Assignment Report

Test Task for Frontend Developer (Angular)

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1. The assignment

Test Task for Frontend Developer (Angular)

The task. Create a Single page web application for displaying the list of charts using the latest features of Angular.

Libraries that should be used:
- RxJs;
- Angular Material / Ng Bootstrap / Taiga UI / or others;
- Highcharts;
- NgRx / NgXs / Akita / or others;
- Any other library of your choice.

Details.
The UI must be responsive.

There will be a header with two links to two separated routes. One of them should be active connected with the current route.

"View mode" is the first route. There will be a list of charts and a date range filter (filtering by dates). Selected dates should affect charts on the page. Date range filter should be hidden if we have no charts.

The data for the charts could be either randomly generated or fetched via any public API for one or for all charts. Each value should have a “value” and “date” fields. The default value for date range filter you can set by yourself.

"Settings" is the second route. There will be a list of charts. Users should have the possibility to add a new chart or edit an existing one. Those settings should be implemented with a modal window. It should be possible to change a name, type (line, spline, area…) and color for each of them. Also we should have the possibility to remove the chart. After saving, new settings will be applied.

2. System pre-requisites

#	Utility	Version
1.	NodeJs	20.16.0
2.	Angular CLI	18.1.2
3.	Json-server	1.0.0-beta.1

For more clarity about the above utilities, please refer the below screen-shoot.

3. The Recipe

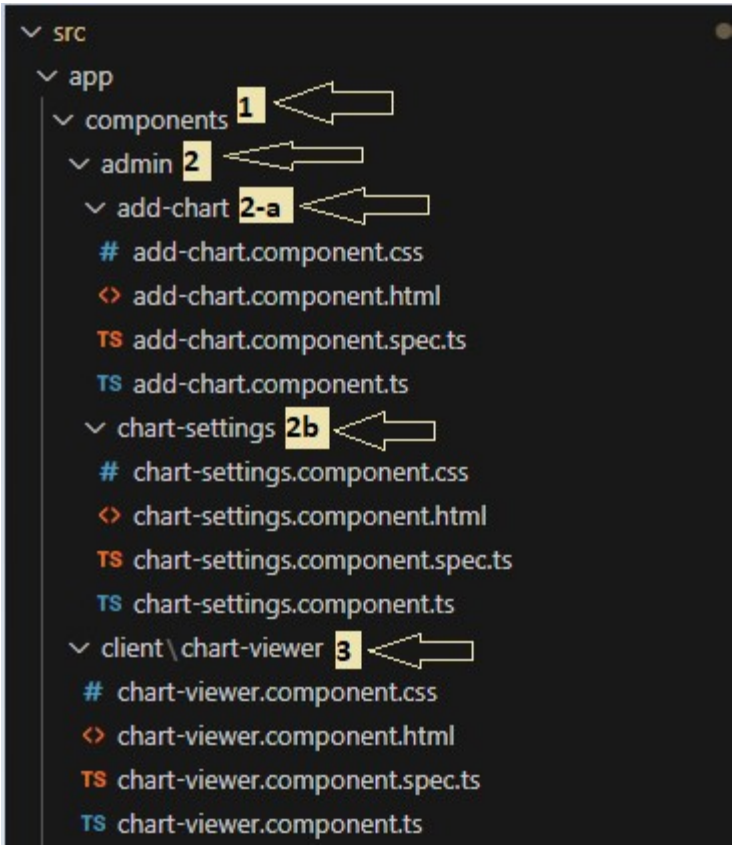
#	Ingredient	Purpose
1.	Highcharts	For charts
2.	Angular Material	UI Library
3.	NgRx & Rxjs	State management & handling data streams
4.	Json server	To mock REST API's

