

FOOD REVIEW MANAGEMENT

BY

IZAZ AHMED

ID: 201-15-3531

This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

Supervised By

Mr. Amit Chakraborty

Assistant Professor

Department of CSE

Daffodil International University

Co-Supervised By

Mr. Fahad Faisal

Sr. Lecturer

Department of CSE

Daffodil International University



DAFFODIL INTERNATIONAL UNIVERSITY

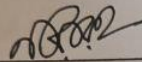
DHAKA, BANGLADESH

JANUARY 2024

APPROVAL

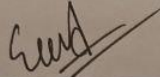
This Project titled “Food Review Management”, submitted by **Izaz Ahmed**, ID No: 201-15-3531 to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 24th January, 2024

BOARD OF EXAMINERS



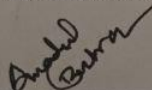
Narayan Ranjan Chakraborty
Associate Professor & Associate Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Chairman



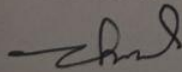
Md. Sazzadur Ahamed
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Amatul Bushra Akhi
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



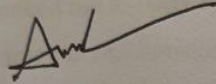
Dr. Md. Zulfiker Mahmud
Associate Professor
Department of Computer Science and Engineering
Jagannath University

External Examiner

DECLARATION

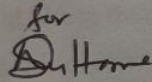
I hereby declare that, this project has been done by me under the supervision of **Mr. Amit Chakraborty, Assistant Professor, Department of CSE** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

Supervised by:



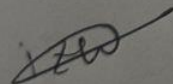
Mr. Amit Chakraborty
Assistant Professor
Department of CSE
Daffodil International University

Co-Supervised by:



Mr. Fahad Faisal
Sr. Lecturer
Department of CSE
Daffodil International University

Submitted by:



IZAZ AHMED
ID: 201-15-3531
Department of CSE
Daffodil International University

ACKNOWLEDGEMENT

First, I express my heartiest thanks and gratefulness to almighty God for His divine blessing makes us possible to complete the final year project successfully.

I really grateful and wish my profound our indebtedness to **Mr Amit Chakroborty , Assistant Professor, Department of CSE Daffodil International University**. Deep Knowledge & keen interest of our supervisor in the field of “*Android development*” influenced me to carry out this project. His endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stage have made it possible to complete this project.

I would like to express my heartiest gratitude to **Dr. Sheak Rashed Haider Noori**, Professor & Head, Department of CSE, for his kind help to finish my project and also to other faculty member and the staff of CSE department of Daffodil International University.

I would like to thank my entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, I must acknowledge with due respect the constant support and patients of my parents.

ABSTRACT

Food review Management is a dedicated Android application for the culinary enthusiasts of Daffodil International University. This user-friendly app streamlines the process of reviewing foods in campus restaurants. With a seamless login, users access a curated list of eateries, selecting their desired spot to share insights through tailored questions covering taste, presentation, service, and overall satisfaction. Beyond simplifying the dining decision-making process, " Food review management " aims to cultivate a community where users actively contribute to shaping the campus food experience. By fostering open dialogue and honest feedback, the app not only serves as a guide for fellow foodies but also encourages restaurants to enhance their offerings based on user insights. " Food review management " is more than just an app; it's a collaborative effort to elevate the campus dining scene through shared experiences and genuine reviews.

TABLE OF CONTENTS

CONTENTS	PAGE
Declaration	ii
Acknowledgements	iii
Abstract	iv
List of figures	v
List of Table	vii
CHAPTER 1: INTRODUCTION	1-4
1.1 Introduction	1
1.2 Motivation	1
1.3 Objectives	2
1.4 Expected Outcomes	2
1.5 Project Management and Finance	3
1.6 Report Layout	3
CHAPTER 2: BACKGROUND	5-12
2.1 Preliminaries/Terminologies	5
2.2 Relative Works	5
2.3Comparative Analysis	6
2.4 Scope of the Problem	11
2.5 Challenges	12
CHAPTER 3: REQUIREMENTS SPECIFICATION	13-18
3.1 Business Process Modeling	13
3.2 Requirement Collection and Analysis	14
3.3 Use Case Modeling and Description	15
3.4 Logical Data Model	17

3.5 Design Requirement	18
CHAPTER 4: DESIGN SPECIFICATION	19-27
4.1 Front-end Design	19
4.2 Back-end design	25
4.3 Interaction Design and User Experience	27
4.4 Implementation Requirements	27
CHAPTER 5: TEST AND IMPLEMENTATION	28-30
5.1 Implementation of Database	28
5.2 Implementation of Front-end Design	29
5.3 Testing Implementation	29-30
5.4 Test Results and Reports	30
CHAPTER 6: IMPACT ON SOCIETY, ENVIRONMENT, & SUSTAINABILITY	31-33
6.1 Impact on Society	31
6.2 Impact on Environment	32
6.3 Ethical Aspects	32
6.4 Sustainability Plan	33
CHAPTER 7: CONCLUSION AND FUTURE SCOPE	34-35
7.1 Discussion and Conclusion	34
7.2 Scope for Further Developments	34
REFERENCES	36

LIST OF FIGURES

FIGURES	PAGE NO
Figure 2.3.1: Food Gulliver	6
Figure 2.3.2: Food panda	7
Figure 2.3.3: Burpple	8
Figure 2.3.4: Yelp	9
Figure 3.1.1: flowchart of food review application	12
Figure 3.3.1: use case diagram food review application	15
Figure 3.4.4: Logical data model	16
Figure 4.1.1: Student register	18
Figure 4.1.2: Login	19
Figure 4.1.3: List of the restaurant	20
Figure 4.1.4: Make review	21
Figure 4.15: Student profile	22
Figure 4.1.6: Ranking for Restaurant	23
Figure 4.3.1: Backend server	24
Figure 4.2.2: Database	25
Figure 5.1.1: ER diagram	27

LIST OF TABLES

TABLES	PAGE NO
Table 1: Whitebox Test Cases for Food Review Application	29

CHAPTER 1

INTRODUCTION

1.1 Introduction:

Navigating the diverse yet sometimes confusing food scene at Daffodil International University can be a daily struggle. To empower students and faculty to make informed culinary choices, I present an Android application dedicated to honest food reviews across all DIU restaurants and shops. Users can rate their meals, leave detailed reviews, and filter recommendations based on cuisine, price, dietary needs, and even specific cravings. This project aims to create a vibrant online community where authentic tastebud-tested opinions guide diners towards memorable meals and away from gastronomic disappointments. With, we hope to revolutionize how DIU students experience food, one review at a time.

1.2 Motivation

The motivation behind developing the Food Review application for Daffodil International University stems from the need for an honest and reliable platform for individuals to share their culinary experiences within the university vicinity. As the culinary landscape continues to evolve, the importance of authentic user reviews becomes paramount for both consumers and restaurant owners. This application aims to bridge the gap by providing a user-friendly interface where individuals can log in, explore a curated list of restaurants and shops around Daffodil International University, and express their candid opinions about the food they have tasted. By encouraging users to answer specific questions about their dining experiences, the application seeks to generate comprehensive and insightful reviews, empowering others in the community to make informed decisions about where to dine. Through the collaborative effort of users, this application aspires to foster a vibrant and transparent food culture around the university, promoting quality and satisfaction in every culinary venture.

1.3 Objective

- Create a platform for users to share honest opinions about university dining options, fostering transparency and authenticity in food reviews.
- To enhance the dining experience for student faculty, and staff by make better choices by providing genuine feedback.
- To facilitate a feedback loop for menu optimization, service enhancement, and overall customer satisfaction.
- To build a platform for food enthusiasts to connect, share recommendations, and engage in discussions, creating a sense of community.
- To collect valuable data for decision-making.

