

Snack Squad - PROJECT REPORT

Date	9th November 2023
Team ID	Team-591037
Project Name	Snack Squad: A Customizable Snack Ordering And Delivery App

CONTENTS

1. INTRODUCTION

1.1 Project Overview

1.2 Purpose

2. LITERATURE SURVEY

2.1 Existing problem

2.2 Problem Statement Definition

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas

3.2 Ideation & Brainstorming

4. REQUIREMENT ANALYSIS

4.1 Functional requirement

4.2 Non-Functional requirements

5. PROJECT DESIGN

5.1 Data Flow Diagrams & User Stories

5.2 Solution Architecture

6. PROJECT PLANNING & SCHEDULING

6.1 Technical Architecture

6.2 Sprint Planning & Estimation

6.3 Sprint Delivery Schedule

7. CODING & SOLUTIONING (Explain the features added in the project along with code)

7.1 Feature 1

7.2 Feature 2

8. PERFORMANCE TESTING

8.1 Performance Metrics

9. RESULTS

9.1 Output Screenshots

10. ADVANTAGES & DISADVANTAGES

11. CONCLUSION

12. FUTURE SCOPE

13. APPENDIX

Source Code

GitHub & Project Demo Link

1. INTRODUCTION

1.1 Project Overview

The project deals with the development of an Android application for Snack Delivery purposes. Kotlin is the programming language used for constructing the app.

1.2 Purpose

The purpose of the application has been to make snacks an easier purchase. It intends to save the time of its users, as it will allow them to make purchases at an affordable price through their phone.

Project Objectives

- Create a user-friendly mobile application for both Android and iOS platforms.
- Offer a diverse range of high-quality snacks from local vendors.
- Implement a secure and seamless payment system.
- Ensure timely and reliable snack delivery to users' specified locations.
- Enhance user engagement through personalized recommendations and promotions.

2. LITERATURE SURVEY

2.1 Existing problem

Although plenty of food delivery applications are available to us on the App Store, not a lot of applications focus on snacks. The snack industry is one of India's rapidly growing economic sectors. In relation to total population figures, per person revenues of US\$47.14 are generated in 2023. To make it easier for citizens to get snacks, an application can be developed to make the ordering process convenient. There is a clear need for a comprehensive snack delivery application that not only offers a wide variety of snack options but also prioritizes personalization based on individual preferences and dietary requirements. This application should provide a seamless and transparent user experience, addressing concerns related to real-time tracking, delivery reliability, and overall customer satisfaction.