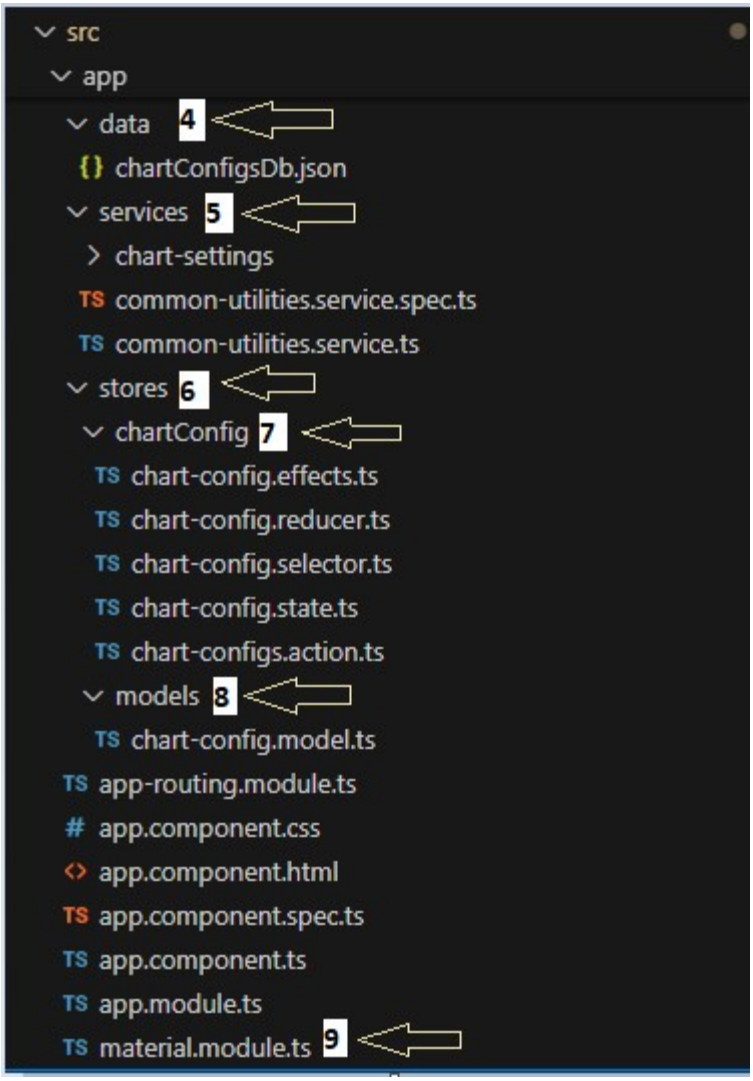
4. The Strategy

- Run time randomized data is shown in the charts.
- To manage/store the charts settings, NgRx, RxJs and json-server are used.
- The default date range is last 8 days which can be change further.

5. Application Structure

In the following screen-shots, I have listed only those folders/files which are created for task purpose and not included in default folder structure in an angular application.





#	Ingredient	Path	Purpose
1.	components	src\app\components	This folder consists all sub-folders/files which further contain all components (html/view pages).
2.	admin	src\app\components\admin	This folder contains components related to the chart settings.
2-a	add-chart	src\app\components\admin\add-chart	This is the folder of the component of add/edit (modal popup) chart configurations.
2.b	chart-settings	src\app\components\admin\chart-settings	This is the folder of the component of manage & listing of added charts.
3.	client	src\app\components\client	This folder contains components related to the view charts to the user.
4.	data	src\app\data	This folder contains

			chartConfigsDb.json file which acts as database for storing charts & their settings.
5.	services	src\app\services	This folder contains all services components.
6.	stores	src\app\stores	This is the folder contains all folder/files related to store and state management and all CRUD operations business logics.
7.	chartConfig	src\app\stores\chartConfig	This folder is has all files related to chart settings store.
8.	models	src\app\stores\models	This folder contains file chart-***config.model.ts***, which defines the structure of chart configuration.
9.	material.module.ts	src\app	This is the featured module and contains all Material UI modules used in the application.