1.4 Expected outcome

Here are some expected outcomes for my food review Android application:

For Users:

- **Improved Food Choices:** Users can make more informed decisions about where to eat based on honest, real-time reviews from fellow students.
- **Enhanced Dining Experiences:** By sharing feedback, users can help restaurants improve their food quality and service, leading to better overall dining experiences.
- **Sense of Community:** The app can foster a sense of community among students by creating a platform for sharing opinions and recommendations.
- **Personalized Recommendations:** The app can recommend restaurants based on user preferences and past reviews, making it easier to find food that suits individual tastes.

For Restaurants:

- **Valuable Customer Feedback:** Restaurants can gain insights into customer preferences and areas for improvement, allowing them to better cater to their target audience.
- **Increased Visibility:** The app can drive more traffic to restaurants by making them more discoverable to potential customers.
- **Improved Reputation:** Positive reviews can enhance a restaurant's reputation and attract new customers.
- **Opportunity for Engagement:** Restaurants can interact with reviewers, address concerns, and build stronger relationships with their customers.
-

1.5 Project Management and Finance

Developing this food review app for Daffodil University I was careful for planning and resourcefulness as a solo developer. To keep things manageable, prioritize core features like user login, restaurant listing with reviews, and food rating submission. I use free tools like Trello for task management and Android Studio for development. I start with basic UI/UX and optimize later based on user feedback. I ensure minimize development costs by utilizing open-source libraries and focusing on essential functionalities. I explore ads or in-app purchases as future monetization options.

1.6 Report Layout

In Chapter 1, the project unfolds with an introduction that illuminates its core facets. Motivations driving the initiative are expounded upon, outlining specific objectives and envisioning anticipated outcomes. Emphasis is placed on project management and financial considerations, offering a preliminary glimpse into the report's overall structure. Chapter 2, the background section, establishes essential context by introducing key terminologies and surveying related works. A comparative analysis situates the project within the broader landscape, discussing the scope of the addressed problem and anticipating potential challenges. Chapter 3 delves into Requirement Specification, scrutinizing the project's functional aspects through business process modeling,

requirements collection, and use case descriptions. The establishment of a logical data model and consideration of design requirements contribute to the comprehensive exploration of this phase. In Chapter 4, Design Specification unveils the intricacies of the design phase, covering front-end and back-end design, interaction design, and user experience. Specific implementation requirements serve as a roadmap for the impending development phase. The subsequent chapter, Implementation and Testing (Chapter 5), navigates the practical execution of the project, encompassing database implementation, front-end design, and meticulous testing procedures. An analysis of test results and pertinent reports concludes the chapter. Chapter 6 casts a wide net, evaluating the project's impact on society, the environment, and sustainability. It scrutinizes societal implications, environmental considerations, ethical aspects, and outlines plans for ensuring long-term sustainability. Finally, Chapter 7, the Conclusion and Future Scope, brings the report to a close by summarizing outcomes and drawing conclusions. It hints at potential future developments, serving as a bridge to further exploration beyond the confines of the current project.

CHAPTER 2

BACKGROUND

2.1 Preliminaries/Terminologies

The food review application for Daffodil International University is a food reviewing application. By this application user can drop a honest food review for a food item.

User: An individual who downloads and interacts with the Android application, contributing reviews and ratings for food at restaurants or shops affiliated with Daffodil International University.

Review: A user-generated assessment and commentary on the quality, taste, and overall experience of the food at a specific restaurant or shop, providing valuable insights for others.

Questionnaire: A set of predefined questions presented to users after selecting a restaurant/shop, designed to gather specific information about their food experience, ensuring a comprehensive review.

Rating System: A numerical or star-based system within the application, allowing users to assign scores to different aspects of their food experience, providing a quick and visual summary of their opinion.

2.2 Related Works

There are many works in Bangladesh and others country's. Here are some works that similar to my work. Every app has Different specialty. I have trying working with the specially reviewing system.

1. Food Gulliver-Food Review App

(<https://play.google.com/store/apps/details?id=com.foodgulliver.reviewapp&hl=en&gl=US>)

2. Food panda

(<https://play.google.com/store/apps/details?id=com.global.foodpanda.android&hl=en&gl=US>)

3. Yelp: Food, Delivery & Reviews

(<https://play.google.com/store/apps/details?id=com.yelp.android&hl=en&gl=US>)

4. Burpple - Food Reviews & Deals

(<https://play.google.com/store/apps/details?id=com.burpple.app&hl=en&gl=US>)

2.3 Comparative Analysis

Food Gulliver-Food Review App:

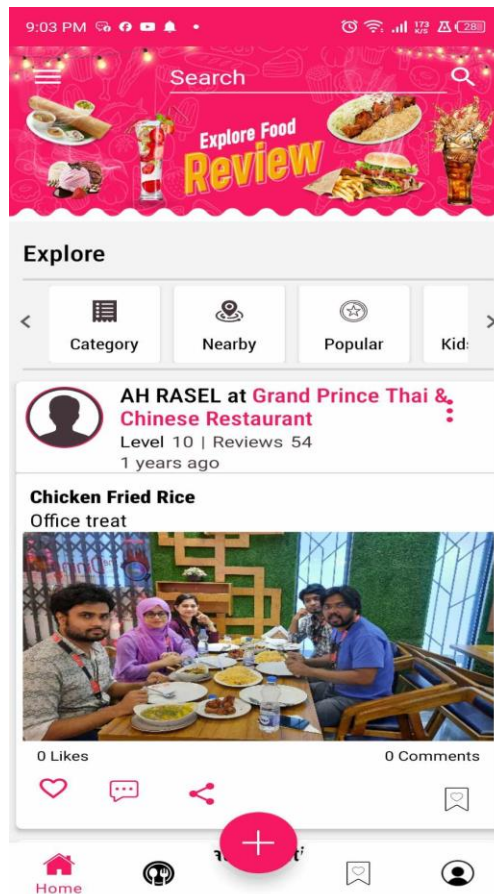


Figure 2.3.1: Food Gulliver

Food Gulliver Bangladeshi food review android application. provide all type of food review post, rating services, and advertising solution to all food lover customers in Bangladesh. My website will work with in boundary of Daffodil International University so that all student can get honest reviews.

Food Panda:

