**Institutions Application**

**Technical Requirements**

- Nodejs with Express on backend, running with Node 18.12.1

- Angular 15.1.2 on frontend

Steps to run the frontend application-

1. Clone the project from the git repository in your local folder.
2. In the terminal, run **npm install** to install all the dependencies.
3. Run **ng serve** to run the application on the url http://localhost:4200/

Steps to run the microservice application-

1. Clone the project from the git repository in your local folder.
2. In the terminal, run **npm install** to install all the dependencies.
3. Run **npm start** to start the server locally on port 3000.

This Institution Application has been made with the following assumptions:

* As per the basic layout of an application, app-content component is made of 2 different components i.e., header, and main content.
* User can
* Search institutions by providing keyword.
* Filtering by a dropdown of cities
* Filtering by a dropdown of provinces
* Create a new institution.
* Update an existing institution.
* Delete an existing institution.
* Get a list of institutions.

Unfortunately, due to time constraints I could not implement some of the additional features I thought I would. Those were the next enhancement I was going to add to my solution. Following are the enhancements:

* For the navigation purpose, side-nav and footer can be added if required.
* For now, legal status and sector are simply hardcoded as an array, but these can be displayed dynamically if they are fetched from backend.
* Also, legal status list and sector list can be displayed in form of table to show their type, description and features they have. A link to this page can also be added in the side nav list. In addition to it, these lists can be added, updated, and deleted as per the requirements.
* Furthermore, better error handling can be performed based on error and status returned from REST APIs.
* For the backend side, additional API can be added to fetch individual institution by specifying id and add query parameters to filter list of institutions.
* Currently in the microservice, error handling for each route is handled individually. This can be improved by adding generic error handling middleware that can return standard error responses.

Application view:

Institutions List view –

* User can search the institutions by typing in the search input field, filtering by dropdown of provinces, and cities.
* If there are no records to be displayed, then the message “No records found” is displayed in the table.
* If province is selected, then cities dropdown shows only cities that are in the selected province otherwise it lists all the cities.
* New institution can be created by clicking on new institution button.
* To edit the institution, click on the edit action button in the action column.
* To delete any institution, click the delete icon and then click yes button in the confirmation dialog box.
* To sort the list, click on the column name to sort according to that column.

New Institution View –

* All fields are required.
* All fields are dropdown except for name of the institution field.
* Values in the city dropdown are displayed only when province is selected and shows cities of the selected province.
* Save button will be enabled only if form is valid.

Edit Institution View-

* Institution information is filled in the form by default while editing the institution information.
* It can be updated by changing any of the values or can be cancelled and redirected to the institutions list.