React and Redux: Lesson 1

Introduction, theory and your first react component

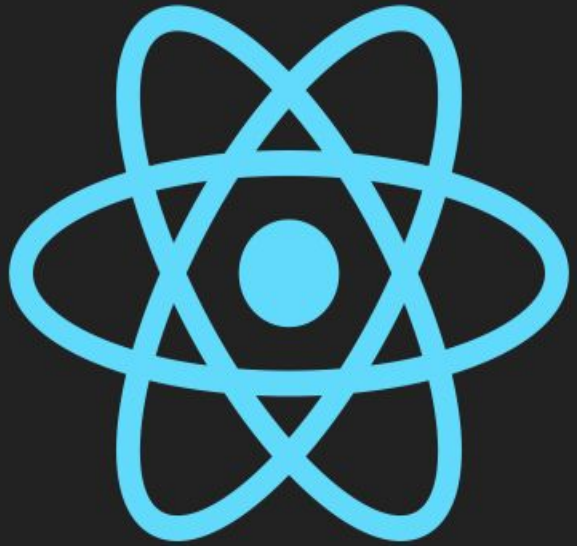
William Abboud

* Covers React v15 - 16

Who is this course for ?

- People comfortable with JavaScript
- People with excellent knowledge of HTML
- People who want to learn the two hottest JS libraries out there these days

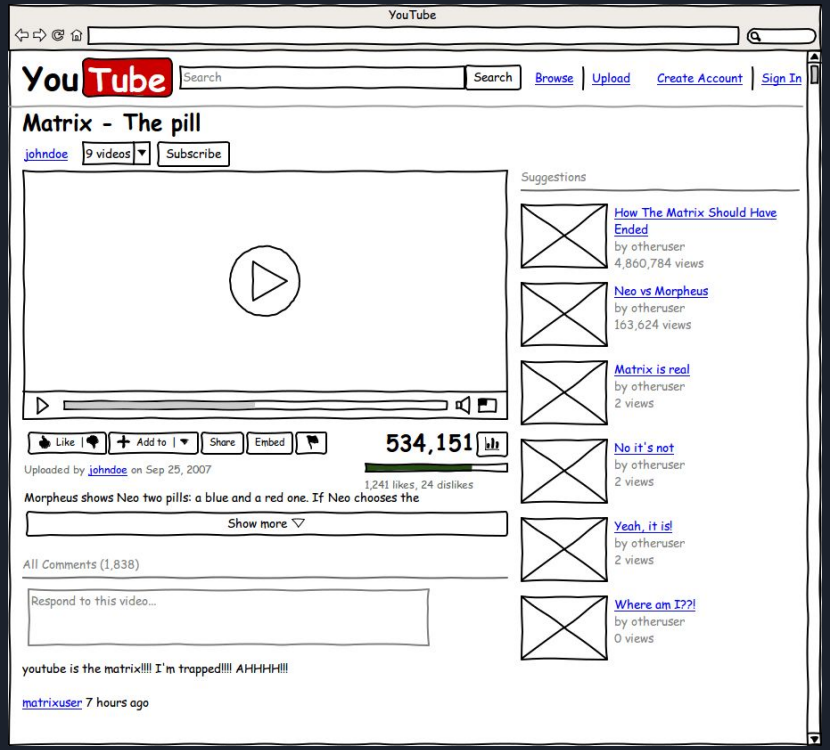
React



Just what the hell is React ?

React is a JavaScript library which makes it easy to break down website/webapp's UI into easy to use units called "Components".