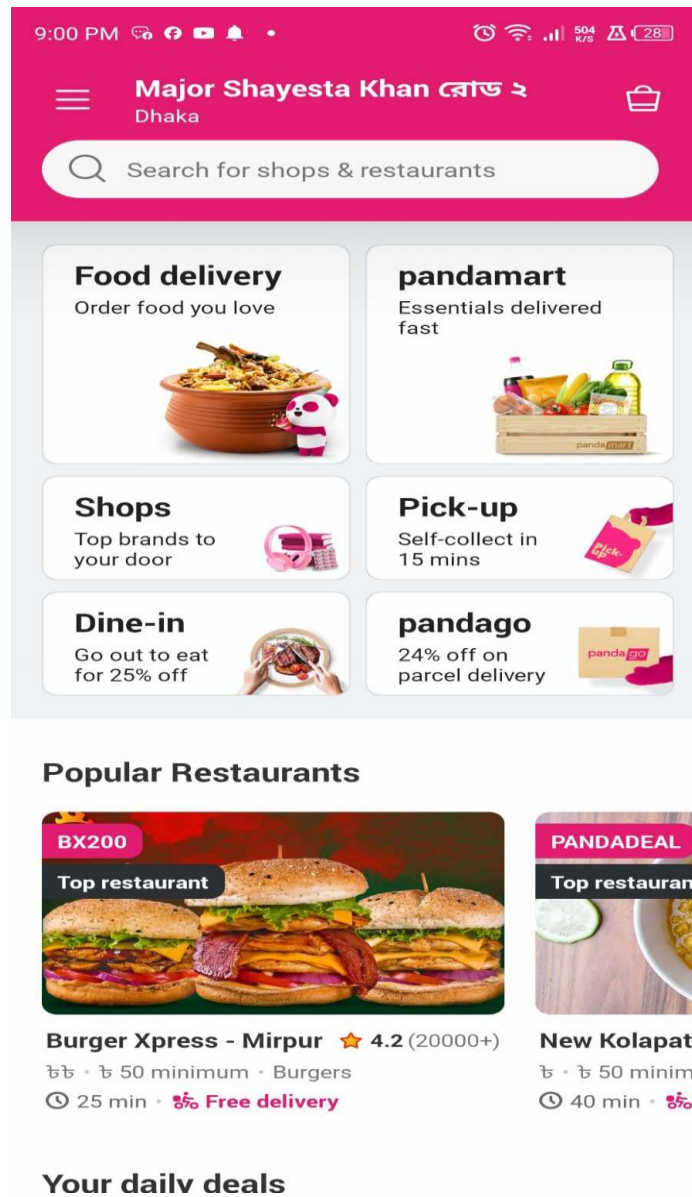


Figure 2.3.2: Food panda

Food panda is a food delivery and review applications. But usually It use for food order, and Daffodil International university's restaurants are not accepting online order. So, user are not able to review them. My application work with review in DIU.

Burpple:

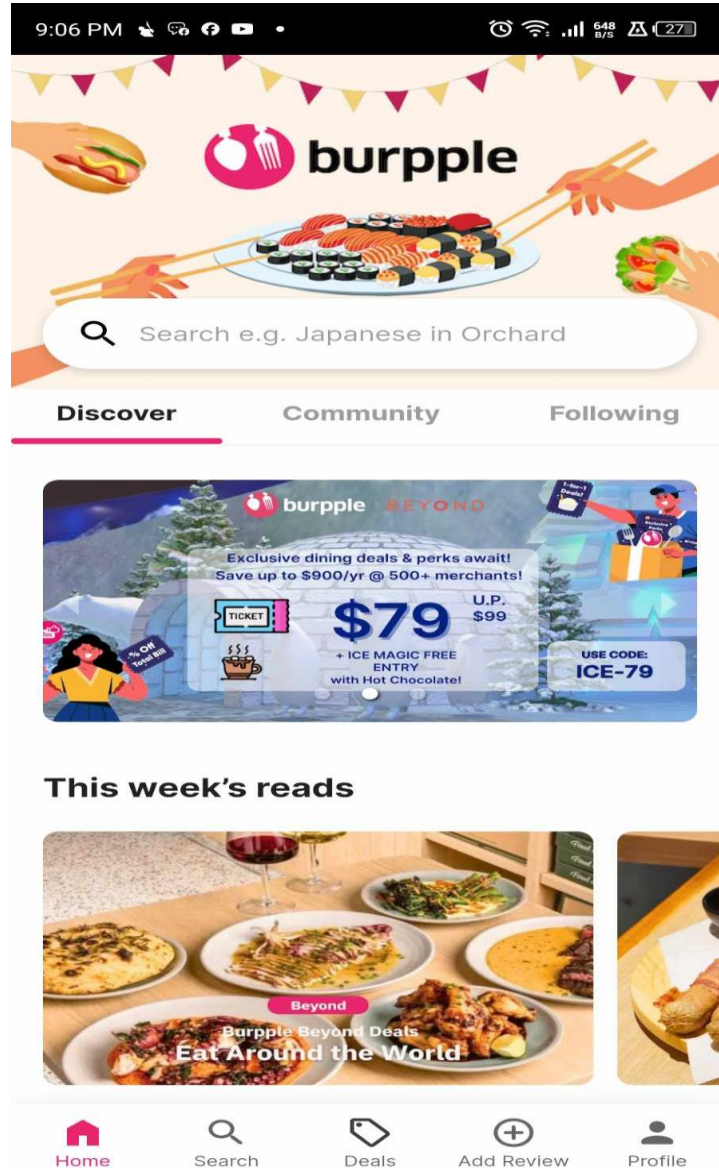


Figure 2.3.3: burpple

Burpple is an application for review food in Singapore. I will work with a boundary in daffodil International University.

Yelp:

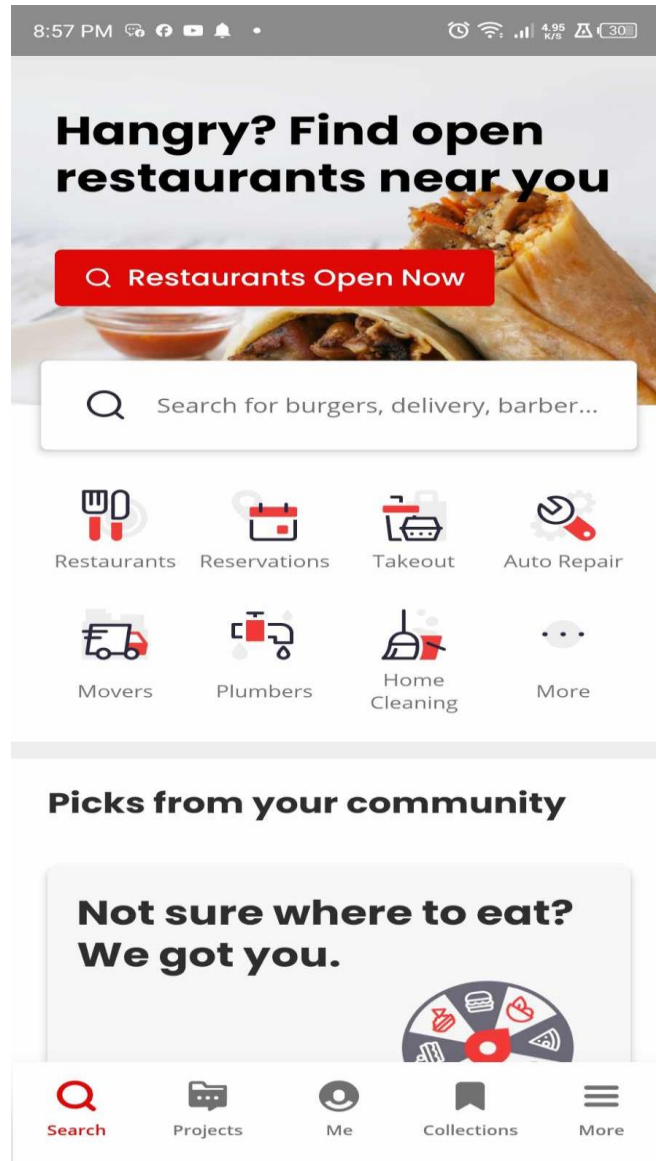


Figure 2.3.4: Yelp

Yelp work with many problems solutions in Bangladesh. Beside they work with food reviews. But I will work only review so that user get honest review and be more believable in the boundary of Daffodil International University.

2.4 Scope of the Problem

Within Daffodil International University, students and staff often lack reliable and easily accessible information about the quality and taste of food offered by various restaurants and shops. This leads to inconsistent dining experiences, making informed choices about where to eat a challenge. Negative word-of-mouth through informal channels creates confusion and may not accurately reflect the overall dining experience.

Specific Challenges Addressed:

Honest Reviews: This application aims to address the issue of unreliable or biased reviews by providing a platform for users to submit genuine feedback about their dining experiences anonymously. This fosters transparency and helps establish trust in the information presented.

