Project Design Phase-I
Proposed Solution Template

Date	23 October 2023
Team ID	PNT2022TMID 591068
Project Name	Project – Food Delivery App (Snack Squad)
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Develop a food delivery application to address common challenges in the industry, including limited restaurant options, inaccurate delivery times, payment security, complex user interfaces, delivery reliability, customization limitations, high delivery fees, inadequate customer support, sustainability issues, and data privacy concerns. The objective is to create a user-friendly, efficient, and secure platform that enhances the overall food delivery experience. graph...
2.	Idea / Solution description	Snack Squad is an innovative food delivery app designed to provide a seamless and convenient dining experience for users. It offers a wide range of features and services to satisfy the cravings of food enthusiasts, all accessible at their fingertips. **Key Features:** 1. **Restaurant Variety:** Snack Squad partners with a diverse range of restaurants, from local favourites to international chains. Users can explore a plethora of cuisines and menus. 2. **User-Friendly Interface:** The app's intuitive design ensures a smooth and enjoyable user experience. Browsing menus, placing orders, and tracking deliveries are all effortless. 3. **Personalized Recommendations:** Snack Squad leverages user preferences and order history to provide personalized restaurant and dish recommendations, making it easier for users to discover new flavours. 4. **Real-Time Tracking:** Users can track the status of their orders in real time. They receive updates on when the food is being prepared, out for delivery, and estimated time of arrival.

		5. **Customization:** The app allows users to customize their orders by specifying ingredients, spice levels, and portion sizes, catering to individual tastes and dietary preferences. 6. **Secure Payments:** Snack Squad offers various payment options, including credit/debit cards, digital wallets, and cash on delivery, ensuring secure and convenient transactions. 7. **Group Orders:** Users can place group orders with friends and family, making it easy to organize social gatherings and get-togethers. 8. **Delivery Options:** In addition to standard delivery, Snack Squad offers premium features like express delivery, scheduled orders, and contactless delivery, ensuring flexibility for users. 9. **Rewards and Loyalty Program:** Snack Squad offers a loyalty program with rewards, discounts, and exclusive offers for regular users, encouraging customer retention. 10. **Customer Support:** The app provides 24/7 customer support to address any issues or inquiries promptly. 11. **Restaurant Partner Portal:** Restaurants benefit from a dedicated portal where they can manage their menus, track orders, and access analytics to optimize their business
3.	Novelty / Uniqueness	**Unique Selling Points:** • **Snack Squad Concierge:** Users can chat with a virtual food concierge for personalized recommendations and assistance, making their food selection process even more convenient. • **Zero-Food-Waste Initiative:** Snack Squad collaborates with restaurants to minimize food wastage by offering surplus food to local charities and organizations. • **Green Delivery:** The company is committed to eco-friendly practices, with an option for users to select environmentally conscious delivery options, such as bicycle or electric vehicle deliveries. • **Community and Social Engagement:** Snack Squad promotes community engagement by sponsoring local events, food drives, and partnerships

		with local businesses.
4.	Social Impact / Customer Satisfaction	Snack Squad is designed to cater to a broad audience, including busy professionals, students, families, and food enthusiasts who seek a convenient and delightful dining experience. Snack Squad, with its innovative features and community engagement initiatives, aims to become the go-to food delivery app, not just for food, but for creating memorable culinary experiences.

5.	Business Model (Revenue Model)	• **Commission Fees from Restaurants:**
		  • Charge a commission fee to partner restaurants for each order facilitated through the app. The fee can be a percentage of the order value.
		  • The commission fee can vary based on factors like order volume, restaurant exclusivity, and promotional placements.
		
		• **Delivery Fees:**
		  • Charge customers a delivery fee for each order. The fee can vary based on factors like distance, order total, and delivery speed (e.g., regular or express).
		  • Offer subscription-based services that waive or reduce delivery fees for a monthly or annual fee.
		
		• **Subscription Services:**
		  • Introduce premium subscription services that offer benefits such as free or discounted delivery, exclusive restaurant access, and priority customer support.
		  • Subscription tiers could cater to different customer segments, like individuals, families, or business accounts.
		
		• **In-App Advertising:**
		  • Allowing restaurants and other businesses to advertise within the app. Charges applicable for sponsored listings, banner ads, or featured

		content. • Use user data and preferences to target ads, providing more value to advertisers. • **Promotional Partnerships:** • Collaborate with restaurants and food brands for special promotions and discounts. • Charge a marketing fee for promoting these deals to a broader audience, driving sales for partners. • **Order Processing Fees:** • Charge a small fee per order to cover payment processing costs, including credit card transaction fees and security measures. • **White Label Solutions:** • Offer white-label versions of your food delivery platform to individual restaurants or restaurant chains for a fee. This allows them to have their branded ordering system
6.	Scalability of the Solution	The scalability of the provided solution for a food delivery app can be achieved through several measures and architectural considerations. Here's how you can ensure scalability at various levels of the app: 1. **Infrastructure Scalability:** o **Cloud-Based Infrastructure:** Host your application on a cloud platform like AWS, Azure, or Google Cloud. This allows you to scale your server and database resources on-demand as your user base and traffic grow. o **Auto-Scaling:** Implement auto-scaling for application servers and databases. This ensures that additional server instances are automatically spun up during high traffic periods and scaled down during low traffic. 2. **Load Balancing:** o Utilize load balancers to evenly distribute incoming traffic

		among multiple application servers. This helps maintain performance during spikes in usage. 3. **Microservices Architecture:** o Implement a microservices architecture where different components of your app, such as user management, order processing, and payment handling, are separate services that can be individually scaled based on demand. 4. **Caching:** o Implement caching mechanisms to reduce the load on databases and speed up responses. Use in-memory caches like Redis for frequently accessed data.