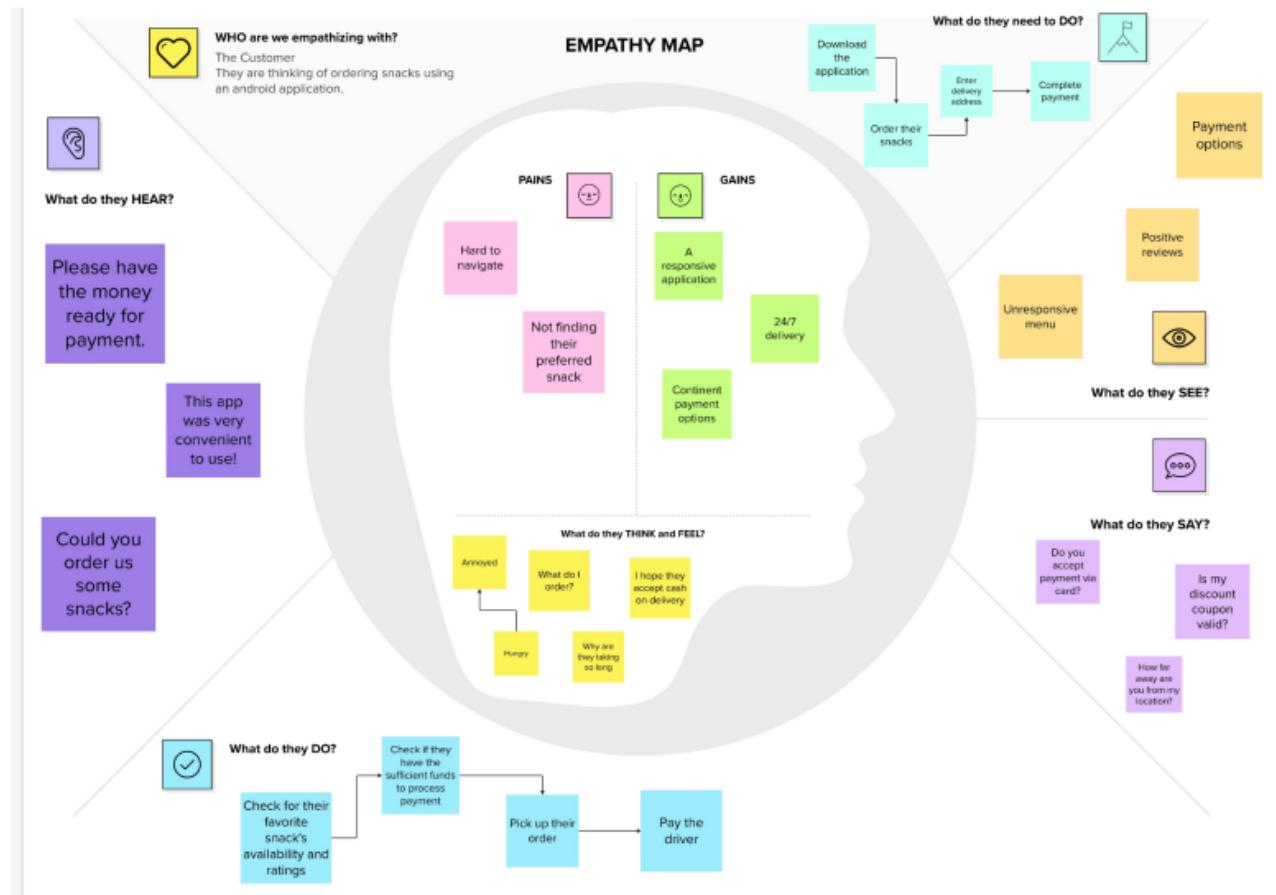
2.3 Problem Statement Definition

PROBLEM

How might we successfully execute a snack delivery application?

3. IDEATION & PROPOSED SOLUTION

3.1 Empathy Map Canvas



3.2 Ideation & Brainstorming

2

Brainstorm

Write down any ideas that come to mind that address your problem statement.

