Travel Agency App

An agency is providing their services using a mobile app. The app is used by clients to view, book or cancel trips and also by the agency employees to manage their offers.

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

- Id - the internal trip id. Integer value greater than zero.
- Name - the location name. A string of characters representing the location name.
- Rooms - the number of rooms available. An integer value greater than zero.
- Transfer type - the transport type. Eg. "car", "bus", "airplane", "train".
- Status - the trip status. Eg. "available", "unavailable", etc.

The application should provide at least the following features:

- Client Section (separate activity - available offline too)
    a. (1p) View the offer. Using GET /trips call, the client will receive the list of trips available in the system. If offline the app will display an offline message and a way to retry the connection and the call. For each trip the location name, number of rooms and the transfer type are displayed.
    b. (0.5p) Book a trip. The client will book a trip, if available, using a POST /book call, by specifying the trip id and the number of rooms, the client will reserve a trip. Available online only.
    c. (1p) Once the client reserved a trip, only the trip details will be displayed, even when offline. While the device is online, an option for the client will be made available to allow the user to cancel the reservation. By doing a DELETE /cancel with his trip id and the number of rooms. After this, the app will display the available trips again.
    d. (0.5p) View the local history of visited places. On the devices, the app, will maintain a list of all reserved trips. The client will be able to view at least the following details for each trip: the location name and the number of rooms.
    e. (0.5p) Remove the local history.
- Employee Section (separate activity - available only online)
    a. (1p) The list of all the available trips. The list will be retrieved using the GET /all call, here in this list, the app will display the status also.
    b. (0.5p) Add a trip. Using a POST /add call, by sending the trip object a new trip will be added to the list, on success the server will return the trip object with the id field set.
    c. (0.5p) Delete a trip. Using DELETE /del call, by sending a valid trip id, the server will remove the trip details. On success 200 OK status will be returned.
    d. (1p) Update the trip details. Using POST /update call, by sending a valid trip object, the server will update the trip represented by the specified id.

(1p) On the server side once a new trip is added in the system the server will send, using a websocket channel, a message to all the connected applications with the new trip object. Each application, that is connected, will add the new trip in the list of available trips.

(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.

(0.5p) On all interactions, a log message should be recorded.