Project 2: Statistic portal

This project involves the development of an interactive data visualization web application that enables users to explore and analyze population (by category) and employment rate data for different cities in Finland. The focus of this project is to create a user-friendly interface for visualizing data on maps and charts.

Tools used by the project are **Frappe Charts** and **Leaflet**. Frappe Charts is used for creating interactive and visually appealing charts that represent the data effectively. Leaflet is used for rendering interactive maps on the web application. It provides mapping capabilities and allows users to explore geographic data.

A. User Guide/Explanation for pages involving.

Specific Population Data, Chart View(index.html) – Main page

1. Open the `index.html` page to access the main page, or via link:
   https://sakuraccess.github.io/IoWP-Final-Project/
2. On the main page, follow the instructions to select the desired population data category. Click the "View the chart" button to view the "Population by area, main type of activity, sex, age, and year" data for either the entire Finland or a specific municipality. The data spans from 1987 to 2021.
3. Once the chart is displayed, you can click the "Go to map view of the whole country" button to switch to the national map view, showing information related to the selected data type. You can also click the "Download Image" button to save the map as an image file; your browser will prompt you to save the file.
4. You can further explore the "Go to the national employment rate distribution map" button to switch to the national employment rate distribution map.

Specific Population Data Page, National Map View(map.html)

1. First, set the desired year as per the instructions.
2. On the map, you can click and drag to view information about a specific municipality. The relevant details will be displayed in a popup window.
3. If you already know the name of a specific municipality, you can enter it in the search box. The map will automatically locate and display information about the specified municipality.
4. Whether you use the map's drag-and-click feature or the search function, the popup window will include a "Chart view for this municipality" button. Clicking this button will take you back to the main page to view other data for that municipality. The municipality's name will be automatically filled in the search box on the main page, making it convenient to find additional data.
5. You can also click the "Go back to the main page" button at the top of the map to return to the main page.

Usage of **the National Employment Rate Distribution Map(emp.html)** is like the Specific Population Data Page, National Map View. You can explore information by dragging on the map or using the search function.

B. Points generated from the course project -> next page.

Feature	Points
The application is responsive on both desktop and mobile environments	4
Data is visualized in both map and chart formats	4
The application is accessible via a link to the website hosted on Github	4
There are more than two items of data available - this means two API calls were made	4
Maps can be switched between different years	3
Raw employment numbers are automatically converted to employment rates	3
The map supports searching and positioning by municipality name	3
Users have the ability to download chart visualizations as SVG images	2
The application is compatible with Firefox, Safari, Edge, and Chrome browsers	2
Obtain diverse data by changing request control parameters	2
Users can easily navigate between different data pages on the map	2
The color scheme of the page has been carefully chosen	2
Users can select the specific type of data displayed by the application	2
Users can select the specific range of years displayed by the application	2
The PDF report is well-written	2
After selecting a city on the map, switching pages doesn't require re-entering the name	2
Years outside the specified range and non-existing municipalities are not accepted	2
Charts and maps are decorated in beautiful colors	1
Application has data source and map statement	1