



CARER MANAGER PLUS ADMINISTRATION PORTAL TECHNICAL REPORT

Version ??.??

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DOCUMENT CONTROL

| Version # | Implemented By | Implementation Date | Reviewed By | Approval Date | Reason |
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1 EXECUTIVE SUMMARY

Here is the group #176, which is developing the project, Carer Manager Plus Administration Portal, for the company, Carer Manager Plus Pty Ltd, under the supervision of the teaching team of COSC 2250 Programming Project 1 of RMIT University, running in semester 2, 2022. In this project, we are required to develop a web application, which is mainly based on React and an external library, 'Dev Extreme', to assist the clients to manage their existed system and corresponding data, by watching and maintaining the details of clients, employees, companies in cooperation, and any reference data in tables, also generating reports for some of the data. We simply apply the methodology of Agile development as the developing team and walked through up to 4 sprints with 9 primary tasks in the whole developing period. In this report, we would give a brief introduction on what our project is and what we have done for that. Requirements would be summarised with various use cases according to the requirements of the project. The overall system architecture of the application we developed would be elaborated concisely in the architecture section. There would also be a section called Technical Framework to cover all the technical tools or external libraries we have ever applied to develop the project. The details of the implementation would be provided immediately after the technical framework section. As we were just primarily developing the application on the front-end basically, and the entire project is governed by the developer team on clients' side, so we do not implement any deployment for this project. Test cases regarding our implementations and corresponding results would also be presented at the end of the report.

2 INTRODUCTION

The project, Carer Manager Plus Administration Portal Web Application Construction, literally speaking, is to create prototype of a web application as the administrative portal to manage the system and data in the existed Carer Manager Plus application governed by the client. The application is primarily interacting with the data or information of the carers, employees, companies in the client's database. Within this application, the user should be able to reset or change their password, view the global parameters of the system, maintain, which including create, read, update and delete, the details of the cooperation companies, the references of administration, the details administration employees, and the references of the cooperation companies, in tables or DataGrid, with any applied custom rules. All those details or references should be able to be imported to the system by handling appropriately and reading a given excel file which contains the information of such, by user uploading. There should also be a portal for the user to generate a report regarding the hours charged by the cooperation companies. As the developing team, we mainly take the responsibility on utilising various back-end related APIs built or configured by the developing team of the clients' side, for instance, Google Address Search API, to accomplish various kinds of relevant functionalities mentioned above in the front-end webpage. To be more specific, we apply one of the prevalent external UI libraries, called 'DevExtreme', as the clients required, to create a mature website with its diverse components, for example, DataGrid, Pop-up, and Form etc, by obeying rules of any non-functional requirements, including accessibility, consistency of the entire application, usability, and so on. The testing of each component, or functionality, is always done by the project manager on the clients' side, but we also attempted kinds of acceptance testing to ensure that the things we built are meeting the requirements then we would report that to the clients.

3 REQUIREMENTS

USE CASE DIAGRAM or USE CASES

The project is basically based on the front-end developing, and each component or webpage is developed relatively independently, so a use case diagram which generally depicts a model of the entire system and represents the interactions between different kinds of models would be unnecessary for the part of our development to this project.

FUNCTIONAL REQUIREMENTS SPECIFICATION

| Req. ID | Description | Priority | UC covered |
|---------|---|----------|------------|
| 1 | Change the password | MEDIUM | N/A |
| 2 | Maintain companies' details | HIGH | N/A |
| 3 | Maintain Administration Reference forms | HIGH | N/A |
| 4 | Maintain Companies' Reference data | HIGH | N/A |
| 5 | Maintain Administration Employee | HIGH | N/A |
| 6 | Import clients from excel | MEDIUM | N/A |
| 7 | Import employees from excel | MEDIUM | N/A |
| 8 | Import carers from excel | MEDIUM | N/A |
| 9 | Hours charged by company report | MEDIUM | N/A |

Table 1.1

NON-FUNCTIONAL REQUIREMENTS SPECIFICATION

- Accessibility

The web contents should be arranged clearly, main contents should be placed apparently. The image, for example, the logo in company details table, being uploaded abnormally would be replaced with text.

- Consistency

The web design of every page, form, pop-up window, or button, should be consistent with the whole application

- Usability

The address input should be enabling the functionality of auto complete.

4 ARCHITECTURE

The system is composed of an React front-end that communicates with the SQL Server database via REST API endpoints. The Node API will make SQL queries to the database

as required. Access tokens are provided and stored in local storage which are used to authentication further API queries to the middleware.



Diagram 1.2

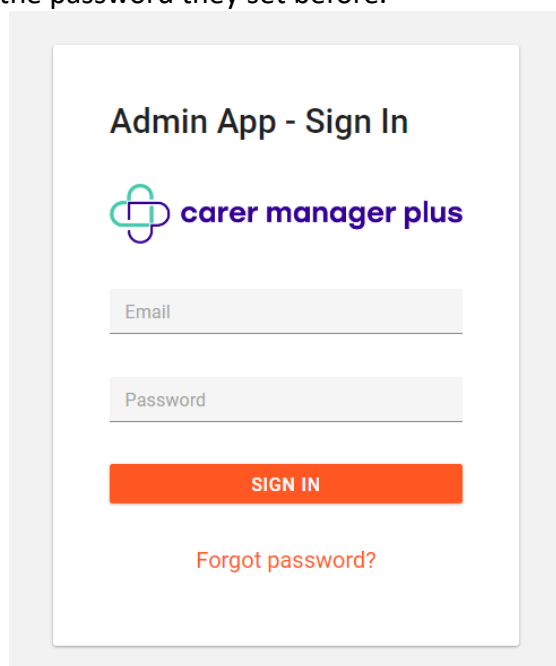
5 TECHNICAL FRAMEWORK

The languages used on the website are JavaScript, html, and CSS. The site was built using the React framework with components from the DevExtreme UI library. The site is packaged into static webpages with webpack.

