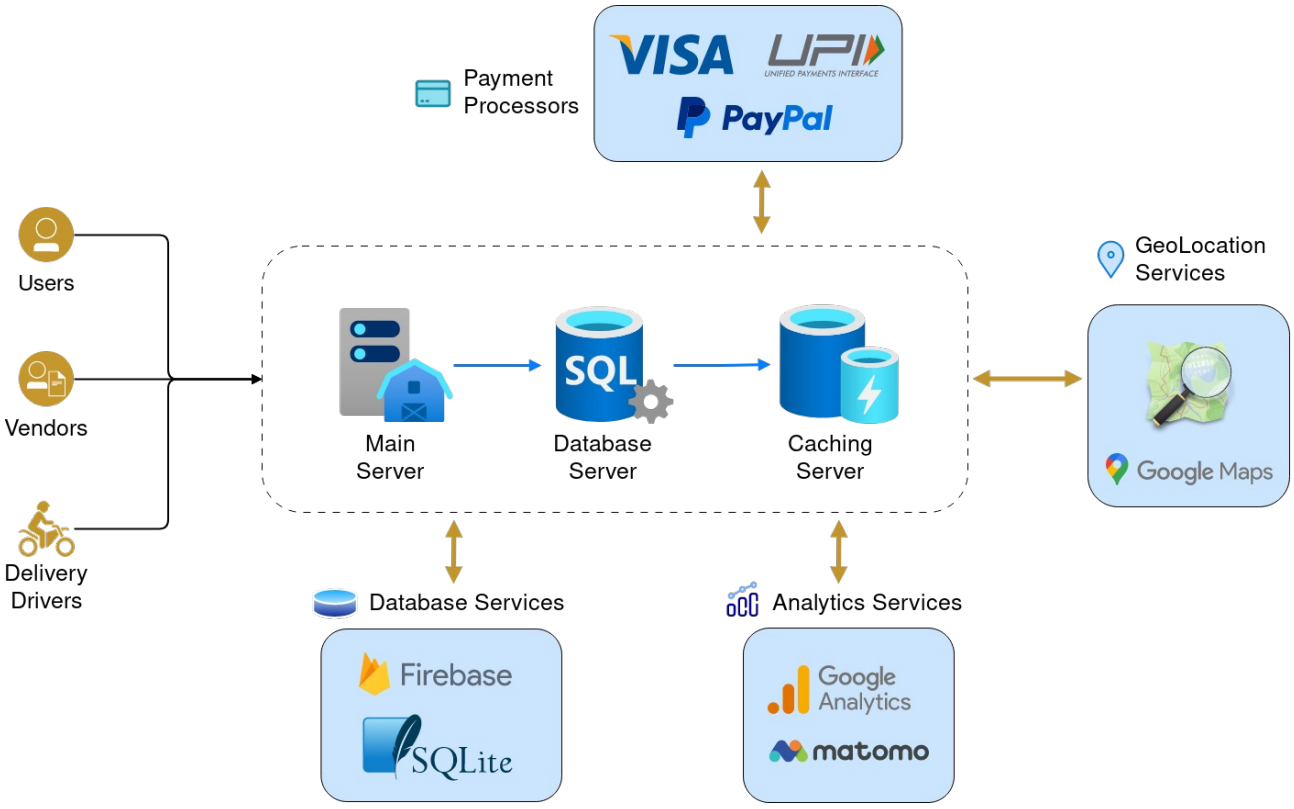
Project Design Phase-I
Solution Architecture

Date	23 October, 2023
Team ID	Team-591097
Project Name	Snack Squad
Maximum Marks	4 Marks

Our snack delivery app can be divided into the following layers :–

- **Frontend:** This layer is responsible for interacting with the user and displaying the application's UI.
- **Backend:** This layer contains the business logic of the application, such as managing user accounts, processing orders, and tracking deliveries.
- **Database:** This layer is responsible for interacting with the database to store and retrieve data.

The following diagram shows a high-level overview of the solution architecture:



Frontend –

The frontend layer is responsible for the following:

- Displaying the application's UI to the user
- Handling user input, such as search queries, order placement, and payment
- Providing feedback to the user, such as order confirmation and delivery status

It is implemented using Kotlin and Jetpack Compose. It follows the Material Design 3 specifications.

Backend –

The backend layer is implemented using Kotlin and it is responsible for the following:

- Managing user accounts
- Processing orders
- Tracking deliveries
- Communicating with the frontend and the database.

We can use services like Google Analytics and Matomo to get analytics about the users to decide our future priorities and areas of improvement.

We should add an option to pay by cash on delivery and also common payment processors like Visa and Paypal so people can use their Debit or Credit Cards for payment. Adding UPI payment option is also important as many people in India are using UPI apps like PayTM, Google Pay, PhonePe, etc to pay instead of Debit/Credit Cards.

GeoLocation services like Google Maps or OpenStreetMaps are important to select the delivery location and display the current location of the delivery driver.

Database –

The data access layer is responsible for the following:

- Storing and retrieving data from the database
- Performing complex queries
- Managing database transactions

The databases are implemented using SQLite for storing a local database for things like items in the user’s cart and Firebase Firestore for Cloud database which stores the list of vendors and their menu items.