Centralized Platform: By creating a central platform for food reviews within the university, users can easily access and share information about different restaurants, streamlining the decision-making process and eliminating the need for relying on informal channels.

Transparency and Accountability: The application's focus on honest reviews can promote a culture of transparency and accountability among restaurants within the university. By highlighting areas for improvement based on user feedback, the application can encourage restaurants to maintain high food quality and service standards.

Scope Exclusions:

Delivery and Takeaway Services: While the initial focus will be on on-site dining experiences, the application's scope does not currently encompass reviews for off-campus delivery services or takeaway options. This functionality may be considered for future expansions.

Nutritional Information: The application is not designed to provide detailed nutritional information about food items. The platform primarily focuses on subjective reviews of taste and quality, allowing users to make informed choices based on personal preferences.

2.5 Challenges

While working on any project, challenges are inevitable, and in the case of our current endeavor, we have encountered certain accusations. Our initial approach involves conceptualizing this application by leveraging user feedback as a valuable resource.

Consequently, we are committed to addressing and incorporating user indictments to ensure the completion of this application meets their expectations. The specified challenges and requirements are outlined below.

- Motivating users to leave reviews: Simplify the reviewing process and introduce rewards or gamification for frequent reviewers.
- Ensuring review quality and authenticity: Implement measures to prevent fake reviews, such as requiring proof of purchase or linking reviews to university IDs.
- Keeping restaurant information up-to-date: Establish processes for regular updates and consider partnerships with restaurants to streamline this.
- Protecting user privacy and data security: Implement strong security measures to safeguard sensitive user information.
- Building a user-friendly interface: Design an intuitive and visually appealing app that caters to the target audience.
- Addressing potential negative reviews: Work with restaurants to handle negative feedback constructively.
- Protecting student privacy: Obtain consents and comply with data protection regulations.

CHAPTER 3

REQUIREMENTS SPECIFICATION

3.1 Business Process Modeling

In this applications user are making review and view review of food by selecting restaurant. If any user wants to review then he have to answer some pre define question about foods.

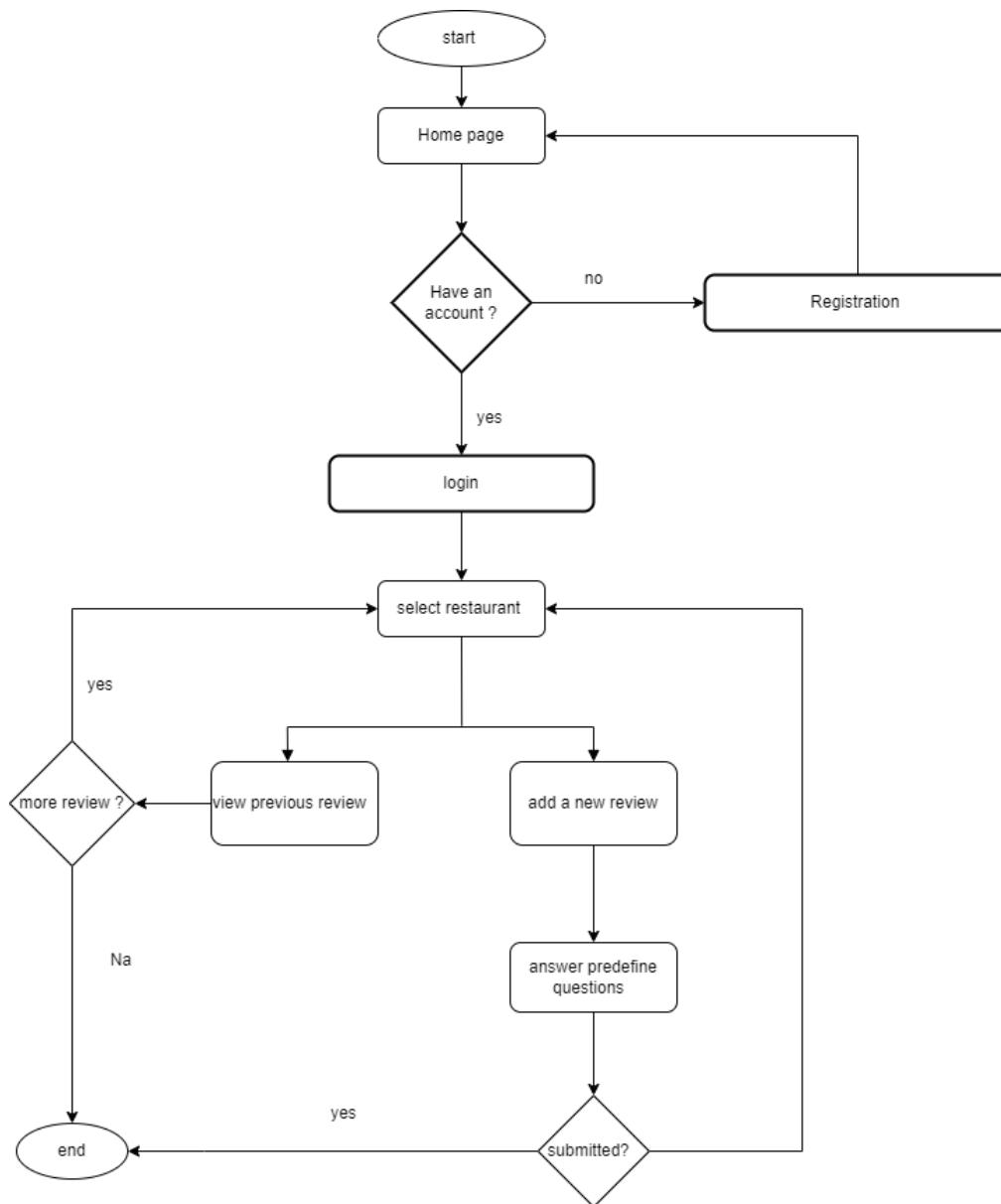


Figure 3.1.1: flowchart of food review application

3.2 Requirement Collection and Analysis

Functional Requirements:

User Authentication:

- Users should be able to create accounts and log in securely.
- User authentication should include features like password recovery and account verification.

Restaurant Listings:

- Display a list of restaurants or shops under Daffodil International University.
- Provide basic information about each restaurant (name, location, contact details).

Review Submission:

- Allow users to select a restaurant from the list.
- Provide a form for users to submit reviews for the selected restaurant. Include questions about the food, service, ambiance, etc.

Rating System:

- Implement a rating system for users to rate different aspects of the food (e.g., taste, presentation, value for money).
- Allow users to give an overall rating for the restaurant.

Review Display:

- Display reviews for each restaurant along with the user's name and date of the review.
- Sort and filter reviews based on different criteria (e.g., most recent, highest rated).

User Profile:

- Allow users to view and edit their profiles.
- Display a history of reviews submitted by the user.

Search Functionality:

- Implement a search feature for users to find specific restaurants quickly.

Non-Functional Requirements:

Performance: The application should respond to user actions promptly. Load restaurant listings and reviews quickly, even with a large user base.

Scalability: The application should be designed to handle an increasing number of users and reviews over time.

Security: Ensure that user data, especially login credentials, is securely stored. Implement secure communication (HTTPS) between the mobile app and the server. Minimize downtime by ensuring the stability of the application. Regularly back up user data to prevent data loss.

Compatibility: Ensure the application is compatible with various Android versions and devices.

Data Privacy: Implement measures to protect user privacy and comply with relevant data protection regulations.

Feedback and Notifications: Provide feedback to users upon submitting reviews or logging in.

