

Project Design Phase-I  
Solution Architecture

Date	22 September 2023
Team ID	590962
Project Name	Snacks Squad
Maximum Marks	4 Marks

Solution Architecture:

*App streamlines access to a wide array of wholesome snack choices, promoting nutritional balance and fostering a culture of mindful eating. By offering a user-friendly platform for personalized and convenient snack selection, it encourages users to make informed dietary decisions that align with their health goals and preferences. With its emphasis on diverse and nutritious options, the app contributes to improved overall well-being, instilling a sense of wellness and satisfaction among users. Through its efficient and accessible approach, it cultivates a healthier snacking routine, ultimately leading to a positive impact on users' lifestyles and long-term health. Moreover, by encouraging the consumption of wholesome snacks, the app contributes to a broader societal shift towards healthier eating habits and wellness-conscious living.*

Solution Architecture Diagram

**User Interface Layer**  
(Mobile Application Interface)  
Interactive and User-Friendly Design  
Customizable Snack Selection Options

-----

-----

**Business Logic Layer**  
(Application & Database Servers)  
Inventory Management Systems  
Recommendation Engines  
Secure Order Processing

-----

-----

**Networking Layer**  
(APIs, Push Notifications, CDN)  
  
Seamless Communication via APIs  
Real-time Push Notifications for Orders  
Efficient Content Delivery via CDN

-----

-----

**Data Management Layer**  
(User Profiles, Inventory, Orders)  
Secure and Efficient Data Storage  
Reliable User Profile Management  
Streamlined Order History Maintenance

-----

---

### ***Personalization & Customization Layer***

**Personalized Snack Recommendations**  
**Customization Options for Users**  
**Dietary Preference Management**

---

---

### ***Third-Party Integrations Layer***

**Secure Payment Gateway Integration**  
**Seamless Delivery Service Integration**  
**Comprehensive Analytics Integration**

---

---

### ***Scalability & Performance Layer***

**Load Balancers for User Traffic Management**  
**Caching Mechanisms for Data Optimization**  
**Autoscaling Capabilities for User Demand**

