React Notes

Npm init -y, initialize a node server package.json. package.json gives the anchor to install ndoe modules. We create an express app after initializing express. And app.use allows us to use everything in the folder to serve it up statically. \_dirname+’/

Can use ReactDOM.render to render item to root. Render takes the html and the js to get element. It looks for index.html.

<script crossorigin src="https://unpkg.com/react@16/umd/react.production.min.js"></script>

This is React

<script crossorigin src="https://unpkg.com/react-dom@16/umd/react-dom.production.min.js"></script>

This is the react-dom. React dom renders the information. React dom Mingling of html and JS is JSX. Babel is a js compiler. React create component takes type, props and what is inside of the element.

Type is the element to create. An id needs to be a property of the element so that is the second element. Any class or ids are props. Cannot do images in jsx with img tag as every tag must be closed. Each jsx creates a react element, not a dom elemnt.

{saleOn() ? 9.99 : 59.99}

Ternary operator so if saleon then 9.99 else 59.99. React elements are essentially just regular javascript objects. React Dom. Render takes to args, what to render and where to render. The where is the actual dom element. The what is a react element.

React Virtual Dom, when react renders it is sent a bunch of react elements. It creates a structure. First time renders takes eeverything and puts it into the actual dom. If react needs to update the virtual dom, it only updates the particular tree. It compares the copy to the original and updates what needs to be updated.

Props are immutable, they are managed by parent not by the component itself. All props are meant to be pure variables.

Any time we have a react component we can add attributes.

Map is the same as forEach, but we make an array each time we loop.

React works a lot better when we give the elements we map from an array a key which can essentially be an index or some other variable. We map though the array, build a new array of components and we can update props that way.

New Date().getFullyear(), javascript Date Object. Must use `` if using the ${syntax}

Object literals

Const name = ‘’

Const age =

Const job = ‘’

Const prop = ‘aPropertyName’

Const x = {

Name,

Age,

Job,

[prop]:’Hello’

}

This bracket notation is now given the name of the prop. This is reusing a variable property name.

Const abilities = [Speed, Smart, Crazy]

Const datafromapi = {

Name: Thanos,

Age: 1000000,

Job: Villian,

Abilities:[Strength, …abilities, telepathy, immortal, destruction]

}

Destructuring

Const {name, age, job} = dataFromApi

With spread syntax, it unpacks in place without having to do the looping.

If we use

Const x = {

Name: Francois

}

Const a = {…x}

A is a copy of abilities, rather than a pointer to the abilities which changes the variable as well.

So by changing a.name it does not change x.name. … loops through array or key value pairs.

setInterval can help run a code x amount of times, given the argument and first function is a function or callback function.

Prototypes are added to every class.

Wigth classes we use class Shape{

Constructor(h, w, tyope){

This.h,

This.w,

etc

}

}

React.Component has a lot of stuff that our react classes can inherit. Classes in react must also have the render method in order to return the JSX. Constructor runs when the object is initialized. We must call this with the super class. In a class base component we need to use this. Props. We usually use the map function to build an array of components.

Webpack creates the development server for us. Eslint are built in to alert us of errors in our code.

We do not need StrictMode. Gives us helpful errors however.

State:

The value of variables at any given time. We can initialize state using this.state in the constructor.

setTimeout(()=>{

            this.setState({

                text:"State has been updated."

            })

        }, 2000)

Set timeout allows us to update the dom within a given interval. Can only use rocket functions in settimeout and react. This is because the rocket function does not cerate a new this.

In the onClicks, we don’t run code we pass the code that we want to run. Every event comes with the event object that allows us to prevent default.

Everytime state changes render is called and is able to update the Dom with ne state. State gives us a single source of truth.

Remember spread syntax can be used to create a copy.

Component LifeCycles.

React is its own thing. Server will be node/ express, We make an http request, node packages js, html and css. Each http request returns json. We can use axios to make http requests.

Nasdaq, openweathermap: Whalburger891991%%

Mcafee: shbad83u2@^#%JJAB@

Yodlee: 611&&T@haghs0xksa2\*2nd

Http request are asynchronous, javascriipt will not wait for response it keeps on moving. State is meant for the very thing where data need sto change. SetState should never be in render as it gets caught in an infinite loop, as setstate is called each time it renders which causes re render. Component DidMount

This is the payload. Componentdidmount is called autpmatically after the first render. The constructor runs sfirst, render runs second. As soon as first render is done, once componentdidmount is there, it will run it. This can allow the url apis to be called. Update state also causes a rerender, Every React component has to mount. ComponentdidMount is good to initiate wherw you will have external requests. Initializations that require dom nodes should also go here. Any js that needs to run after the component mounted, after first render that’s when we need component did mount.