Implement notifications for important updates or responses to user reviews.

.

3.3 Use Case Modeling and Description

The food review management use case diagram is the visual representation of the functionalities of user. The user are can login, view previous review, select restaurant for review etc. In this use case diagram, I present the visualization of this functional requirement for user. The Use case diagrams are valuable for visualizing the functional requirements of my system that will translate into my design choices and my development priorities.

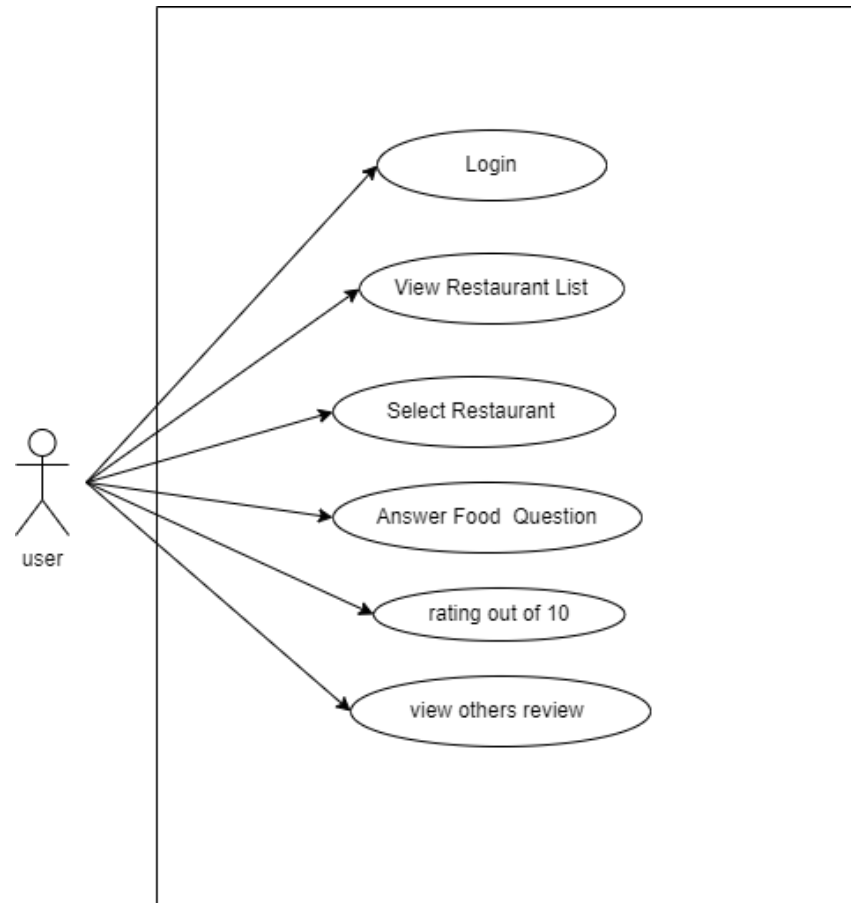


Figure 3.3.1: use case diagram of food review application

User: Represents the end-user of the application, who interacts with the system.

Food Review Application: The main system box that contains the use cases.

Login: The user logs into the application.

View Restaurant List: After logging in, the user can view the list of restaurants/shops under Daffodil International University.

Select Restaurant: The user selects a specific restaurant/shop from the list.

Answer Food Questions: The user answers a set of questions about the food at the selected restaurant/shop.

Rating out of 10: user can easily rate any food 1-10 out of 10 by the food test, decoration, freshness, price etc.

View others review: user will easily to view the previous foods reviews.

3.4 Logical Data Model

This paradigm simplifies the characterization of structural relationships between data components by employing testable logical models. These models utilize UML class notation to represent data elements derived from conceptual models, serving as the basis for the physical data model. Widely utilized in the field of business architecture, these logical models contribute to the creation of a cohesive data model that enhances the informed decision-making process.

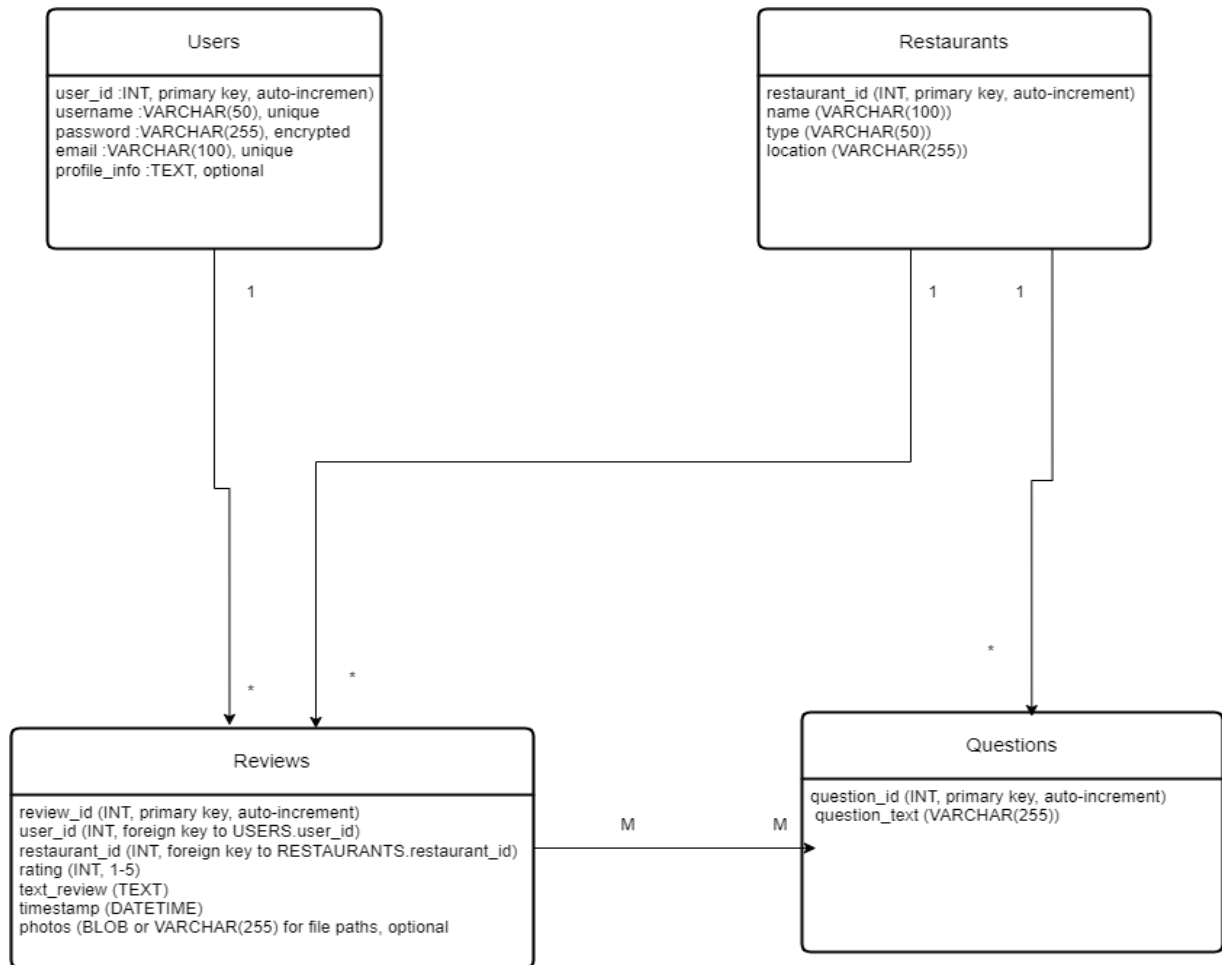


Figure :3.4.4: Logical data model

3.5 Design Requirement

Frontend Technologies:

Development Environment: Android Studio provides a robust and versatile Integrated Development Environment (IDE) tailored for Android app development. Its extensive

features, including code editing, debugging, and performance analysis tools, contribute to a streamlined development and deployment process.