⌚ 10 minutes

Amol

vegetarian
and non-
vegetarian
menus

points
reward
system for
each order

a well
designed UI

card
payments

affordability

location
based
searching

snack variety

customization
themes

advertisements
on youtube

Dayalu

filter snacks
by region

rating from
users

compatibility
with maps

smooth
delivery

upi
payments

order history

customer
service

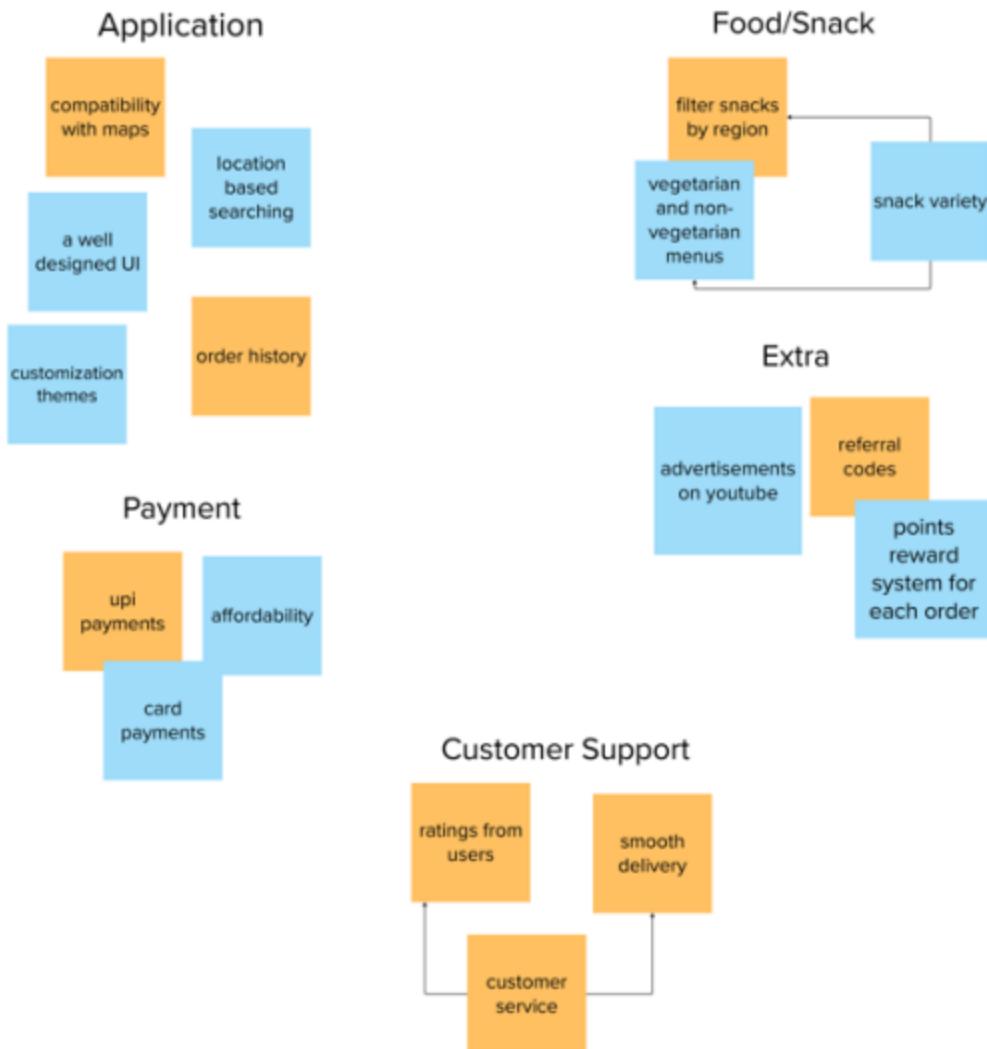
referral
codes

3

Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

⌚ 20 minutes

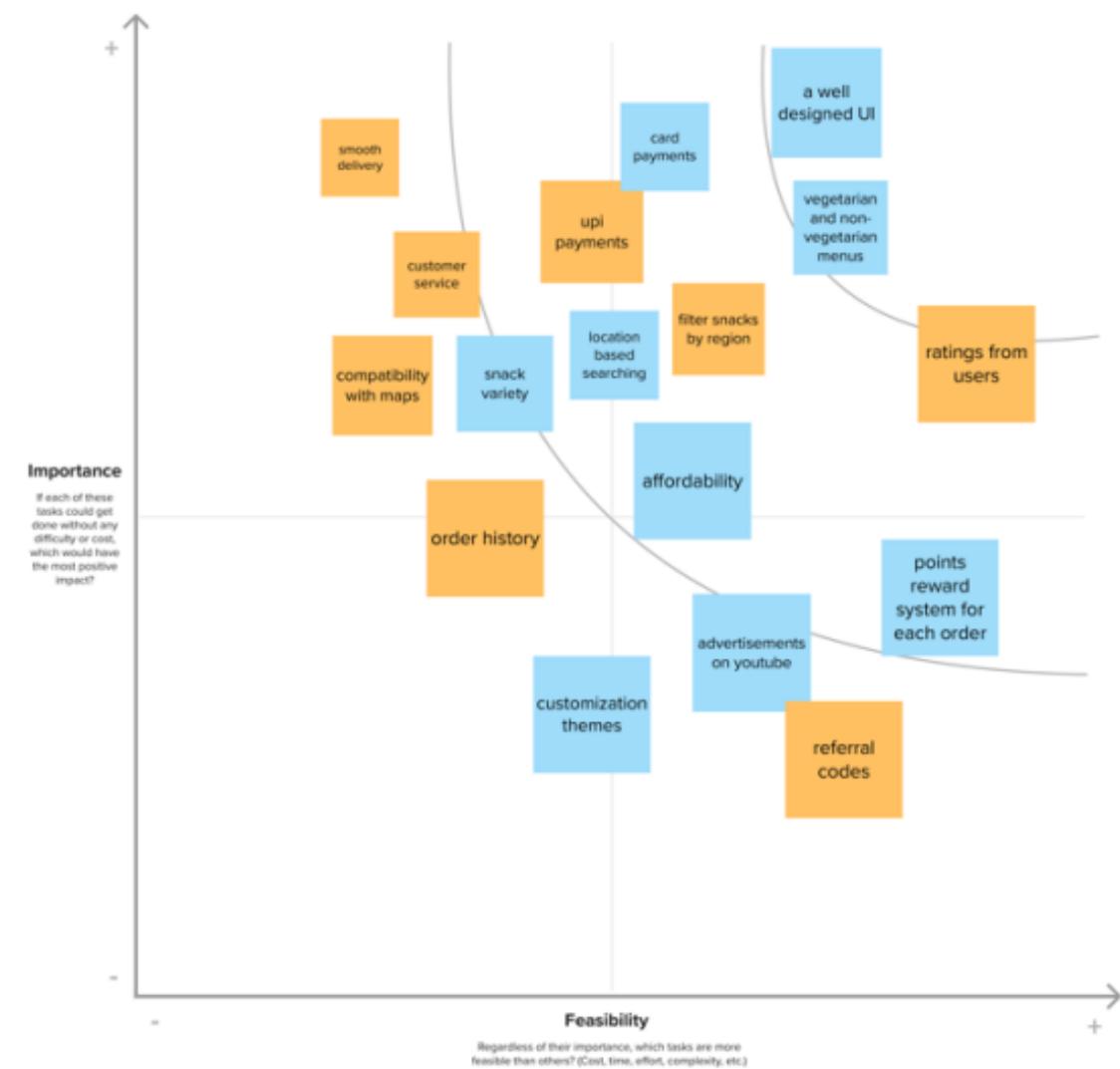


4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⌚ 20 minutes



4. REQUIREMENT ANALYSIS

4.1 Functional requirements

1. User Registration and Authentication:

Users should be able to create accounts, log in securely, and manage their profiles.

2. Product Catalog:

Display a diverse range of snacks with detailed descriptions, prices, and images.

3. Order Placement:

Allow users to easily browse snacks, add items to the cart, and place orders.