6. Steps to run the application

Step 1: Clone the project from the following link

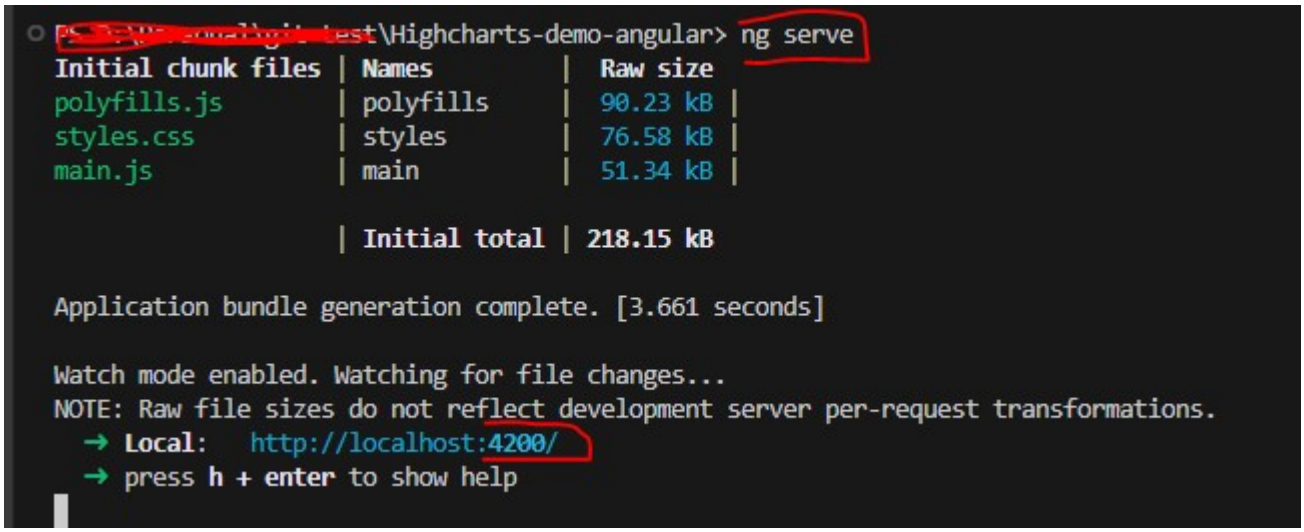
https://github.com/officialbsingh1983/Highcharts-demo-angular

Step 2: Open the command prompt in the cloned directory ***(Highcharts-demo-angular)***

Step 3: execute the following commands in the command prompt

1. ***npm install***
2. ***ng serve***

Please note ***ng serve*** is expected to run the application on ***4200 port***, in case of differ port in your system then please use your running port number in the ***Step 7***.

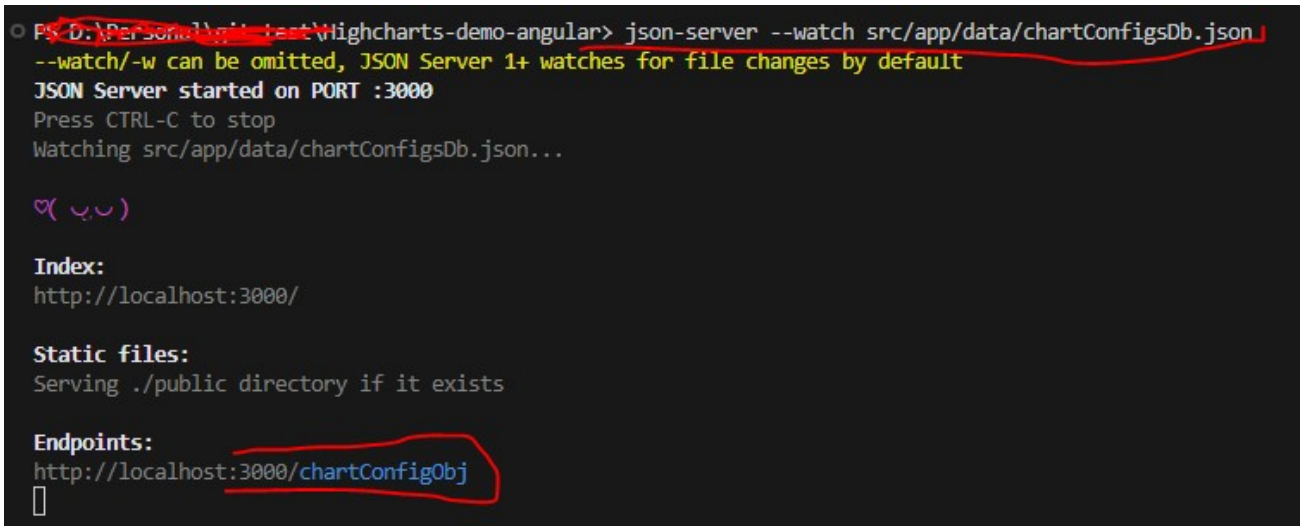


Step 4: open another command prompt in the same directory location

Step 5: execute the following command in the command prompt

1. ***json-server --watch src/app/data/chartConfigsDb.json***

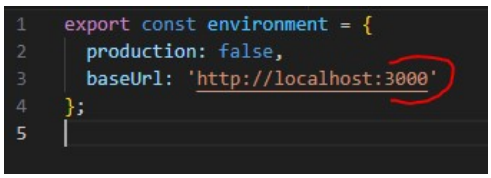
Please note, above command is expected to run on ***3000 port*** (http://localhost:3000/chartConfigObj). Please refer the following screen-shot



