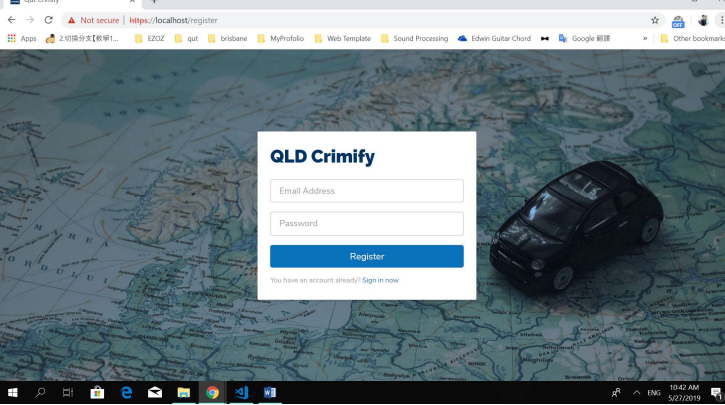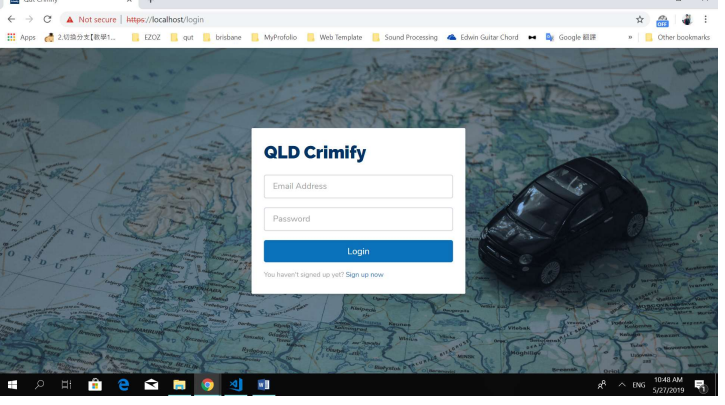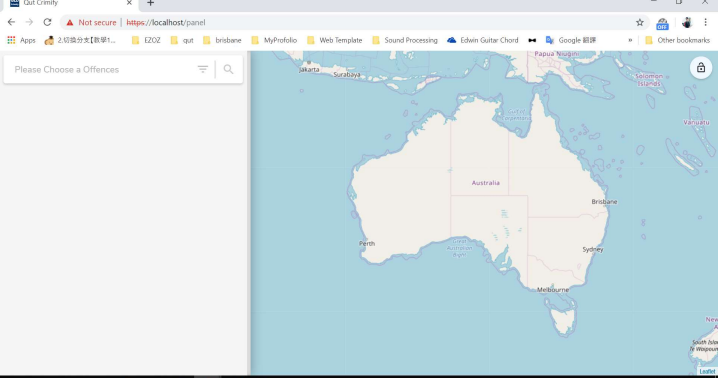## Introduction

This Client react app has approached level 7 Criteria which means client side has attempted to complete all requirement written in the client-side specification document.

Client- side Features	States
Register Feature	DONE
Login Feature	DONE
Open & authenticated routes	DONE
React Web APP	DONE
Search function	DONE
Data tables	DONE
Data table with sortable column header	DONE
Successful processing of all end-points	DONE
Data Filtering	DONE
Data Graphing	DONE
Data Mapping	DONE
Logout Feature	DONE

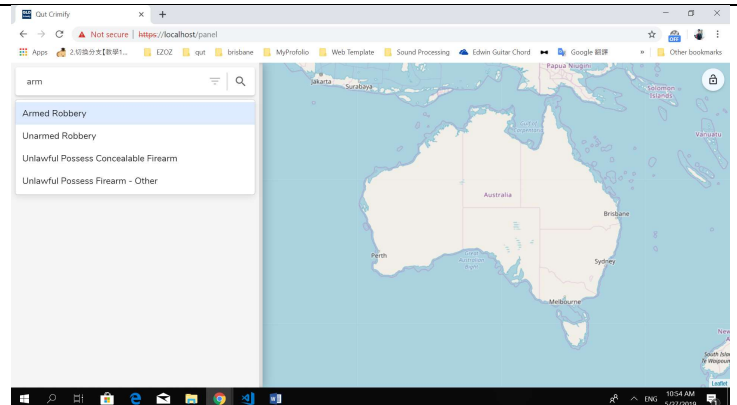## Technical description:

Technical	Description
React	JavaScript library for front-end development
Axios	Promise based http fetching Javascript library
recharts	Chart JavaScript library to show chart data
React select	This library is used for search function, with this select function helps, user are restricted to type in only available information
React table	React table helps the web app to shows Json format data in a table format
Leaflet Js	Leaflet library is used for mapping. By providing the correct JSON format, Leaflet library can show the data and location corrected on the map
React Router Dom	This library helps the react app for all redirect features
Font awesome	This is a library for icons. Helps the website looks prettier
Google font	Font library from Google, helps website more profession
css	Css is a style sheet language helps the web app looks better. The whole client side app didn't use any css framework or libraries.
npm	JavaScript Fast, reliable, better dependency management

Testing and limitations – test plan, results, compromises.