4. Real-Time Order Tracking:

Provide a real-time tracking feature for users to monitor the status and location of their snack deliveries.

5. Secure Payment Gateway:

Integrate a secure payment system to facilitate smooth and safe transactions.

4.2 Non-Functional requirements

1. Performance:

The app should load quickly, and transactions should be processed efficiently even during peak usage times.

2. Reliability:

Ensure the reliability of the app with minimal downtime and robust error handling.

3. Scalability:

Design the app to handle growth in both user base and product offerings.

4. Security:

Implement strong data encryption, secure payment gateways, and user authentication to protect user information.

5. Usability:

The user interface should be intuitive, easy to navigate, and accessible to users with varying levels of tech proficiency.

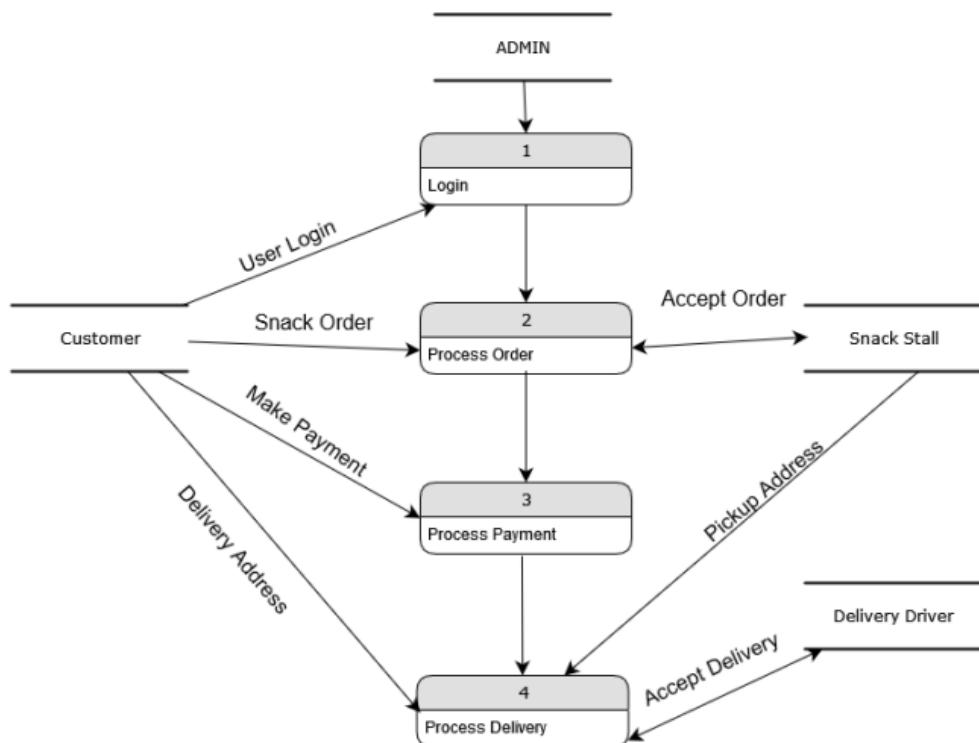
6. Compatibility:

Ensure compatibility across a range of devices, screen sizes, and operating systems.