In case of the port number is differ from the said port the please follow the following step:

Step 6: **(Please ignore this step in case your json-server is running on 3000 port)**

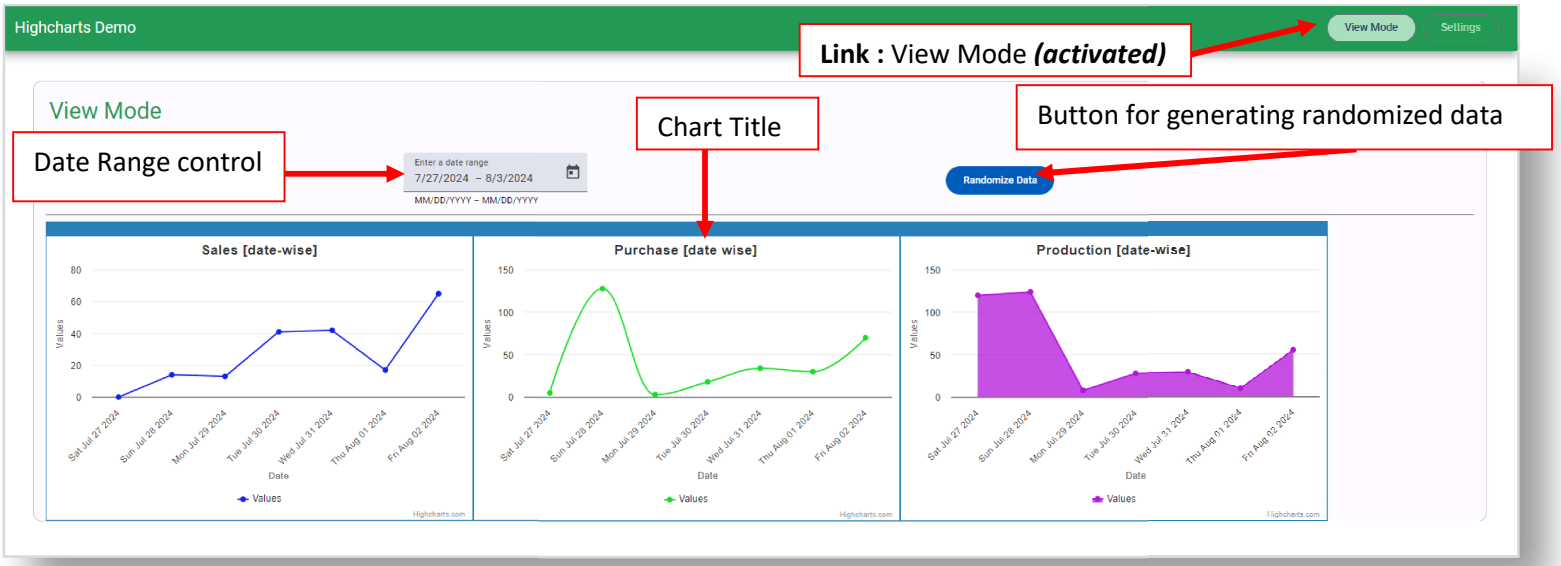
Please open ***'\src\environments/ environment.ts '*** file in any text editor. Change the port number from 3000 to your system's json-server running port number. Please refer the following screen-shot