Components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9 videos
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534,151
Uploaded by johndoe on Sep 25, 2007
1,241 likes, 24 dislikes
Morpheus shows Neo two pills: a blue and a red one. If Neo chooses the
Show more
All Comments (1,838)
Respond to this video...
youtube is the matrix!!!! I'm trapped!!!! AHHHH!!!
matrixuser 7 hours ago
Suggestions
How The Matrix Should Have Ended
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4,860,784 views
Neo vs Morpheus
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163,624 views
Matrix is real
by otheruser
2 views
No it's not
by otheruser
2 views
Yeah, it is!
by otheruser
2 views
Where am I??!
by otheruser
0 views

The World without React

```
$(document).ready(function () {
  $.getJSON('faq.json', function (data) {
    if (data.info.responseCode === 200) {
      let dl = $('<dl></dl>')
      $.each(data.faqs, function (index, obj) {
        let div = $('<div></div>')
        let dt = $(`<dt data-id=${index}>Q: ${obj.question} <span>[+]</span></dt>`)
        let dd = $(`<dd data-id=${index}>A: ${obj.answer}</dd>`)

        div.append(dt).append(dd)
        dl.append(div)

        dd.hide()
        dt.on('click', function () {
          let $this = $(this)
          let $span = $this.find('span')

          dd.toggle(300)
          $this.toggleClass('clicked')

          if ($this.hasClass('clicked')) {
            $span.text('[-]')
          } else {
            $span.text('[+]')
          }
        })
      })
      dl.appendTo('body')
    }
  })
})
```

Do we need React ?

The short answer imo is - No !

You don’t need React to create websites these days or any other framework or library for that matter.

However, React makes it really easy to create single responsibility UI units (Components) by giving you the necessary tools to create them in a way that follows the principles of single responsibility, low coupling, encapsulation and composition to the dot.

Note: (If you use it correctly)

```
var Accordion = function(containerElSelector, data) {
    if ( !$.isArray(data) || !data.length ) {
        throw new Error("Please supply an array of objects with question and answer properties");
    }

    function createQuestion(questionText, $answerEl) {...
    }

    function createAnswer(answerText) {
        var answerEl = $('<dt class="answer">'+ answerText +'</dt>');
        answerEl.hide();

        return answerEl;
    }

    $(document).ready(function() {
        var accordionContainer = $(containerElSelector);

        if ( !accordionContainer.length ) {
            throw new Error("Please supply a container element to attach the accordion to.");
        }

        data.forEach(function(questionAndAnswer) {
            var accordionEl = $('<dl class="accordion-item"></dl>');
            var answerEl = createAnswer(questionAndAnswer.answer);
            var questionEl = createQuestion(questionAndAnswer.question, answerEl);

            accordionEl.append(questionEl);
            accordionEl.append(answerEl);
            accordionContainer.append(accordionEl);
        });
    });
};
```

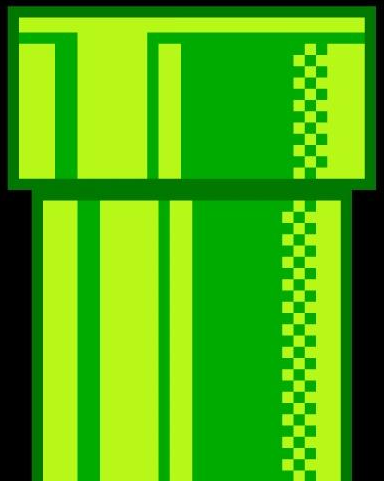
Photo by Kelvyn Ornettte Sol Marte on Unsplash

- NodeJS 8.x.x and above
- Babel - to transpile JSX, ES6 JavaScript to ES5*, sourcemaps and more
- Webpack
- ESLint
- Jest
- React Create App

* Technically there are browsers out there that fully support ES6 now days - https://kangax.github.io/compat-table/es6/