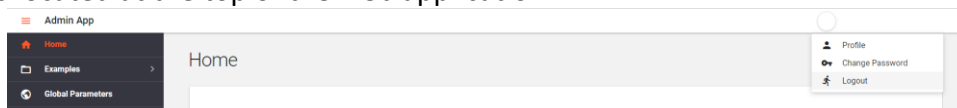
6 IMPLEMENTATION

- Login/Logout Function:

Each active administration user is able to login with their email address as their username, as well as the password they set before.

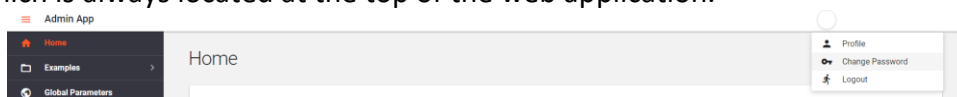


Each active administration user is able to logout anytime via the tool bar which is always located at the top of the web application.



- Password Change Function:

Each active administration user is able to change their password anytime via the tool bar which is always located at the top of the web application.



The user has to provide the system with their old password, as well as the new password they want to update, under the validation rules, including but not limit to, new password should not be the same as the old password, the password going to set should be a strong password, for instance, containing at least one special character, to request for a password change successfully.

- References of companies maintaining page:

The user is able to access the page with tables containing the details of the references of companies via the navigation sidebar, and each specific type of references of companies can be accessed via the tab inside the reference tables page.

The user can add a new record for such specific type into the database via the button ‘+’ at the tool bar above the table, by filling all the required details for a new record, in a pop-up form.

7 DEPLOYMENT INSTRUCTIONS

Describe the deployment instructions, the basic specifications of the server, etc.

< Keep in mind that this section must be detailed so that any other team (sponsor) can deploy the solution by reading these instructions)

The dependencies for the running environment must have NPM and NodeJS 16 or higher installed.

Local run instructions:

- 1.) Clone project with "git clone <https://github.com/Carer-Manager-Plus/admin-app>"
- 2.) run "cd admin-app"
- 3.) run "npm install"
- 4.) run "npm start"
- 5.) Site should be accessible on <https://localhost:3000>

Production build:

- 1.) run "npm install"
- 2.) run "npm run build"
- 3.) deploy with "serve -s build" or deploy contents of "build" on chosen static webserver

8 TEST SPECIFICATIONS

In this project, the testings are mainly scheduled and implemented on the clients' side, but we still implemented some testings to ensure the functionalities we built are running smoothly as what we expected. Basically, we apply only acceptance testing in this project to meet the demand as mentioned above. A table below shows the critical and representative designed test cases which we have implemented corresponding testings to them.

| Test Case ID | Req. covered | Test Objective | Preconditions | Steps | Test data | Expected result |
|--------------|--------------|--|---|-------|--|--|
| 1 | 1 | Ensure the accomplishment of the functionality | Logged in as a normal administration user | 3 | Old password: Ab123456# New password: Ab123456@ | Changed successfully |
| 2 | 1 | Ensure the appropriate handling of the incorrect input | Logged in as a normal administration user | 3 | Old password: Ab12345 New password: Ab123456 | Old password doesn't match, new password should contain at least one special |

| | | | | | | |
|---|---|--|---|---|---|--|
| 3 | 2 | Ensure the functionality of inserting with new record of a company to the company details table is running correctly | Logged in as a normal administration user | 4 | Company: Carer Test Business phone: 0400111222 Address Search: 360 Swanston Street Melbourne, VIC Email: carertest@gmail.com Mobile: 0433444555 Locality: Melbourne Postcode: 3000 | character The details of address would be completed automatically depending on what have inputted in the address search bar, then the record has been inserted successfully to the table in the current page |
| 4 | 3 | Ensure the details of references of administrators, for instance, funding type, are displaying in tables correctly | Logged in as a normal administration user | 3 | N/A | The information including type, billing cycle, kinds of funding, and country are displayed in a table |
| 5 | 4 | Ensure the functionality of updating a record which contains the details of reference data of companies, for instance, | Logged in as a normal administration user | 5 | Standard quantity: 100 | The row selected to update successfully changed as the input |

| | | | | | | |
|--|---|---|---|---|--|--|
| charge rate type, is running correctly | | | | | | |
| 6 | 4 | Ensuring the form input validation of updating a record of the details of reference data of companies, for instance, day type, is running appropriately | Logged in as a normal administration user | 6 | Select both the weekday and holiday at the same time | The error message shows up at the bottom of the form, the things where violate the rules of the record are highlighted |
| 7 | 5 | Ensuring the functionality of deleting a record in the table, Admin Employee, is running correctly | Logged in as a normal administration user; In the table of Admin Employee, there is a row of data whose first name is 'Testing' | 4 | Select the row with the first name as 'Testing' | The row selected to delete is disappeared after clicking the deleting button |

Table 1.3

9 TESTING RESULTS

| Test Case ID | Testing Result |
|--------------|--|
| 1 | Password changed successfully |
| 2 | A pop-up window shows up and illustrates the error message, "Password doesn't match" |
| 3 | New record inserted successfully |
| 4 | The information of funding type displaying in the table completely |
| 5 | The record selected to update is being updated as expected correctly |
| 6 | The error message displaying apparently |
| 7 | The selected record got deleted correctly |

10 OTHER CONSIDERATIONS

No other considerations applicable to this project.

11 REFERENCES

No literal references applicable to this report.