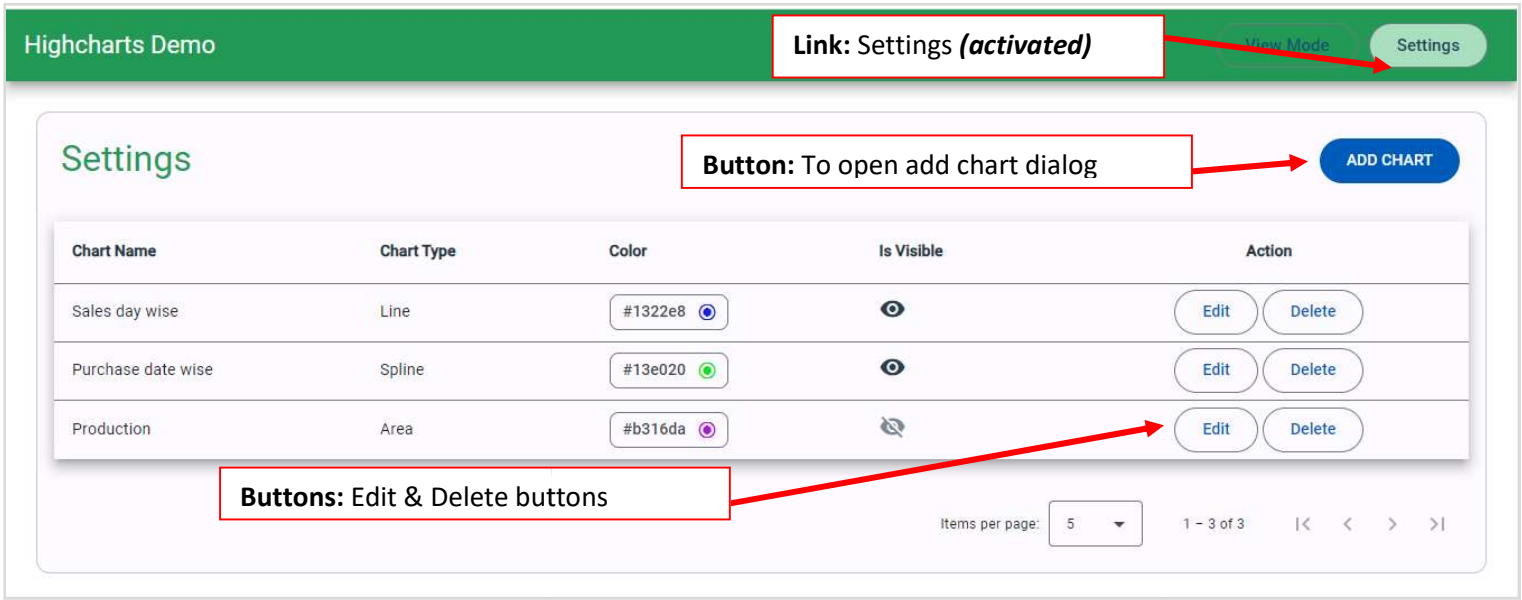
Step 7: Open browser and go to ***http://localhost:4200/*** address.

7. Application flow and screen-shots

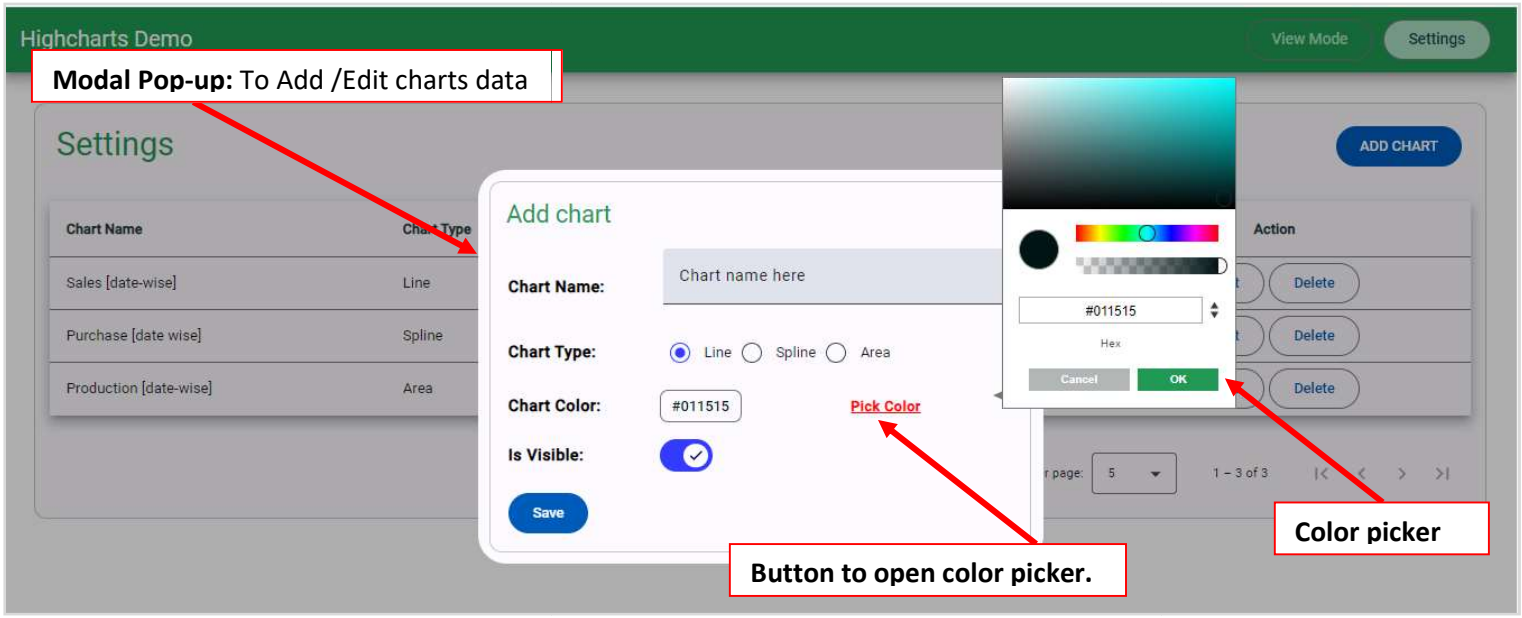
1. **View Mode page** ***(default route)***

