1. Install nodejs and npm, show 2503 and 2502 error.

Solution:

Go to C:\Windows\temp, right click the folder. Select security, click edit, select users(….), click full control.

A screenshot of a social media post

Description automatically generated

1. Fix a vulnerable npm package in package-lock.json:

npm audit fix, npm will install latest version of package automatically.

不要隨便用，npm start后，會出現下面的error,

*npm ERR! code ELIFECYCLE*

*npm ERR! errno 1*

*npm ERR! react-demo@0.1.0 start: `webpack-dev-server --mode development --hot --open --history-api-fallback`*

*npm ERR! Exit status 1*

*npm ERR!*

*npm ERR! Failed at the react-demo@0.1.0 start script.*

*npm ERR! This is probably not a problem with npm. There is likely additional logging output above.*

*npm ERR! A complete log of this run can be found in:*

*npm ERR! C:\Users\fphwp\AppData\Roaming\npm-cache\\_logs\2019-11-16T20\_17\_37\_176Z-debug.log*

可以用npm update ... (e.g. npm update react)

1. SetState is not a function: 原因是没有bind function. 比如，原来是onClick={handleLogout}, 变成{this.handleLogout}即可解决
2. Indent: Ctrl k + ctrl f
3. ComponentDidMount is after render. The order is constructor, render,componentDidMount.
4. Difference between Component and pureComponent: component doesn’t implement *shouldComponentUpdate()* by default. On the other hand, purecomponent does implement it and perform a shallow comparison on react state and props values.

It increases app performance. Shallow comparison is comparing scala values and references when comparing object.

1. Name Is missing in props validation:

class Greeting extends React.PureComponent {

  render() {

    return <h1>Hi there, my name is {this.props.name}!</h1>;

  }

}

Add following code:

Greeting.propTypes = {

  name: PropTypes.string

};

Greeting後面的是小寫p開頭,name後面的是大寫P開頭

1. Sass: you can use variables and other sass function
2. Promise: A good rule of thumb is to always either return or terminate promise chains, and as soon as you get a new promise, return it immediately, to flatten things.

From <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Using_promises>

JS is single threaded, meaning that two bits of script cannot run at the same time. They have to run one after another.

<https://developers.google.com/web/fundamentals/primers/promises>

1. React-scroll: 随着scroll down, navigation menu的标题随着变色
2. React-parallax-tilt: when mouse move on the image, animation spears.
3. State an props: state is equivalent to local variables in a function. Props, on the other hand, is equivalent to function parameters.

Class SampleFunc extends React.Component{

Render(){

Return <div>Hello {this.props.name}</div>

}

}

<SampleFunc name = “Joni ” />

1. Async function always return a promise, whether you use await or not. That promise resolves with whatever the async function returns, or rejects with whatever the async function throws.

<https://developers.google.com/web/fundamentals/primers/async-functions>

fetch(url).then… equals to await fetch(url).

1. Hook: they are functions that let you hook into React state and lifecycle features from function components. With Hook, you can use state in function, which previously you had to convert it to a class.

useEffect: similar to componentDidMount and componentDidUpdate.

1. Bem: [https://codeburst.io/understanding-css-bem-naming-convention-a8cca116d252#targetText=BEM%20stands%20for%20Block%2C%20Element](https://codeburst.io/understanding-css-bem-naming-convention-a8cca116d252#targetText=BEM stands for Block, Element)

<https://medium.com/fed-or-dead/battling-bem-5-common-problems-and-how-to-avoid-them-5bbd23dee319>

B: block, E: elements, M:modifier, cannot name element inside another element.

1. Sass: Mix are sass functions that group css declarations together. We can use it in any class with @include command. SCSS is Sass version 3. In sass, & take the place of the parent ‘s name.
2. Update set-value and meme in package-lock.json: use

npm install set-value and npm install mem

1. React template: <https://nndou.netlify.com/>
2. Multi lingual react: <https://medium.com/@ricklee_10931/react-multi-lingual-with-react-i18next-57879f986168>

<https://github.com/i18next/react-i18next>

1. Bootstrap: navbar-expand-lg讓nav menu排在一行
2. Bootstrap：mr-auto to force sibling columns away from one another.
3. Country Flag: <https://cdnjs.com/libraries/flag-icon-css>
4. Cannot display background image: set position in css and use style in js file
5. npm ERR! code ELIFECYCLE

npm ERR! errno 1

npm ERR! react-website@0.1.0 start: `webpack-dev-server --mode development --hot --open --history-api-fallback`

npm ERR! Exit status 1

npm ERR!

