General notes

03/10/18

Searched for credible sources to learn react.

Progression will be logged in a git repo (Bitbucket).

Findings:

Research functional programming

Egghead has React tutorial with good references

Set a goal for myself. Create a mini app that calculates certain average values for special dice rolls.

Talked to React developer to get some inside knowledge.

03/11/18

Moved from personal bitbucket account to school github account.

Moved from egghead to advancedreact.

Advanced react set up and ready to go.

Learning about components

Comments are supposed to be put inside {} -> these put you into javascript land

No siblings in components

Learning about CSS in react

Created a layout using components

Learning about props

Learning about passing dynamic data

A component is basically just an object

Console gives comments about possible codesmells or unused pieces of code

Learning about stateless functional components

Learned about implicit returns:

**const** Header = (props) => (

Learned about react routing

Learned about page not found

Learned about helper functions & utility functions -> possible to only load in a single function

React rule: don’t touch the dom

Learned about event handlers

Functions are called inline, without parenthesis because else they will be called on page load

You can pass an event object to the called method

Refs allow you to reference dom nodes on the page

‘this’ does not always refer to the entire component. This has to do with binding. There is a whole bunch of lifecycle events for example componentDidMount() -> this will mount as soon as the component is loaded. So, all of the built-in methods of react bind this to the component object. When we add methods, they are not bound by default. That means its hard to reference the component inside of one of its own methods. The solution is to bind our own methods as well.

Example:

constructor() {  
 **super**();  
 **this**.goToStore = **this**.goToStore.bind(**this**);  
}

Side note:

super(); must always be called first in a constructor. This passes in the react parent.

This however might clutter your constructor when you have a lot of custom functions. If you find yourself having a lot of custom functions you can instead use them as a property. ‘this’ does bind to properties.

Example:

goToStore = (event) => {

Learning about state

State is an object that holds data that itself needs as well as some children may need. You can think of state as a single state of truth. Data sometimes lives in multiple places. For example, store data in a DOM element. With react the golden rule is don’t touch the dom. So, we just want to update the item that we want to change, not everything. So, state is a place where data lives. This way all the pieces of data that use this state get updated once the state is updated.

To pull values out of form fields, use refs

Example:

**import** React **from** 'react';  
  
**class** AddFishForm **extends** React.Component {  
  
 nameRef = React.createRef();  
 priceRef = React.createRef();  
 statusRef = React.createRef();  
 descRef = React.createRef();  
 imageRef = React.createRef();  
  
 createFish = (event) => {  
 event.preventDefault();  
  
 **const** fish = {  
 nameRef: **this**.nameRef.value.value,  
 priceRef: parseFloat(**this**.priceRef.value.value),  
 statusRef: **this**.statusRef.value.value,  
 descRef: **this**.descRef.value.value,  
 imageRef: **this**.imageRef.value.value,  
 };  
  
 console.log(fish);  
 };  
  
 render() {  
 **return** (  
 <form className={'fish-edit'} onSubmit={**this**.createFish}>  
 <input name="name" ref={**this**.nameRef} type={"text"} placeholder={"Name"} />  
 <input name="price" ref={**this**.priceRef} type={"text"} placeholder={"Price"} />  
 <select name="status" ref={**this**.statusRef}>  
 <option value="available">Fresh!</option>  
 <option value="unavailable">Sold Out!</option>  
 </select>  
 <textarea name="desc" ref={**this**.descRef} type={"text"} placeholder={"Desc"} />  
 <input name="image" ref={**this**.imageRef} type={"text"} placeholder={"Image"} />  
 <button type={"submit"}>Add Fish</button>  
 </form>  
 );  
 }  
}  
  
**export default** AddFishForm;

Now that we have the constant “fish” we have to get it into state, so that It can be used across multiple components. App is the parent that holds all components, so this is where we want the data to live. So, we need to go into our app component and create state. This is done by setting property on the highest parent component.

Example:

**class** App **extends** React.Component {  
 state = {  
 fishes: {},  
 order: {},  
 };

Now we have to be able to reach these states. This is done through a method on the same parent component. First, you have to pass down the method as a property.

Example:

Parent:

<Inventory addFish={**this**.addFish}/>

Child (here addFish is a property, that’s why you need to add .props):

<AddFishForm addFish={**this**.props.addFish}/>

Grandchild:

**this**.props.addFish(fish);

The lowest level component how has access to the state. Now we have to fill the state. This is never done directly, this I mutation and is wrong. First, we need to take a copy of the existing state. Then we add our new element to the copy. Finally, we have to set the new object to state.

Example:

addFish = fish => {  
 **const** fishes = { ...**this**.state.fishes };  
 fishes[`fish${Date.now()}`] = fish;  
 **this**.setState({ fishes });  
};