UI Design: XML serves as the markup language for designing the user interface (UI) of the Android application. It allows developers to create visually appealing and intuitive interfaces, adhering to Android's design guidelines. This ensures a consistent and user-friendly experience across different devices.

Backend technology:

Programming Language: Java, a widely-used and versatile programming language, forms the core logic of the application. It enables seamless user interactions, efficient data handling, and integration with various Android features, contributing to a stable and responsive application.

Database: Firebase Realtime Database, a cloud-based NoSQL database, offers efficient and scalable data storage. Its real-time synchronization capabilities ensure that users receive up-to-date information, contributing to a dynamic and responsive data environment. The database seamlessly integrates with Android applications, enhancing overall performance.

CHAPTER 4

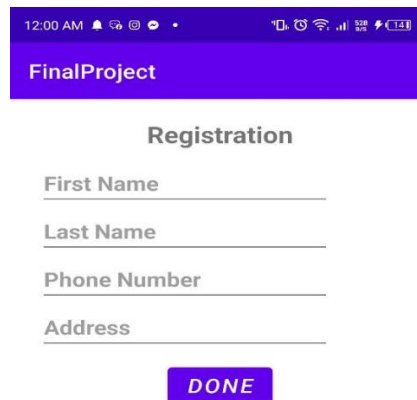
DESIGN SPECIFICATION

4.1 Front-end Design

The frontend design of the Food review app plays a pivotal role in creating a user-friendly and intuitive interface for users. The design focuses on providing a seamless and visually appealing experience, enhancing usability and accessibility.

User Interface:

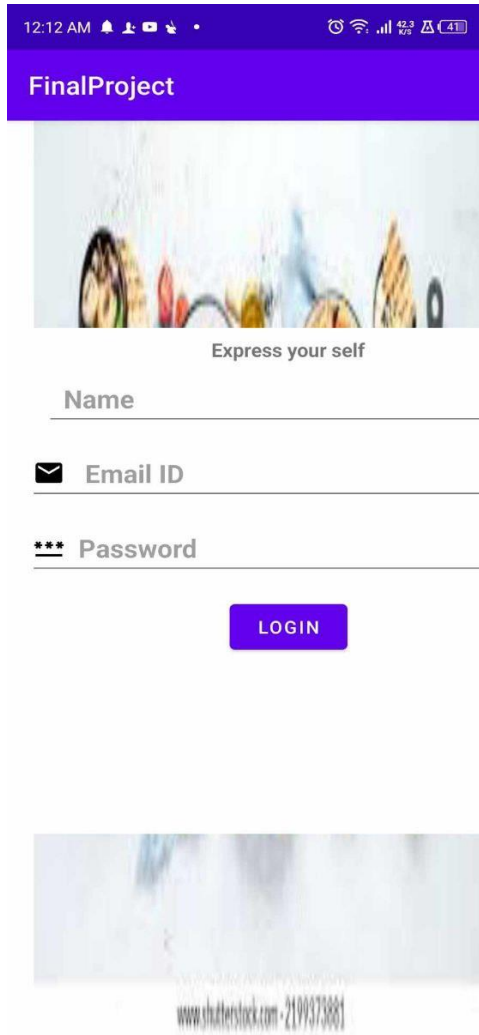
Student Register: user have to registration by this registration page.



The image shows a mobile application interface for registration. At the top, there is a status bar with the time 12:00 AM and various icons. Below that is a purple header with the text 'FinalProject'. The main content area is white and contains the title 'Registration' in bold. There are four input fields, each with a label above it: 'First Name', 'Last Name', 'Phone Number', and 'Address'. Each field has a horizontal line for text entry. At the bottom of the form is a purple button with the text 'DONE' in white.

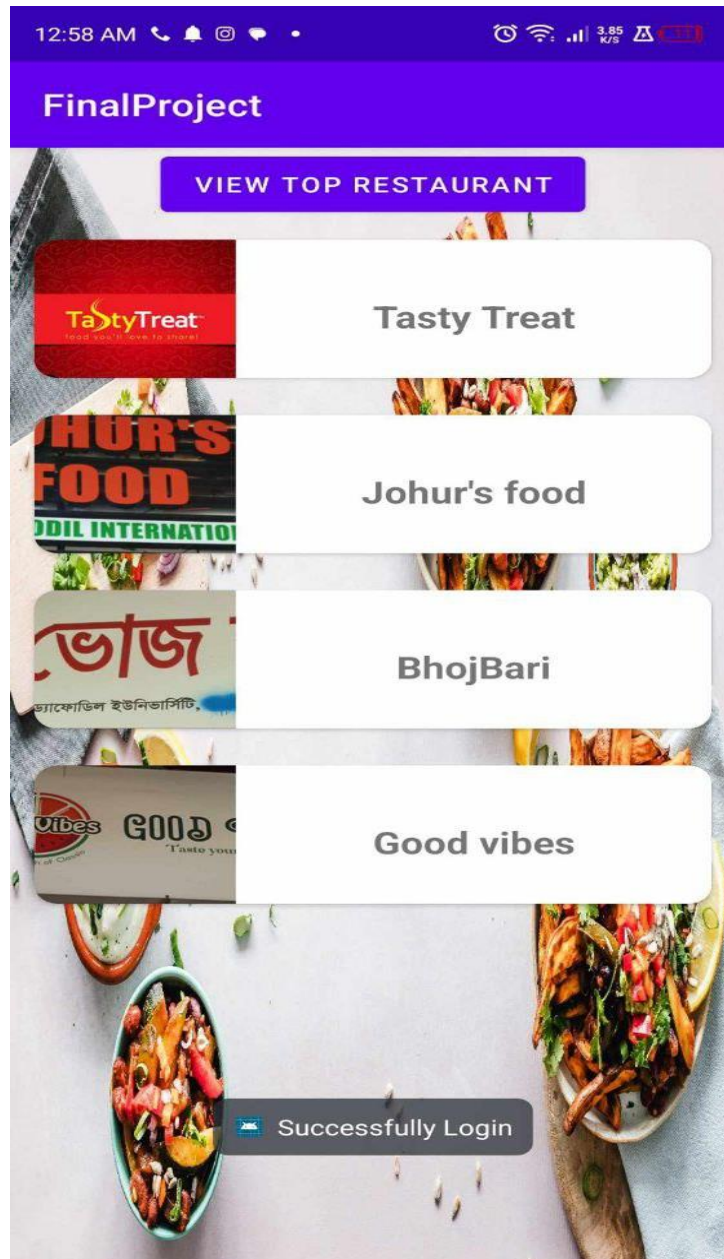
Figar4.1.1: user register

Login: This is the login page. User able to login by this page.