5. PROJECT DESIGN

5.1 Data Flow Diagrams & User Stories

Data Flow Diagrams:



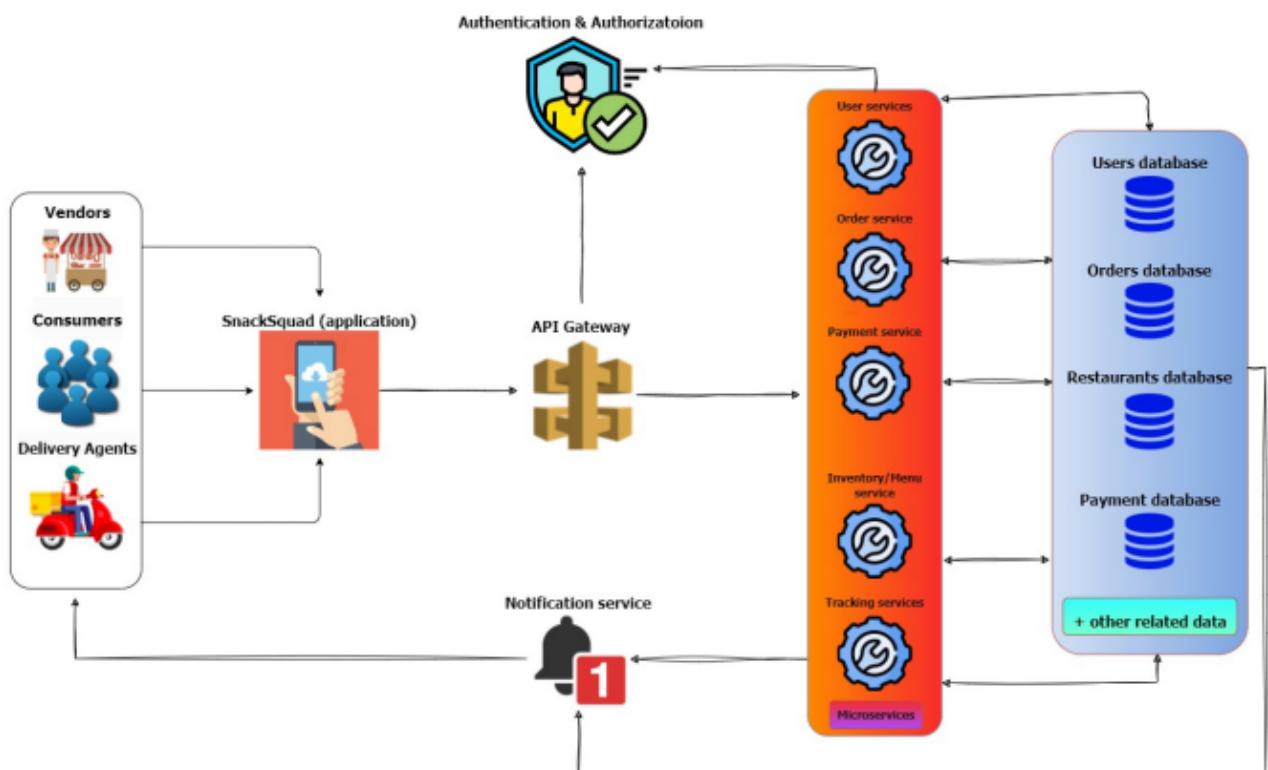
User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
	Login	USN-3	As a user, I want to view and filter through snack places near my area	I will be able to see the places to order	High	Sprint-1
	Dashboard	USN-4	As a user, I want to view the ratings and reviews of the snack places I wish to order from	I will be able to view the ratings and reviews	High	Sprint-1
Administrator	Administrator Access	USN-5	As an administrator, I wish to add and remove snack places from the application database	I can add new places and remove them as such	High	Sprint-1

