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| INTRODUCTION  Welcome to the documentation for the "User Groups" application developed by Prajodhay, in response to a task from Fanatacode. In this documentation, you will find a comprehensive overview of the application's functionalities, code structure, and usage instructions.This application is designed to group users based on geographical distances and display the results on a webpage. The code consists of three main,functions - calculateDistance, groupUsers, and displayGroups - which work together to achieve the desired functionality.  We will explain the purpose and functionality of each function, the data flow, and how the final output is displayed. Additionally, the documentation will cover the setup requirements to run the application successfully.Here is the step by step process,  Working   1. Make sure that all files are in same directory, 2. Make sure you have an active internet connection as the application fetches the data from the data.json file using JavaScript's Fetch API. 3. Open the index.html file in a web browser (e.g., Google Chrome, Mozilla Firefox, etc.) 4. The application will load and display the user groups based on the distance criteria, calculated using the provided calculateDistance function. The user groups will be displayed along with the highest and lowest group size in the respective group containers. 5. Click Compute to perform the computation and result will be displayed.   Working Of The Body-   1. The script fetches the data from the data.json file using the Fetch API. The data is in JSON format, and it contains user information, including their full names and geographical coordinates. 2. After fetching the data, the script processes it by calling the groupUsers function, passing the retrieved data as an argument. The groupUsers function groups the users based on the distance criteria (within 1000 kilometers) and returns an array of arrays representing the user groups. 3. Next, the script calls the displayGroups function, passing the array of groups as an argument. The displayGroups function creates HTML elements for each group and its members, and it also finds the group with the highest and lowest number of members. 4. Finally, the script updates the summary section of the webpage with the total number of groups, the group number with the highest number of members, and the group number with the lowest number of members. |