

## Recipe Sharing and Management App

A group of users is sharing and managing their recipes using a mobile application. Each user can upload, view, and edit their recipes while exploring recipes shared by others.

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

- Id - the unique identifier for the recipe. Integer value greater than zero.
- Date - the date when the recipe was created. A string in the format "YYYY-MM-DD".
- Title - the title of the recipe. A string of characters.
- Ingredients - a list of ingredients used in the recipe. A string of characters.
- Category - the category of the recipe (e.g., dessert, appetizer, main course). A string of characters.
- Rating - the average rating of the recipe. A decimal value.

The application should provide at least the following features:

- Main Section (separate screen/activity)

A. (1p) View the list of all recipes. Using the **GET /recipes** call, users can retrieve a list of recipes. If offline, the app will display an offline message and allow retrying. Once retrieved, the data should be available on the device, regardless of whether online or offline.

B. (2p) View detailed information about a recipe. The **GET /recipe** call will retrieve the details of a specific recipe. Once retrieved, the data should be available on the device, regardless of whether online or offline.

C. (1p) Add a new recipe. Users can use the **POST /recipe** call to upload a recipe by specifying all its details. Available online only.

D. (1p) Edit or delete a recipe. Users can update or remove their recipes using the **DELETE /recipe** call. Available online only.

- Explore Section (separate screen/activity)

(1p) View monthly rating analysis. Using the **GET /allRecipes** call, the app will retrieve all receipts and compute the list of monthly average ratings, displayed in descending order.

- Insights Section (separate screen/activity)

(1p) View the top 3 categories by rating. Using the same **GET /allRecipes** call, the app will compute and display the top 3 categories and their total rating in descending order.

- (1p) When a new recipe is added, the server will use a WebSocket channel to notify all connected clients. The app will display the notification with the recipe title and category in human-readable form (e.g., toast or dialog).

(0.5p) A progress indicator will be displayed during server operations.

(0.5p) Any server interaction errors will be displayed using a toast or snackbar, and all interactions (server or DB) will log a message.