5.2 Solution Architecture

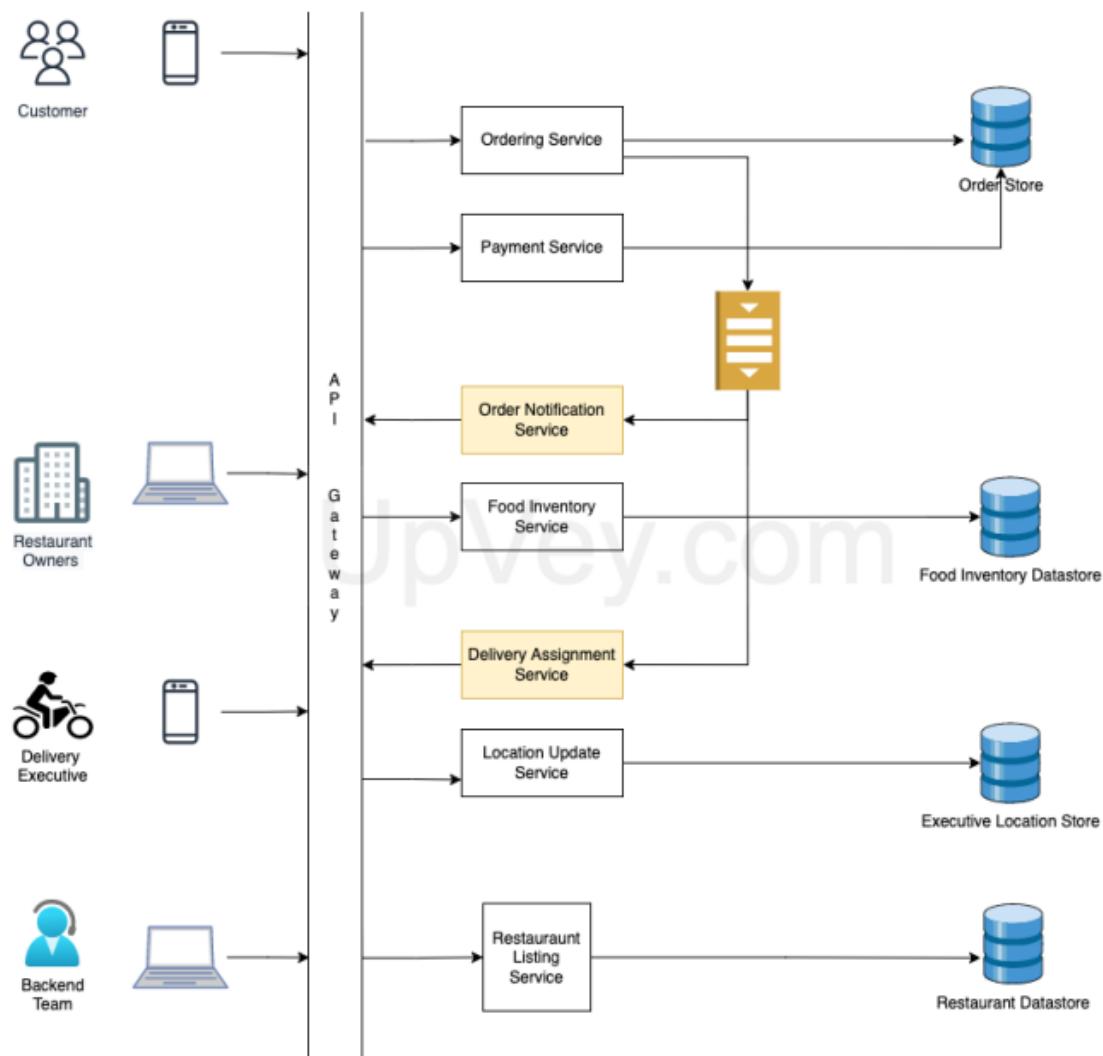
Solution Architecture:



6. PROJECT PLANNING & SCHEDULING

6.1 Technical Architecture

Technical Architecture:



6.2 Sprint Planning & Estimation

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	2
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	2
Sprint-1	Login	USN-3	As a user, I want to view and filter through snack places near my area	2	High	2
Sprint-1	Dashboard	USN-4	As a user, I want to view the ratings and reviews of the snack places I wish to order from	3	High	2
Sprint-1	Administrator Access	USN-5	As an administrator, I wish to add and remove snack places from the application database	2	High	2