npm ERR! Failed at the react-website@0.1.0 start script.

npm ERR! This is probably not a problem with npm. There is likely additional logging output above.

npm ERR! A complete log of this run can be found in:

npm ERR! C:\Users\Administrator\AppData\Roaming\npm-cache\\_logs\2019-12-17T05\_47\_36\_515Z-debug.log

解决方法：去webpack.config.js里删除

const ExtractTextPlugin = require(“extract-text-webpack-plugin”);

const extractTextPlugin = new ExtractTextPlugin(“css/app.css”);

1. Position in css: default is static, absolute is positioned to its first no static ancestor element, relative is positioned relative to its normal position.
2. … spread syntax:

<https://stackoverflow.com/questions/40124680/what-does-in-react-native-mean>

1. Z-index: stack order of element.
2. Vh: relative to 1% of the height of the viewport (viewport: the browser window size)
3. Server IP Address in cloudflare:

<https://support.cloudways.com/creating-a-record-cloudflare/>

<https://stackoverflow.com/questions/46764113/how-to-get-the-ip-of-aws-s3-hosted-site>

Goto s3, properties->static website hosting, copy jw.flypenguins.net.s3-website-ap-southeast-2.amazonaws.com,

Goto cmd->ping jw.flypenguins.net.s3-website-ap-southeast-2.amazonaws.com

1. Where to change in aws for cloudflare:



右面Name Servers: 把原來的default值先保存到一個word裏，以備不時之需。然後把cloudflare裏的值複製過來。



把第一個flypenguins.net選中，在右面value的地方輸入cloudflare裏的 值

1. Breakpoint in scss:

- wide (1281px, 1680px)

- normal (981px, 1280px)

-narrow (841px, 980px)

- narrower (737px, 840px)

- mobile (481px, 736px)

- mobile portrait ( null, 480px)

From html5up directive

1. Dasharray in css: 6,6 第一个6代表线的长度，第二个6代表间隔，以此类推下去
2. Cubic-bezier in transition: set your own speed from start to end,it is belonged to transition-timing-function.
3. 522 cannot connect. 按照item 29方式,ping一下，得到32 bytes data后去cloudflare修改即可。
4. Potential vulnerable only in package-lock.json (git not provide merge)
5. npm install <dep>
6. npm uninstall <dep>

Step 2 remove <dep> in package.json where is not appeared before

<https://stackoverflow.com/questions/49582891/proper-way-to-fix-potential-security-vulnerability-in-a-dependency-defined-in-pa>

1. Router reference links:

<https://stackoverflow.com/questions/52859834/redirecting-after-deleting-page-route-in-react-and-redux>

<https://stackoverflow.com/questions/30915173/react-router-go-back-a-page-how-do-you-configure-history>

<https://javamastermind.com/2020/01/16/react-navigation-manage-session-history/>

<https://stackoverflow.com/questions/44121069/how-to-pass-params-with-history-push-link-redirect-in-react-router-v4>

1. Query link to:

<https://spin.atomicobject.com/2019/10/01/a-quick-start-guide-to-query-strings-with-react-router/>

<https://reacttraining.com/react-router/web/api/Link>

1. Promise

<https://medium.com/@theflyingmantis/async-await-react-promise-testing-a0d454b5461b>

<https://medium.com/@theflyingmantis/callbacks-vs-promises-and-basics-of-js-80d3d1515e81>

promise is an object that links the producing and consuming together.

Let promise = new Promise(function(resolve, reject)){}. The function passed to promise is an executor (it is singer).resolve and reject are callbacks. The executor should call only one resolve or one reject. All further calls of resolve and reject are ignored.

1. Closure:

Inner function has access to outer function’s variable.

1. currying:

<https://developer.huawei.com/consumer/cn/forum/topicview?tid=0201233940793580151&fid=23>

1. callback

<https://javascript.info/callbacks>

the second argument is as function that runs when the action is completed.

1. Chain

Promise.then(f1).catch(f2) == promise.then(f1,f2)

The answer is no, first one is chain, when error occurs in f1, can be catched by f2. the second one is unhandled.

<https://javascript.info/promise-chaining>

1. Error handling with promise

new Promise(function(resolve, reject) {

setTimeout(() => {

throw new Error("Whoops!");

}, 1000);}).catch(alert);

Won’t trigger catch. Because only synchronous errors are handled.error is generated not while the executor is running, but later.

new Promise(function(resolve, reject) {  
setTimeout(() => {  
reject(new Error("Whoops!"))  
}, 1000);  
}).catch(alert);

This works.

