This generates a folder called my-app inside will have basic react project made
- Delete js files in their and replace with own
- However wouldn’t recommend this method for creating actual projects

Setup with webpack



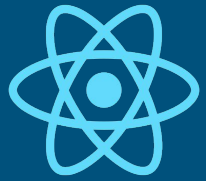
- Would recommend using webpack
- Uses webpack.config.js file to set config of your system
- Webpack is just an easy way of bundling your js scripts
- If curious about how it works will have links at the end
- Lot of features to it, too many for this tutorial
- My one for a basic setup is on github.com/dyllew3/react-proj
- Then when installed run command: npm install
- Source code in src file, run “npm run start” to start website

JSX elements



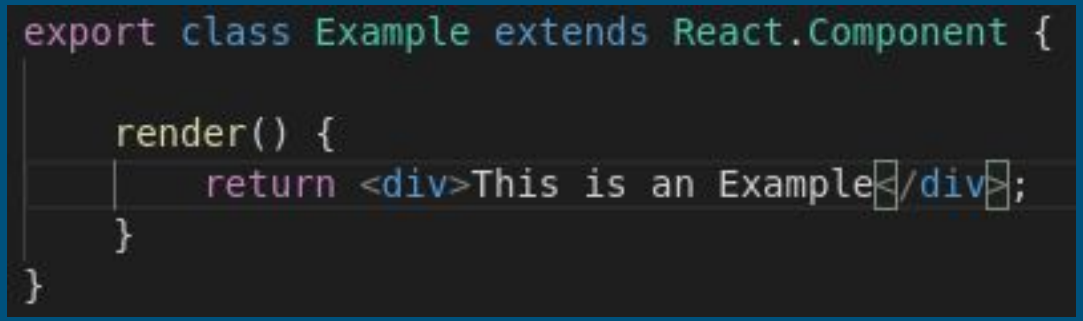
- This a react element called a jsx element, neither html nor javascript but will be rendered to html
- Able to return them from functions and set them as variables or constants

Rendering



- Use ReactDOM to render your jsx element and insert it into the html page

Classes

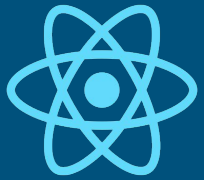


Can use classes to create react components by extending react.component.

These can have the render function which returns a jsx element and allows the class to be rendered in html. To instantiate it you need <Example />

The export keyword just means the function/class/variable can be imported by other files

Properties



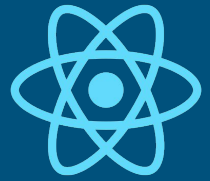
- Can pass properties to classes when instantiating them
- Can set them on instantiation
- Builtin in property className which sets css classname of elements

```
export class Example extends React.Component {

    constructor(props) {
        super(props);
    }

    render() {
        return <div>This is {this.props.name}</div>;
    }
}
```

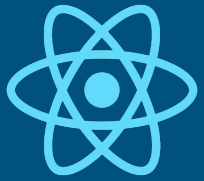
Properties



- Can set when loading by just assigning when using jsx element
-

```
<Example name={"Lizard Man"} />,
```

Conditional Rendering



Allows you to conditionally load items

```
function bloop(y){
  if(y){
    <div>true</div>
  }
  else {
    <div>false</div>
  }
}
```

Get developer tool for chrome

- Helpful for debugging allows you to see react elements in element inspector
- https://chrome.google.com/webstore/detail/react-developer-tools/fmkadmapgofadopljbjfkapdkoienihi?hl=en
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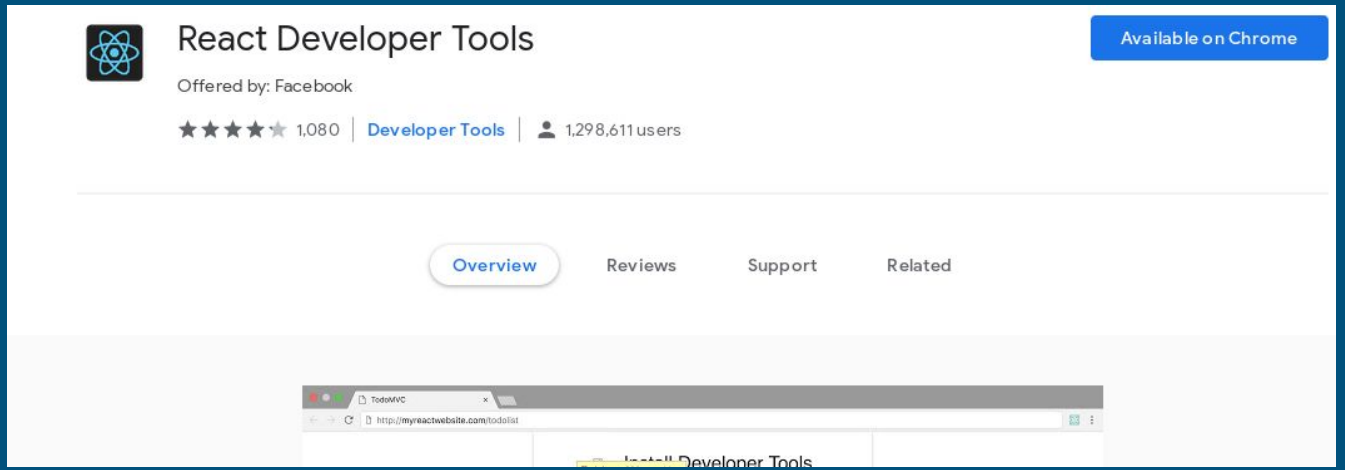
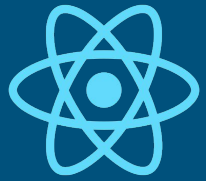


Further tips and reading



- Typescript: https://www.typescriptlang.org/
- Typescript React: https://www.typescriptlang.org/docs/handbook/react-&-webpack.html
- Reactjs.org - Check out docs for more advanced features
- Creating setup: https://medium.freecodecamp.org/part-1-react-app-from-scratch-using-webpack-4-562b1d231e75
- Sass(better css basically) - https://sass-lang.com/