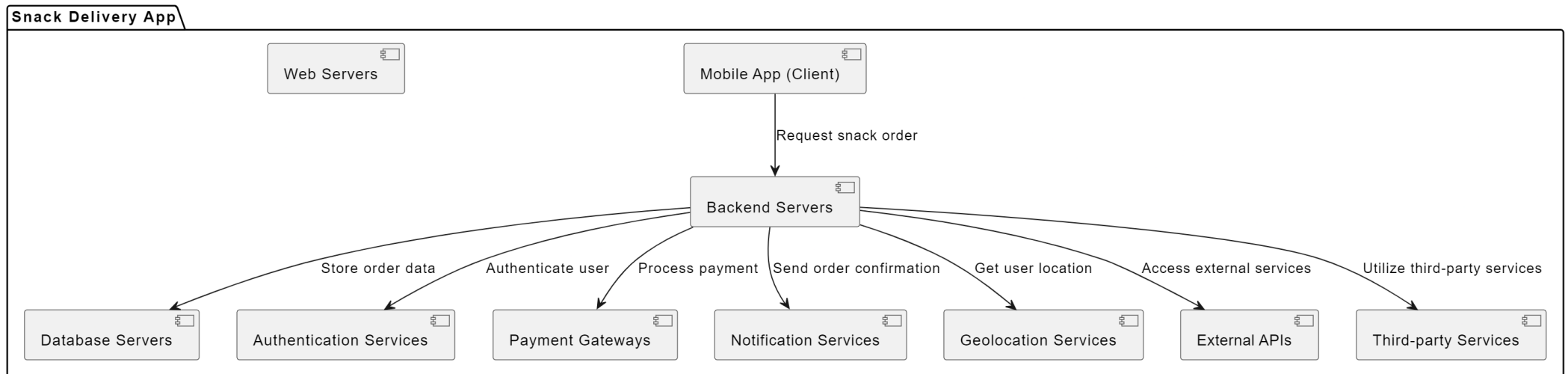


## Project Design Phase-II Technology Stack (Architecture & Stack)

Date	27 <sup>th</sup> October 2023
Team ID	Team-591034
Project Name	Snack Squad: A Customizable Snack
Maximum Marks	4 Marks

### Technical Architecture:



Components and Technologies

Component	Description	Technology Required
User Interface	Design the app's user interface using Jetpack Compose, including screens for browsing restaurants, selecting items, and managing the cart.	Jetpack Compose, XML layouts
Navigation	Implement navigation between different screens and features of the app, such as home, menu, cart, and user profile.	Navigation Component, Jetpack Compose
Data Management	Handle data related to restaurants, menus, user profiles, and orders. Retrieve and store data using APIs and databases.	Retrofit, Room, LiveData
Authentication	Implement user authentication and authorization for secure access to the app.	Firebase Authentication, OAuth, JWT
Restaurant Search	Allow users to search for nearby restaurants based on location, cuisine, or other filters.	Geolocation services, Filters
Menu Display	Display restaurant menus with items, descriptions, prices, and images.	RecyclerView, Jetpack Compose List
Cart Management	Enable users to add, remove, and manage items in their cart. Show the total order price.	ViewModel, LiveData, Cart Management
Order Processing	Facilitate the ordering process, including payment processing, order confirmation, and order history.	Payment Gateway Integration, Order API
User Profiles	Allow users to create and manage their profiles, view order history, and set preferences.	User Database, Profile Management
Notifications	Send push notifications to users for order updates, promotions, and other relevant information.	Firebase Cloud Messaging, Push Services

Component	Description	Technology Required
Reviews and Ratings	Enable users to leave reviews and ratings for restaurants and dishes. Display average ratings.	Review Submission, Rating System
Customer Support	Offer customer support features, such as live chat, FAQs, and contact information for assistance.	Chat SDK, Support Knowledge Base

### Application Characteristics

Characteristic	Description	Technology
User-Friendly UI	The app should have an intuitive and user-friendly user interface that makes it easy for users to browse restaurants, select items, and place orders.	Jetpack Compose, Material Design
Real-time Updates	Provide real-time updates to users on their order status, delivery tracking, and promotional messages.	Firebase Cloud Messaging, WebSockets
Location Services	Utilize location services to determine the user's current location for restaurant recommendations and delivery tracking.	Android Location APIs
Payment Integration	Integrate with payment gateways to enable secure and convenient payment processing for orders.	Payment Gateway APIs
Search and Filters	Implement a robust search feature and filters to help users find specific restaurants or cuisine types easily.	Search Algorithms, Filtering Logic
User Authentication	Ensure user data security by implementing authentication and authorization for secure access to the app.	Firebase Authentication, OAuth
Offline Access	Allow users to access basic functionality even when they have limited or no internet connectivity.	Local Data Storage (Room, SQLite)

Characteristic	Description	Technology
Order History	Maintain a history of user orders, providing easy access to past orders for reordering or reference.	Database (Room, SQLite)
Customer Support	Offer customer support features like live chat, FAQs, and contact information for assistance.	Chat SDK, Knowledge Base
Reviews and Ratings	Enable users to leave reviews and ratings for restaurants and dishes and display average ratings.	Review Submission
Performance Optimization	Optimize the app's performance for faster load times and smoother user experience.	Profiling Tools, Caching
Security and Privacy	Implement data security measures to protect user information and ensure user privacy.	Encryption, Data Protection