6.3 Sprint Delivery Schedule

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	10	10 Days	24 Oct 2022	2 Nov 2022	10	6 Nov 2022

7. CODING & SOLUTIONING

7.1 Feature 1: User Authentication and Profile Management

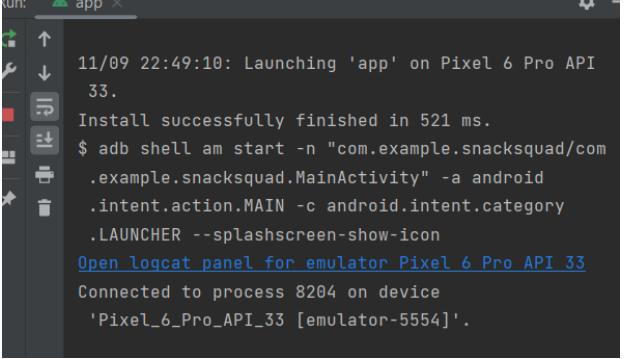
Implement user profiles to store and manage user information.

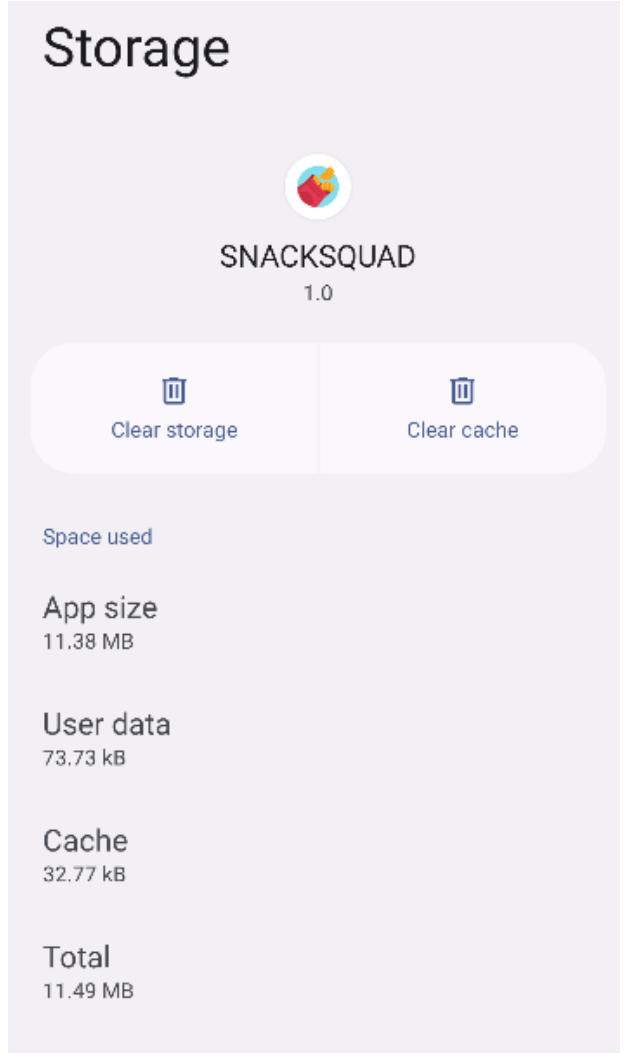
7.2 Feature 2: Order Placement and Payment:

Implement a shopping cart system to add and manage selected snacks.

8. PERFORMANCE TESTING

8.1 Performance Metrics

S.No	Parameter	Values	Screenshot
1	Metrics	App Launch Time- 550ms (approx.) Screen Render Time- 120ms Code Quality- 35 warnings	

2	Usage	<p>App Size- 11.38MB</p> <p>Customer Experience- 4/5</p>	<h2>Storage</h2>  <p>SNACKSQUAD 1.0</p> <p>Clear storage Clear cache</p> <p>Space used</p> <p>App size 11.38 MB</p> <p>User data 73.73 kB</p> <p>Cache 32.77 kB</p> <p>Total 11.49 MB</p>
3	Performance	Error and Crash Rates- 5%	

9. RESULTS

9.1 Output Screenshots

The image displays six screenshots of the SnackSquad mobile application, arranged in two rows of three. The top row shows the login and registration screens, while the bottom row shows the popular snacks menu, the cart screen, and the payment screen.