1. Promise.all

Promise.all([

new Promise(resolve => setTimeout(() => resolve(1), 3000)), // 1

new Promise(resolve => setTimeout(() => resolve(2), 2000)), // 2

new Promise(resolve => setTimeout(() => resolve(3), 1000)) // 3]).then(alert);

The result is [1,2,3].

Even though the first promise takes the longest time to resolve, it’s still first in the array of results.

45 anonymous

They have no name, so called anonymous. They are not accessible outside of ask.

ask(

"Do you agree?",

function() { alert("You agreed."); },

function() { alert("You canceled the execution."); });

46 async and await

Async ensures that the function returns a promise. Await makes JS wait until that promise settles and returns its value. That does not cost any CPU resources, because the engine can do other jobs in the meantime: execute other scripts, handle events, etc.

1. Function expression vs. Function declaration

A function declaration can be called earlier than it is defined. A function expression is created when the execution reaches it and is usable only from that moment.

<https://javascript.info/function-expressions>

1. Variable name

The name must contain only letters, digits, or the $ and \_ .The first character must not be a digit.each word except first starting with a capital letter: myVeryLongName. Capital-named constants are only used as aliases for hard-coded values.(e.g. const COLOR\_RED = “#F00”)

Vs C#

Must Start with letter or \_. May contain characters, decimal digit. Interface start with capital I. Attribute types end with Attribute.Enum use singular for non-flag and plural for flag.

<https://docs.microsoft.com/en-us/previous-versions/dotnet/netframework-1.1/x2dbyw72%28v%3dvs.71%29>

49. data type

NaN, BigInt: > 253-1 or <–(-253-1), null, undefined, type of null is not object. <https://javascript.info/types>

50 type conversions

Number(undefined) – NaN

Number(null) – 0

1. Array

Let arr = new Array(5);

Let arr = [];

(vs. C#:

Int[] arr = new int[5];

)

Push/pop(stack) run fast vs. Shift/unshift(queue) are slow.

52.

When set global parameters, got to .eslintrc, e.g.

  "globals":{

    "SERVICE\_ID": true,

    "TEMPLATE\_ID": true,

    "USER\_ID": true

  }

When set id secret, got to webpack, set DefinePlugin

const definePlugin = new webpack.DefinePlugin({

  SERVICE\_ID: JSON.stringify("your\_service\_id"),

  TEMPLATE\_ID: JSON.stringify("your\_template\_id"),

  USER\_ID: JSON.stringify("your\_user\_id"),

});

After add id value, refresh website does not work, ctrl c, redo npm start, it will works.

53 difference between PureComponent and Component is that React.Component doesn’t implement shouldComponentUpdate(), but React.PureComponent implements it with a shallow prop and state comparison.

54 shallow comparison

Shallow compare does check for equality. When comparing scalar values (numbers, strings) it compares their values. When comparing objects, it does not compare their attributes - only their references are compared

<https://stackoverflow.com/questions/36084515/how-does-shallow-compare-work-in-react>

55 lifecycle

A screenshot of a social media post

Description automatically generated

<https://medium.com/@aravishack/react-js-life-cycle-of-components-6267eb79b564>

1. TypeError: this.getResolve is not a function at object.loader安裝minicssextractplugin:

因为当前sass的版本太高, 直接用npm install sass-loader@7.3.1 --save-dev 就可以了，同名的第三库会自动更换

1. Entrypoint mini-css-extract-plugin = \*

When using miniCssExtractPlugin, it appears the above yellow text. To remove it, uninstall miniCssExtractPlugin, only use style-loader.

<https://github.com/webpack-contrib/mini-css-extract-plugin/issues/23>

58 if image size is too large, use apple preview to choose quality.

59

* Attributes – is what’s written in HTML.
* Properties – is what’s in DOM objects.

A small comparison:

|  | **Properties** | |
| --- | --- | --- |
| Type | Any value, standard properties have types described in the spec | |
| Name | Name is case-sensitive | |
| **Attributes** | |
| A string | |
| Name is not case-sensitive | |

1. querySelector(css) returns the first element for the given CSS selector.
2. document.createElement(tag) – creates an element with the given tag,

Stock location System need to download:

* visual studio community 2019
* visual studio code (code.visualstudio.com, user installer)
* ssms (click link **Download SQL Server Management Studio** on the ssms page)
* node-v…-x64.msi (this already includes npm)

Stock Location system code:

Just copy projects from VS and VS Code, respectively (Including all packages)