Photo by Temple Cerulean on Unsplash

One way Data Flow and props



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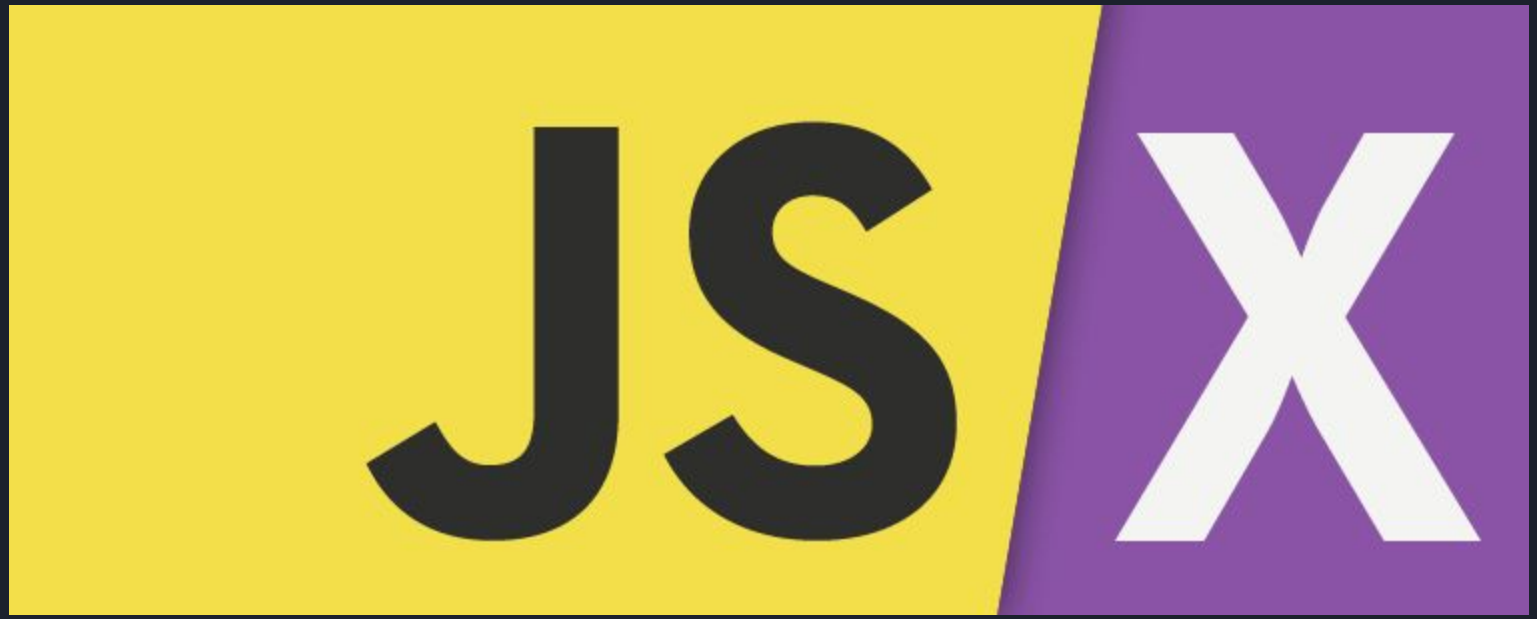
Sample React Component

```
6  import·React·from·'react';
7
8  function·renderListItem(child,·i,·listItemClassName)·{
9  ····return·(
10 ········<li·key={i}·className={·listItemClassName·}>
11 ············{·child·}
12 ········</li>
13 ····);
14 }
15
16 function·List(props)·{
17 ····const·{·listClassName,·listItemClassName,·children·}·=·props;
18 ····const·otherProps·=·Object.assign({},·props);
19
20 ····/*·we·don't·need·these·on·the·<ul>·*/
21 ····delete·otherProps.listItemClassName;
22 ····delete·otherProps.listClassName;
23 ····delete·otherProps.children;
24
25 ····return·(
26 ········<ul·className={·listClassName·}·{...otherProps}>
27 ············{·children.map((child,·i)·=>·{
28 ····················return·renderListItem(child,·i,·listItemClassName);
29 ············})·}
30 ········</ul>
31 ····);
32 }
33
34 List.propTypes·=·{
35 ····listClassName:·React.PropTypes.string,
36 ····listItemClassName:·React.PropTypes.string,
37 ····children:·React.PropTypes.array.isRequired
38 };
39
40 export·default·List;
41
```



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