- Login Screen:** Shows the SnackSquad logo with a red and blue abstract shape containing a yellow swirl. Below the logo are two red buttons: "LOG-IN" and "REGISTER".
- Registration Screen:** Shows fields for "Enter Full Name", "Enter Email", and "Enter Password", followed by a purple "Register" button. A "Return to Log-In" link is at the bottom.
- Popular Snacks Screen:** Shows a grid of snack items: Vegetable Cutlet (40Rs) with a picture of a white plate with cutlets and green chutney; Onion Bhaji (15Rs) with a picture of a tray of golden-brown bhajis; and another partially visible item.
- Your Cart Screen:** Shows a list of items in the cart: "Vegetable Cutlet" and "Vada Pav". A "PROCEED TO PAYMENT" button is at the bottom.
- Payment Screen:** Shows payment methods: VISA, MasterCard, UPI (Paytm, UPI), and Cash on Delivery. It also displays the total amount to pay: 70Rs.

10. ADVANTAGES & DISADVANTAGES

Advantages:

1. Convenience: The primary advantage of a snack delivery app is the convenience it offers to users. They can easily order their favorite snacks from the comfort of their homes or workplaces, saving time and effort.
2. Wide Reach: With a mobile app, you can reach a broad audience. People can access your snack delivery service from anywhere with an internet connection, increasing your potential customer base.
3. Real-Time Tracking: Integrating real-time tracking features allows users to track the status of their snack delivery. This transparency can enhance the user experience and build trust.
4. Marketing Opportunities: A snack delivery app provides a platform for targeted marketing. You can send notifications about promotions, discounts, and new snack offerings directly to users, increasing engagement.

Disadvantages:

1. Competition: The market for snack delivery apps can be highly competitive. Standing out among other similar services requires effective marketing, unique features, and excellent customer service.
2. Customer Trust: Building trust in a snack delivery service is essential. Issues like late deliveries, incorrect orders, or poor food quality can erode trust quickly. Providing excellent customer service and addressing issues promptly is crucial to maintaining trust.
3. Costs: Developing and maintaining a high-quality snack delivery app involves initial and ongoing costs. This includes app development, server maintenance, marketing, and customer support. Generating sufficient revenue to cover these costs is crucial.

11. CONCLUSION

In conclusion, the development and implementation of the SNACKSQUAD - Snack Delivery App represents a vision of convenience and culinary innovation. Through meticulous planning, agile development methodologies, and a commitment to user-centric design, we have successfully created a platform that not only satisfies the cravings of our users but also redefines the way food delivery services operate in the digital age.

The advantages of the Snack Delivery App are evident in its convenient user interface and real-time tracking features, which contributes to an unparalleled user experience. The app capitalizes on the widespread use of mobile technology, providing a convenient solution for users to access a variety of snacks at their fingertips.

However, it is crucial to acknowledge and address the challenges that come with such technological ventures. The competition in the snack delivery market is fierce, necessitating ongoing efforts in marketing, customer engagement, and continuous improvement of the app's features. Additionally, maintaining the food quality standards, and building and retaining customer trust pose ongoing challenges that demand our unwavering commitment.

12. FUTURE SCOPE

These are some objectives that can be met to further improve the app:

1. Diversification of Snack Options:

Expand the range of snacks offered on the platform to cater to diverse tastes and dietary preferences. Consider collaborating with local vendors, introducing healthy snack options, or incorporating trending and seasonal items.

2. Global Expansion:

Explore opportunities to expand the app's reach beyond its current geographical location. Consider entering new markets, either nationally or internationally, to tap into different customer demographics and preferences.

3. Sustainability Initiatives:

Respond to the growing demand for sustainable and eco-friendly practices. Consider implementing environmentally conscious packaging, supporting local and sustainable snack producers, and communicating these efforts to environmentally conscious consumers.

4. Integration of Social Features:

Introduce social features within the app, allowing users to share their snack choices, reviews, and recommendations with friends. Social integration can enhance user engagement and create a sense of community around the app.

13. APPENDIX

Source Code (GitHub):

<https://github.com/smartinternz02/SI-GuidedProject-587129-1696857363/tree/main/Project%20Development%20Phase/Project%20Files/SNACKSQUAD>

Project Demonstration:

https://drive.google.com/file/d/1lC9UBzKMIkULDrNj4cw4uCtCVu0xrGxg/view?usp=drive_link