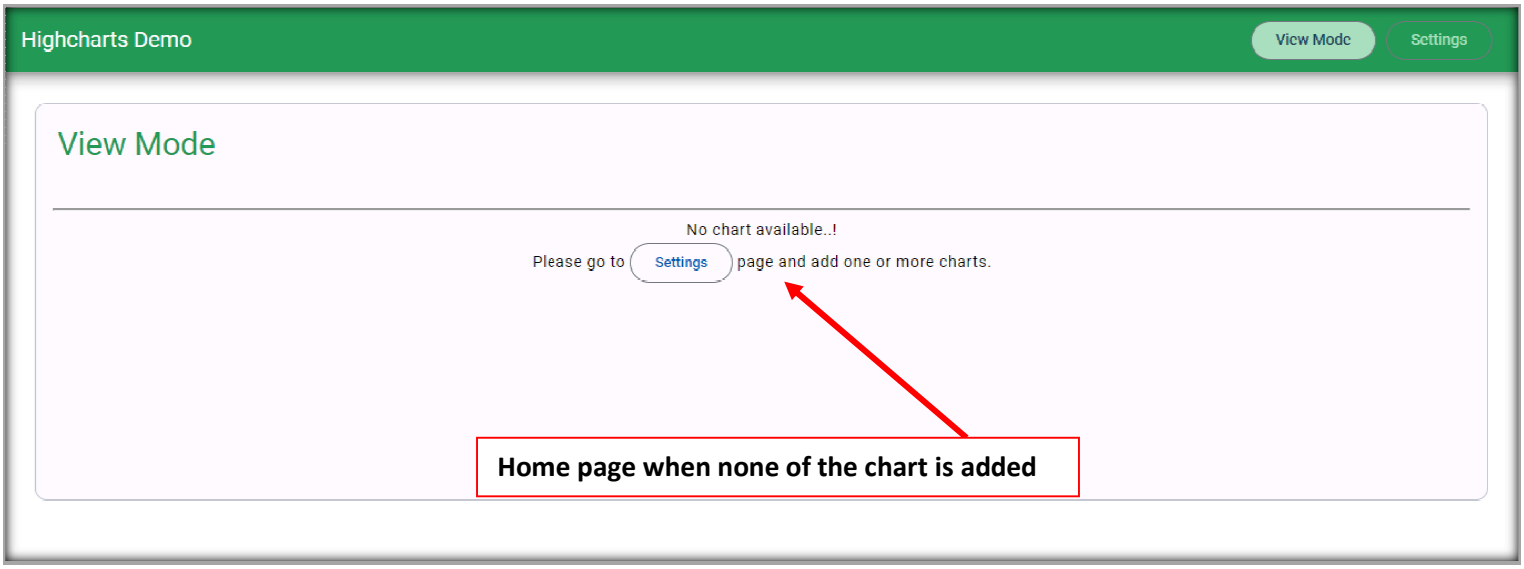


2. **Settings page**



3. Add/Edit chart modal popup





Thank you