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

| Date | 01 November 2023 |
|---|---|
| Team ID | Team-590986 |
| Project Name | Project - Snack Squad: A Customizable Snack Ordering and Delivery App |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

## *User:-

→ User Registration

→ User Profiles

→Menu and Item Display

→ Cart Management

→ Ordering and Checkout

→Real-time Order Tracking

→ Notifications and Alerts

→ Reviews and Ratings System

→Customer Support and Chat

→ Search and Filtering

→Social Media Integration

→GPS and Location Services

## *Restaurant:-

→ Restaurant Listings

## *Admin:-

→ Admin Dashboard

→ Analytics and Reporting

## *Payment:-

→Payment Processing

## *Database:-

→User database

→Restaurant data

→Reviews and Ratings data

→Order data

## *Third-party Services:-

→Geolocation services

→Payment gateways

→Push notification services

**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Registration | Allows users to create and manage their accounts | Authentication frameworks (e.g., JWT, OAuth) |
| 2. | User Profiles | Users can update their personal information and preferences. | Database, User profiles management |
| 3. | Restaurant Listings | Displays a list of available restaurants to users. | Database, APIs, Geolocation services (Google Maps, GPS) |
| 4. | Menu and Item Display | Shows restaurant menus and food items with descriptions. | Database, APIs |
| 5. | Cart Management | Allows users to add, modify, and review their orders. | Data storage, Real-time updates (WebSockets) |
| 6. | Ordering and Checkout | Facilitates order placement, payment, and checkout. | Payment gateways (e.g., Stripe), Order processing logic |
| 7. | Real-time Order Tracking | Provides real-time tracking of order status and delivery. | Geolocation services, Push notifications |
| 8. | Notifications and Alerts | Sends alerts and notifications to users and drivers. | Push notification services (e.g., Firebase Cloud Messaging) |
| 9. | Reviews and Ratings | Allows users to rate and review restaurants and orders. | Database for storing reviews and ratings |
| 10. | Payment Processing | Handles secure payment transactions for orders. | Payment gateways, Encryption (SSL/TLS) |
| 11. | Customer Support and Chat | Provides in-app chat support for users and drivers. | Real-time chat integration, Messaging services |
| 12. | Admin Dashboard | Web-based interface for restaurant and order management. | Web development technologies (e.g., React, Django) |
| 13. | Analytics and Reporting | Tracks and analyzes app usage and performance. | Analytics tools (e.g., Google Analytics) |
| 14. | Search and Filtering | Offers search functionality and filters for restaurant selection. | Search algorithms, Filters |
| 15. | Social Media Integration | Allows users to share their experiences on social platforms. | Social media APIs (e.g., Facebook Graph API) |

| S.No | Characteristics | Description | Technology |
|------|-----------------|-------------|------------|
| 16. | GPS and Location Services | Provides accurate location data for tracking deliveries. | GPS, Geolocation services (e.g., Google Maps API) |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|------|-----------------|-------------|------------|
| 1. | User Registration and Login | Allows users to create accounts and log in securely. | Authentication frameworks (e.g., JWT, OAuth) |
| 2. | User database Restaurant Listings | Displays a list of restaurants based on user preferences. | Database, API, Geolocation services (Google Maps, GPS) |
| 3. | Menu and Item Display | Shows restaurant menus and food items with details. | Database, API |
| 4. | Cart Management | Allows users to add, modify, and review their orders. | Data storage, Real-time updates (WebSockets) |
| 5. | Ordering and Checkout | Enables users to place orders, select payment methods. | Payment gateways (e.g., Stripe), Order processing logic |
| 6. | Real-time Order Tracking | Provides real-time tracking of order status and delivery. | Geolocation services, Push notifications |
| 7. | Notifications and Alerts | Sends alerts and notifications to users and drivers. | Push notification services (e.g., Firebase Cloud Messaging) |
| 8. | Reviews and Ratings System | Allows users to rate and review restaurants and orders. | Database for storing reviews and ratings |
| 9. | Payment Processing | Handles secure payment transactions for orders. | Payment gateways, Encryption (SSL/TLS) |
| 10. | Customer Support and Chat | Provides in-app chat support for users and drivers. | Real-time chat integration, Messaging services |
| 11. | Admin Dashboard | Web-based interface for restaurant and order management. | Web development technologies (e.g., React, Django) |
| 12. | Analytics and Reporting | Tracks and analyzes app usage and performance. | Analytics tools (e.g., Google Analytics) |
| 13. | Search and Filtering | Offers search functionality and filters for restaurant selection. | Search algorithms, Filters |
| 14. | GPS and Location Services | Provides accurate location data for tracking deliveries. | GPS, Geolocation services (e.g., Google Maps API) |