Mobile App Development
QuickMart App

Objective

The objective of this assignment is to practice accessing QuickMart API web API using the Dio library.

Preparation

1. Sync the Lab GitHub repo and copy the **Assignments/Assignment3** folder into your repository.
2. Open the **QuickMart App** project in VS Code. The project has the solution of the previous assignment using JSON files for reading the data. Your task is to replace the JSON file data handling with web API access using Dio.

Note: Feel free to reuse your own code from your previous assignments in case you do not want to use the provided solution.

Overview

For this assignment, you will replace the JSON data implementation with web API calls to perform CRUD operations. The app should allow users to:

- Fetch, view, filter, search for products.
- Add products to the shopping cart.
- Update shopping card items.
- Manage a list of favorite products.

Important: All the operations mentioned above must be executed on the server side. Use API calls for adding, updating, deleting, searching, filtering, etc. Refer to the API documentation for details.
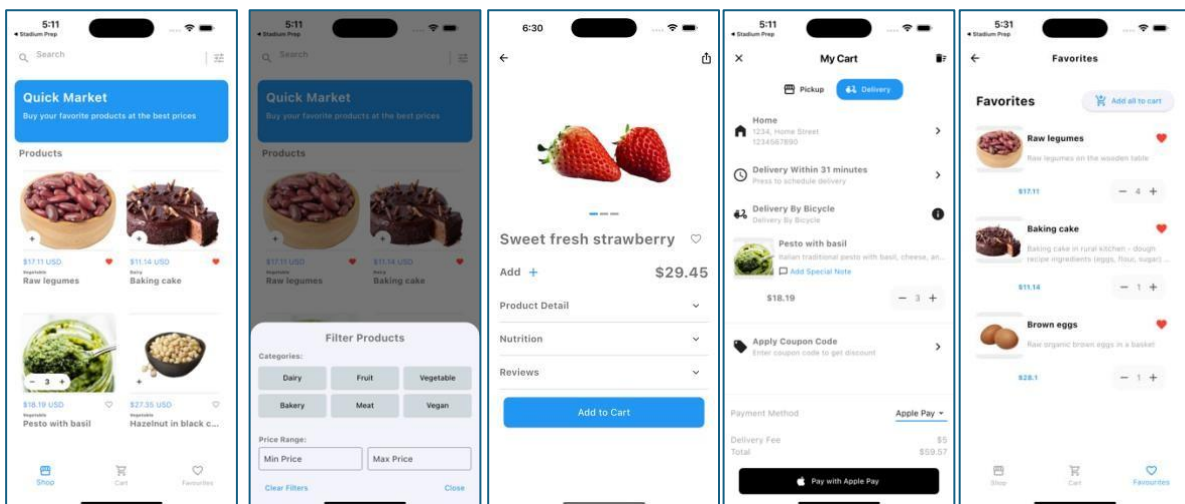

Figure 1 QuixkMart App

Implementation Instructions

1. **Dio Setup and Configuration**:
   - Add the Dio library to your project.
   - Configure Dio with the base URL [https://quickmart.codedbyyou.com/api] and any necessary headers.
2. **Modify QuickMart Repositories**:
   - Modify the repositories classes to use the Dio Library to handle API requests for **products**, **cart**, and **favorites**.
   - Ensure each method handles network errors gracefully and provides user feedback.
3. **Provider for State Management**:
   - Ensure that data updates are reflected on the UI by implementing proper state management logic within each Provider.
4. **Test the Screens**:
   - **Product Screen**: Display a list of products, allowing users to add items to the cart or mark them as favorites. Test searching products and filtering products by name and category.
   - **Product Details Screen**: Display detailed information about the product, and allow the user to add it to the cart or favorites.
   - **Cart Screen**: Display items in the cart, with options to update quantity or remove items.
   - **Favorites Screen**: Show products marked as favorites, allowing navigation to the product details.

Note Ensure that your code adheres to best practices, is well-commented, and handles exceptions gracefully. Clean-up and tidy-up your submission. Remove any unused/duplicate folders and files. Ensure that you include the testing document in Word format to ease reviewing and feedback.