**Creating a QR Scanner React App and Deploying on Google App Engine**

**Creating a QR Scanner Locally**

**Phase 00 – Tools & Environment**

* Install **nvm** from [this GitHub repository](https://github.com/coreybutler/nvm-windows#node-version-manager-nvm-for-windows) by downloading the *"nvm-setup.zip”* [file here](https://github.com/coreybutler/nvm-windows/releases)
* Install node.js and npm following [this Microsoft documentation](https://docs.microsoft.com/en-us/windows/dev-environment/javascript/nodejs-on-windows)

**Phase 01 – Create a React App Boilerplate**

* Create a react app boilerplate using the command: -

*npx create-react-app* ***my-app-name***

* If prompted, install “*create-react-app"*
* Once the app has been created, navigate into the project and run *npm start* to test if the react app was created successfully and can run with no errors
* The react app should run with a message letting you know it was compiled successfully.

**Phase 02 – Create a QR Scanner React App**

* Open the entire folder of the react app you created in **Phase 01** in Visual Studio Code
* Navigate to the **“*src”*** folder and open the ***“App.js”*** file.
* Replace the boilerplate code with the following code:-

import React, { useRef, useState } from 'react';

import { Container, Card, CardContent, makeStyles, Grid } from '@material-ui/core';

import QrReader from 'react-qr-reader';

function App() {

const classes = useStyles();

const qrRef = useRef(null);

const [scanResultWebCam, setScanResultWebCam] = useState('');

const handleErrorWebCam = (error) => {

console.log(error);

}

const handleScanWebCam = (result) => {

if (result) {

setScanResultWebCam(result);

}

//qrRef.current.openImageDialog();

}

return (

<Container className={classes.container}>

<Card>

<h2 className={classes.title}>Easy Entry Store QR Code ReactJS</h2>

<CardContent>

<Grid item xl={4} lg={4} md={6} sm={12} xs={12}>

<h3>QR Webcam Scanner</h3>

<QrReader

delay={300}

style={{ width: '100%' }}

onError={handleErrorWebCam}

onScan={handleScanWebCam}

/>

<h3>Scanned by WebCam Code: {scanResultWebCam}</h3>

</Grid>

</CardContent>

</Card>

</Container>

);

}

const useStyles = makeStyles((theme) => ({

container: {

marginTop: 10

},

title: {

display: 'flex',

justifyContent: 'center',

alignItems: 'center',

color: '#000',

background: '#ADD8E6',

padding: 20

}

}));

export default App;

* In your CLI, navigate to your react folder.
* Install the QR code reader with this command: -

*npm install --save react-qr-reader*

* Next, install the QR code scanner with this command: -

*npm install--save react-qr-scanner*

* If errors occur and its unable to install either the reader or scanner, attach *“--legacy-peer-deps"* to the command like this: -

*npm install --save react-qr-reader --legacy-peer-deps*

*npm install --save react-qr-scanner --legacy-peer-deps*

* Next, install material ui core using this command: -

*npm install @material-ui/core*

* Next, navigate to the ***“Public”*** folder in your react project folder in Visual Studio Code.
* Open the ***“index.html”*** file and just before the closing ***</head>*** tag, paste this code: -

<title>EasyEntryStoreQRScannerv2</title>

<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Roboto:300,400,500,700&display=swap"/>

* Use “npm start” to run the application
* If you cloned the application from GitHub be sure your npm is installed and uptodate
* On Linux, after running ***“npm start”*** and you get a “Permission Denied” error you can use this CLI command: -

*Chmod +x node\_modules/.bin/react-scripts*