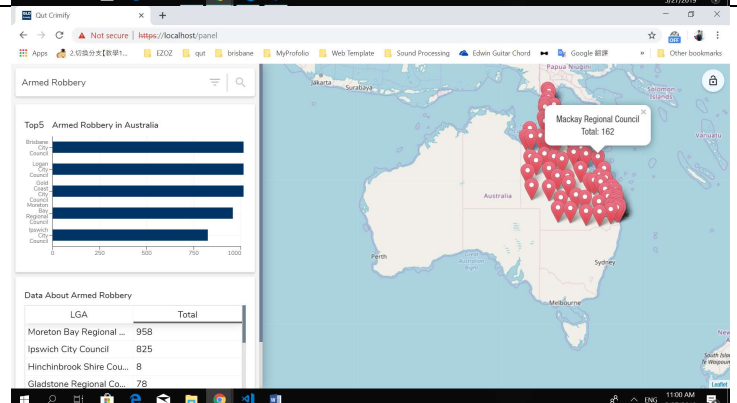| Features	Screen-shots
Register Feature: • Users are able to register an account, and this is the register page. • Form validations is implemented, whenever user submit the form, react will check whether all credentials information is provided. • If any error occurs including missing credentials and user already exist, the system will alert user • Once register successful, it redirects user to login page	
Login Feature: • Users are able to login to an existing account • Form validations is implemented, whenever user submit the form, react will check whether all credentials information is provided. • If any error occurs including missing credentials and user already exist, the system will alert user • Once login successful, it redirects user to authenticated page, and JWT token will be saved in local storage	
Authenticated routes • Once login successful, it redirects to panel page.	

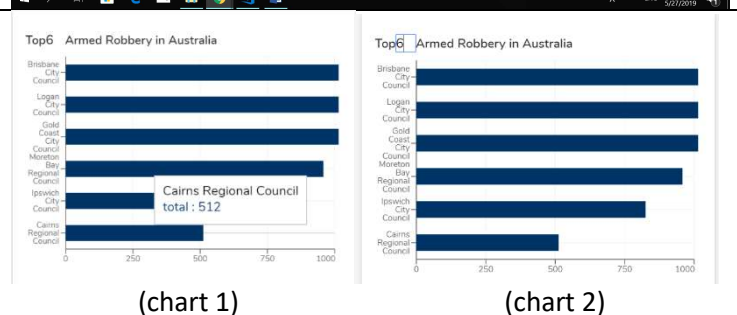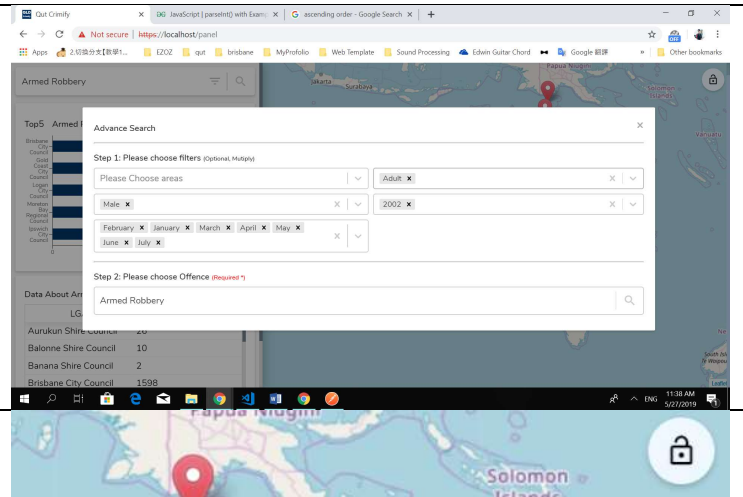|	
Search function by Offences • User can type the offences that they are interested to know about. • This feature restricted user can only search the available offences provided by teaching team	
Data Mapping • After user chooses one offences, the map will automatically shows the location of those results	
Data Graphing • After user chooses an offences, this table will automatically appears to shows Top 5 the chosen offences in Australia • User are allowed to change the Default value Top 5 to Top any numbers. The example on right hand side, has changed it to top 6. (chart 1) • By hovering the chart, user can see the total of crimes in a location. (chart 2)	 (chart 1) (chart 2)
Data Table • After user chooses an offences, this table will automatically appears to shows the data table • Table 1: descending sort by Total column • Table 2: Ascending sort by LGA	 (table 1) (table 2)
Data Filtering • By Clicking the filter Button , an Advance search card pops up. User need to fill in the filter information to get the filter results.	
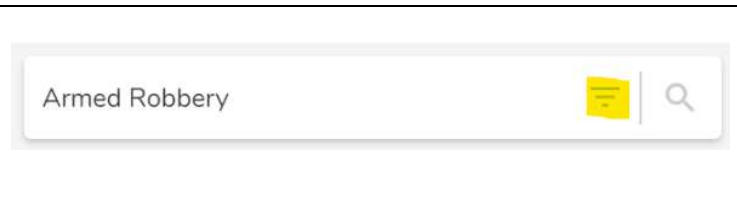
• All filter options are restricted, user is only allowed to choose the available options. • User needs to fill in the filter first before they choose an offence	
Logout Button • When user click the logout button, the JWT token will be removed from local storage, and user will be redirected to login page.	

References

Technical	Reference url
React	https://reactjs.org/
Axios	https://www.axios.com/
recharts	https://github.com/axios/axios
React select	https://react-select.com/home
React table	https://www.npmjs.com/package/react-table
Leaflet Js	https://leafletjs.com/
React Router Dom	https://www.npmjs.com/package/react-router-dom
Font awesome	https://fontawesome.com/
Google font	https://fonts.google.com/
css	https://www.w3schools.com/css/
npm	https://www.npmjs.com/

Appendix
Instruction for running the application

1. npm install
2. npm run start