Block Diagram

CY_02

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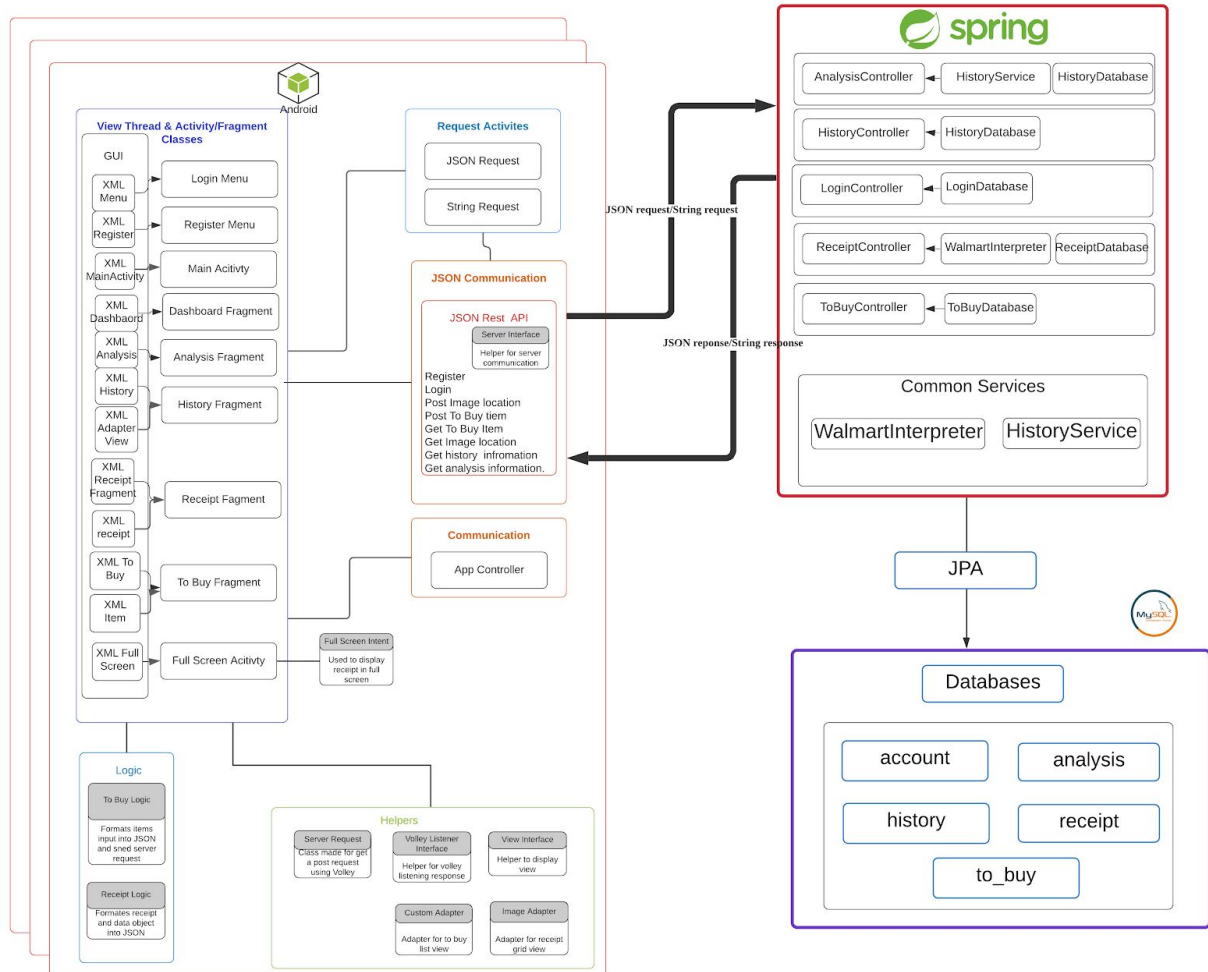Yen Wang

LetsGro

Block Diagram

Design Descriptions

Android User GUI
- The view thread and activity/fragment classes have all the xml files and each directs to the corresponding activity or fragment. There are four main activities, login page, create an account, full screen, and the main activity. For all the other main UIs, we show as fragments. The fragments we are using are dashboard, analysis, history, to-buy, and receipt. Once the user goes into the main activity, the rest will be shown as fragments.

Android Logic
- The logic is basically used to handle the logic of the fragments. To-buy and receipt are the fragments using. They organize the code and format the results that go into the JSON request.

Android Request Activities
- This part of the diagram shows the request activities we will send to the server. For our project, we will send string requests and JSON requests to the server to receive the respective response.

Android Code Helpers
- We have 5 helpers class. The two interface classes (View interface and Volley Listener Interface) help us remove the independence of the classes. The two adapter classes (custom adapter and image adapter) help us control the gridview and listview. We have 1 class (Server request) which helps us to handle the request to the server.

Android JSON Communication
- We will have different requests and responses to and from the server. This diagram shows all the requests and responses we used in this project. For example, posting image location, request ToBuy item, etc.

Android Communication
- We have an app controller for this communication part. This app controller will handle all the request queues of this project.

Backend
- The backend controllers intercept the requests and responses and perform the appropriate actions.
- The tables on the database contain the user information, to buy lists, history list (grocery history list), and receipt (image location on the device).
- The backend has two services:
    - WalmartIntrepreter
        - Extract data from the Walmart receipt and save it to the history database
    - HistoryService
        - Calculate the most visited store, highest price for an item, and total spending.

Tables