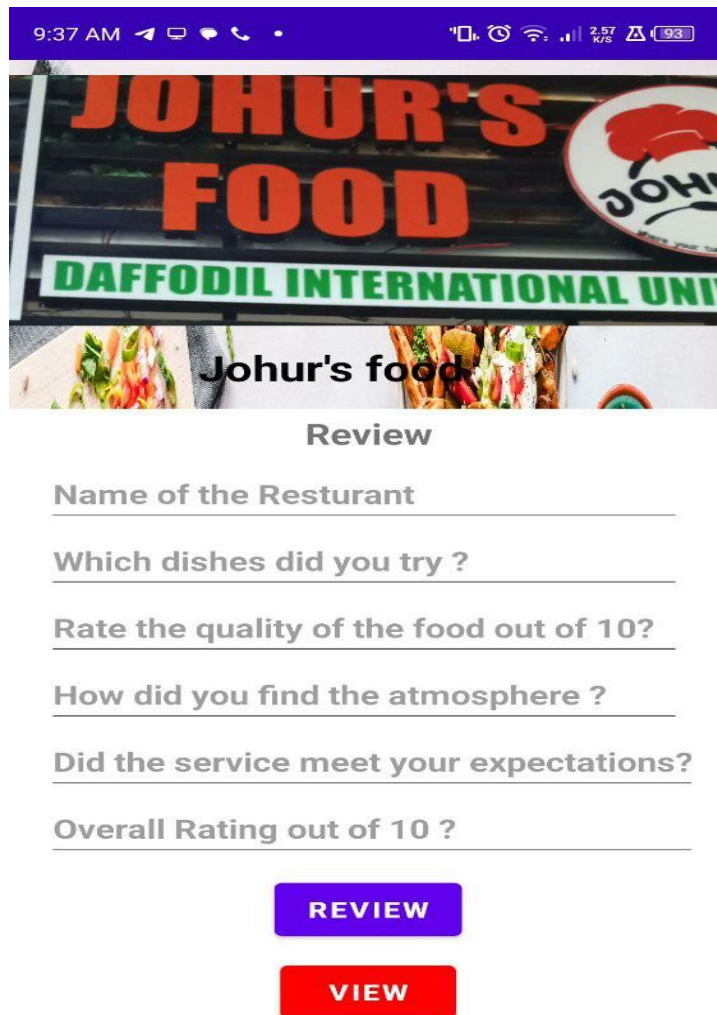
Figar4.1.2: login

List of restaurants: from here user can select restaurant.



Figar4.1.3: list of the restaurant

Make a review: user can make review by this page.



9:37 AM

JOHUR'S FOOD

DAFFODIL INTERNATIONAL UNIV

Johur's food

Review

Name of the Resturant

Which dishes did you try ?

Rate the quality of the food out of 10?

How did you find the atmosphere ?

Did the service meet your expectations?

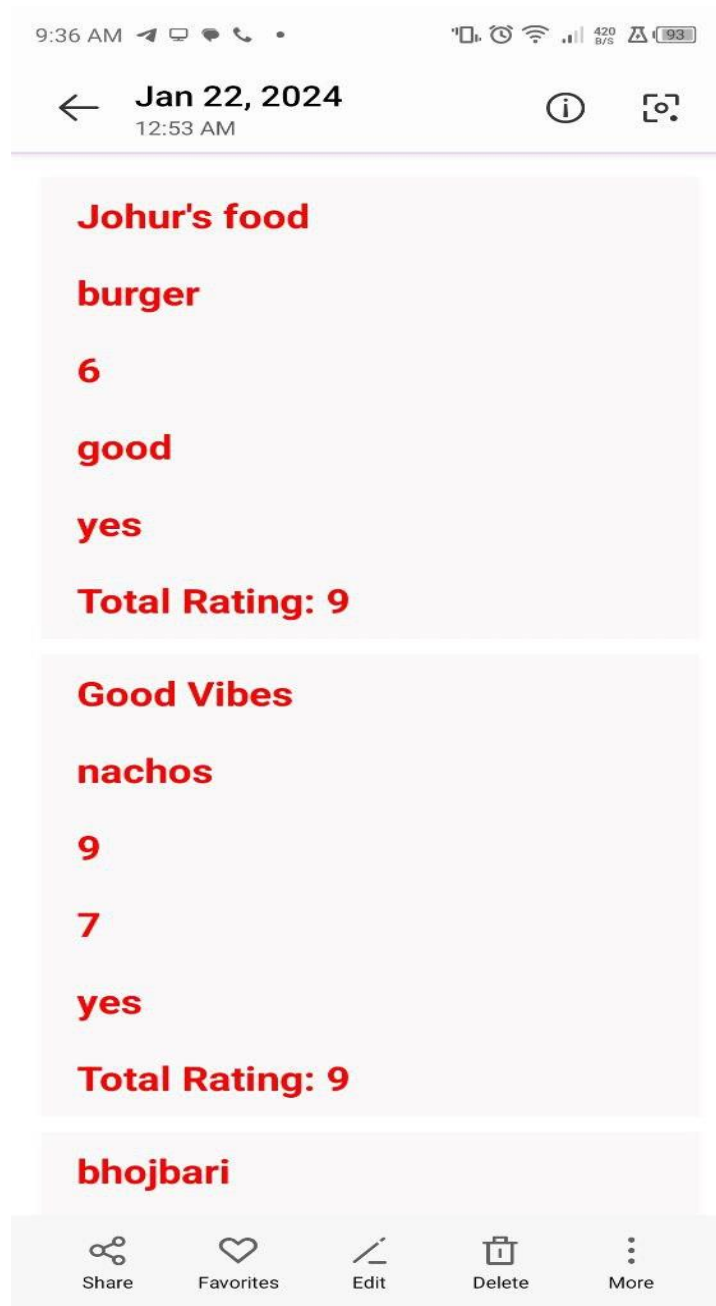
Overall Rating out of 10 ?

REVIEW

VIEW

Figar4.1.4: make review

View Review: For here user can views reviews.



Figar4.1.5: student profile

Ranking for restaurant: Here user can see the top-rated returners.

