Health and Fitness Tracker App

A group of users is tracking their health and fitness progress using a mobile application. Each user can manage their own health and fitness data.

On the server side, at least the following details are maintained:

- Id - the internal health and fitness data-id. Integer value greater than zero.
- Date - the date when the health and fitness data was recorded. A string in the format "YYYY-MM-DD".
- Type - the type of activity performed. A string of characters.
- Duration - the duration of the activity. A decimal value.
- Calories - the number of calories burned during the activity. A decimal value.
- Category - the category of the activity. A string of characters.
- Description - a description of the activity. A string of characters.

The application should provide at least the following features:

● Main Section (separate activity)

A. (1p) View the list of recorded health and fitness data. Using the **GET /dayData** call, the user will retrieve the list of all their recorded health and fitness days. If offline, the app will display an offline message and a way to retry the connection and the call. Once retrieved, the data should be available on the device, regardless of whether online or offline.

B. (2p) By selecting a date, the user can view the details of the health and fitness data recorded on that date. To retrieve the details of a specific date's health and fitness data, the **GET /activities** call can be used by specifying the date. Once retrieved, the data should be available, regardless of whether online or offline.

C. (1p) Add health and fitness entry. Using **POST /activity** call by specifying all the health and fitness data details, the user will be able to create a new health and fitness record. Available online only.

D. (1p) Delete health and fitness entry. By selecting a date from the list, and using the **DELETE /activity** call, the user will be able to delete a health and fitness data record. Available online only.

● Progress Section (separate activity)

(1p) View the total duration for each month. The list will be retrieved using the **GET /allActivities** call. The list should display the month and the total duration per month in descending order.

● Top Section (separate activity)

(1p) View the top 3 categories. Using the same **GET /allActivities** call, compute the top 3 categories by the number of activities. The list should contain the category name and the number of activities in descending order.

● (1p) On the server side, once new health and fitness data is added to the system, the server will send, using a WebSocket channel, a message to all the connected clients/applications with the new health and fitness data object. Each application, that is connected, will display the received health and fitness data details, in human form (not JSON text) using an in-app "notification" (like snackbar or toast or a dialog or a message on the screen).

(0.5p) On all server operations, a progress indicator will be displayed.

(0.5p) On all server interactions, if an error message is received, the app should display the error message using a toast or snackbar. A log message should be recorded on all interactions (server or DB calls).