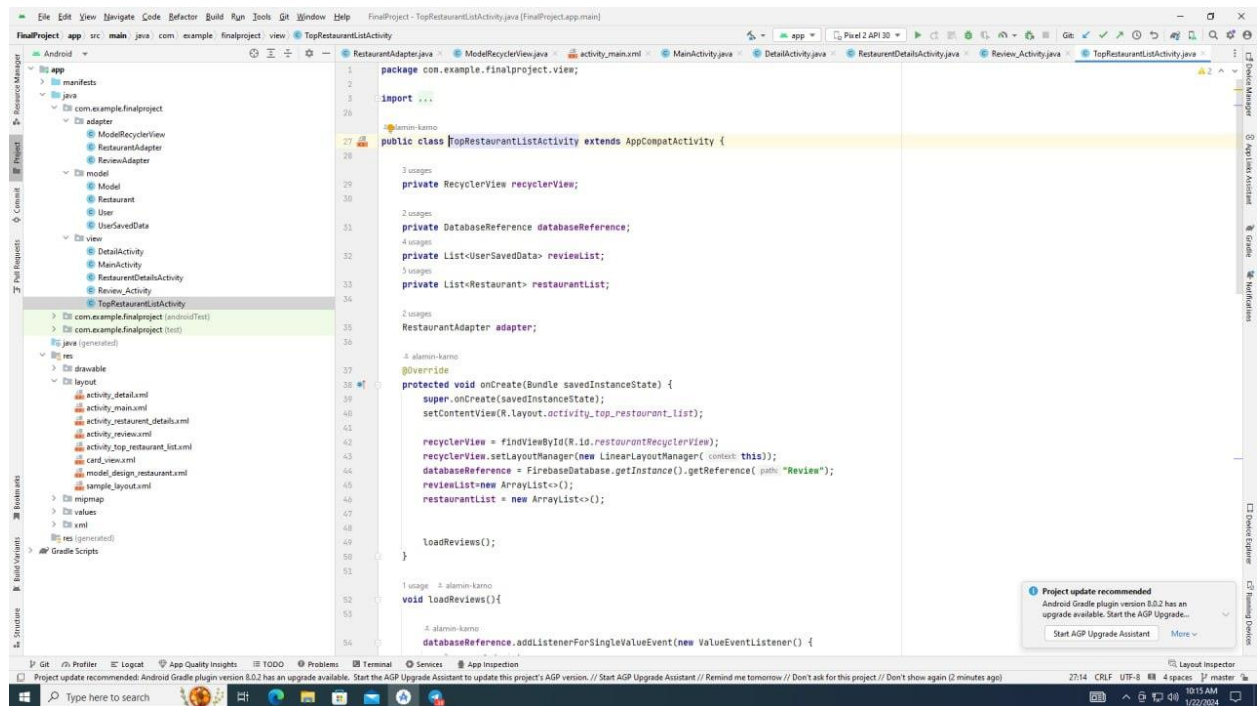


Figar4.1.6: Ranking for Restaurant

4.2 Back-end Design

The foundation of any software is rooted in its back-end, commonly known as the server-side architecture. A well-structured back-end is crucial for the seamless operation of dynamic websites. As the backbone of the entire system, the back end stands out as the most crucial and complex element. Back-end developers are responsible for managing various intricate tasks, including data flow, security, database administration, data validation, authentication, and session management. I crafted the entire logic for our system, leveraging technologies such as Java and utilizing the real-time database of Firebase.

Backend server



```
1 package com.example.finalproject.view;
2
3 import ...
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27 public class TopRestaurantListActivity extends AppCompatActivity {
28
29     @alamin-karno
30     private RecyclerView recyclerView;
31
32     private DatabaseReference databaseReference;
33     private List<UserSavedData> reviewList;
34     private List<Restaurant> restaurantList;
35
36     @alamin-karno
37     private RecyclerViewAdapter adapter;
38
39     @Override
40     protected void onCreate(Bundle savedInstanceState) {
41         super.onCreate(savedInstanceState);
42         setContentView(R.layout.activity_top_restaurant_list);
43
44         recyclerView = findViewById(R.id.restaurant_recyclerview);
45         recyclerView.setLayoutManager(new LinearLayoutManager(this));
46         databaseReference = FirebaseDatabase.getInstance().getReference("Review");
47         reviewList = new ArrayList<>();
48         restaurantList = new ArrayList<>();
49
50         loadReviews();
51     }
52
53     void loadReviews(){
54         databaseReference.addListenerForSingleValueEvent(new ValueEventListener() {
```

Figar4.3.1: backend server

Database

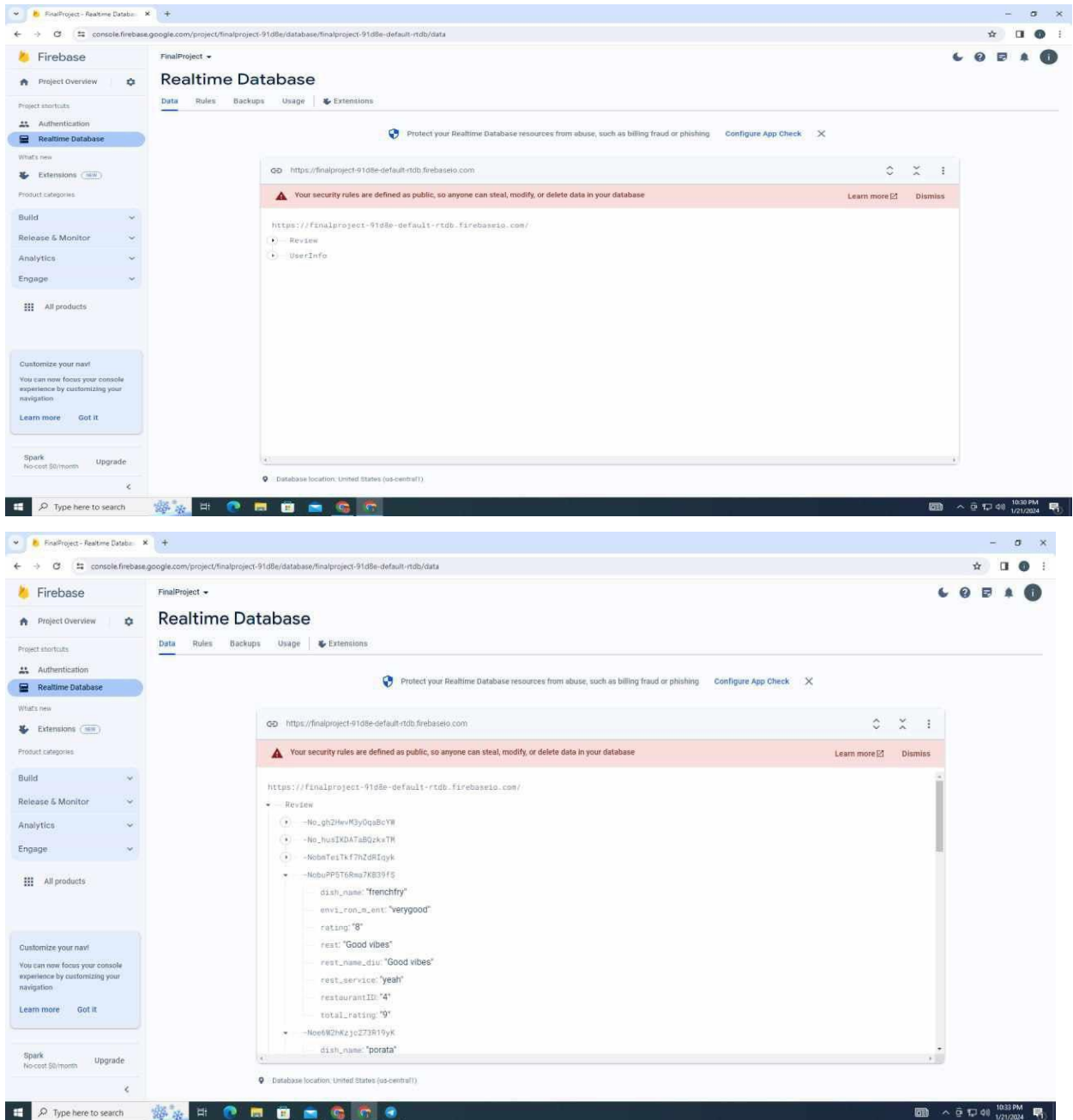


Figure 4.2.2: database

4.3 Interaction Design and User Experience

I strive to develop highly user-friendly interfaces for my Android applications, ensuring seamless user comprehension throughout the entire process. By implementing a navigation drawer for each task, I've managed to create a swift and straightforward navigation process. Users won't face any challenges, even without a traditional navigation bar. This streamlined user interface significantly enhances overall user experience by improving interaction efficiency and intuitiveness.

4.4 Implementation Requirements

1. Enhancing system security involves employing secure authentication solutions to authorize and verify users.
2. Ensure the accuracy and consistency of entered data by implementing validation tests on both the client and server sides.
3. Monitor system activities effectively by employing logging tools, thereby enhancing security procedures and aiding in troubleshooting.
4. Implement appropriate encryption techniques when transmitting and storing sensitive information, such as user passwords.
5. Identify and address potential system issues through comprehensive testing methods like unit and integration testing.
6. Develop scalability plans for the backend architecture to accommodate future increases in user traffic and data volume.

CHAPTER 5

TEST AND IMPLEMENTATION

5.1 Implementation of Database

Data plays a pivotal role in every undertaking, and my objective is to establish a database model tailored for each unique category. To address this, I have developed a robust database management system utilizing Firebase Realtime Database. This approach enables me to efficiently manage and assist multiple categories within our project by leveraging the capabilities of Firebase.

Here is the ER diagram:

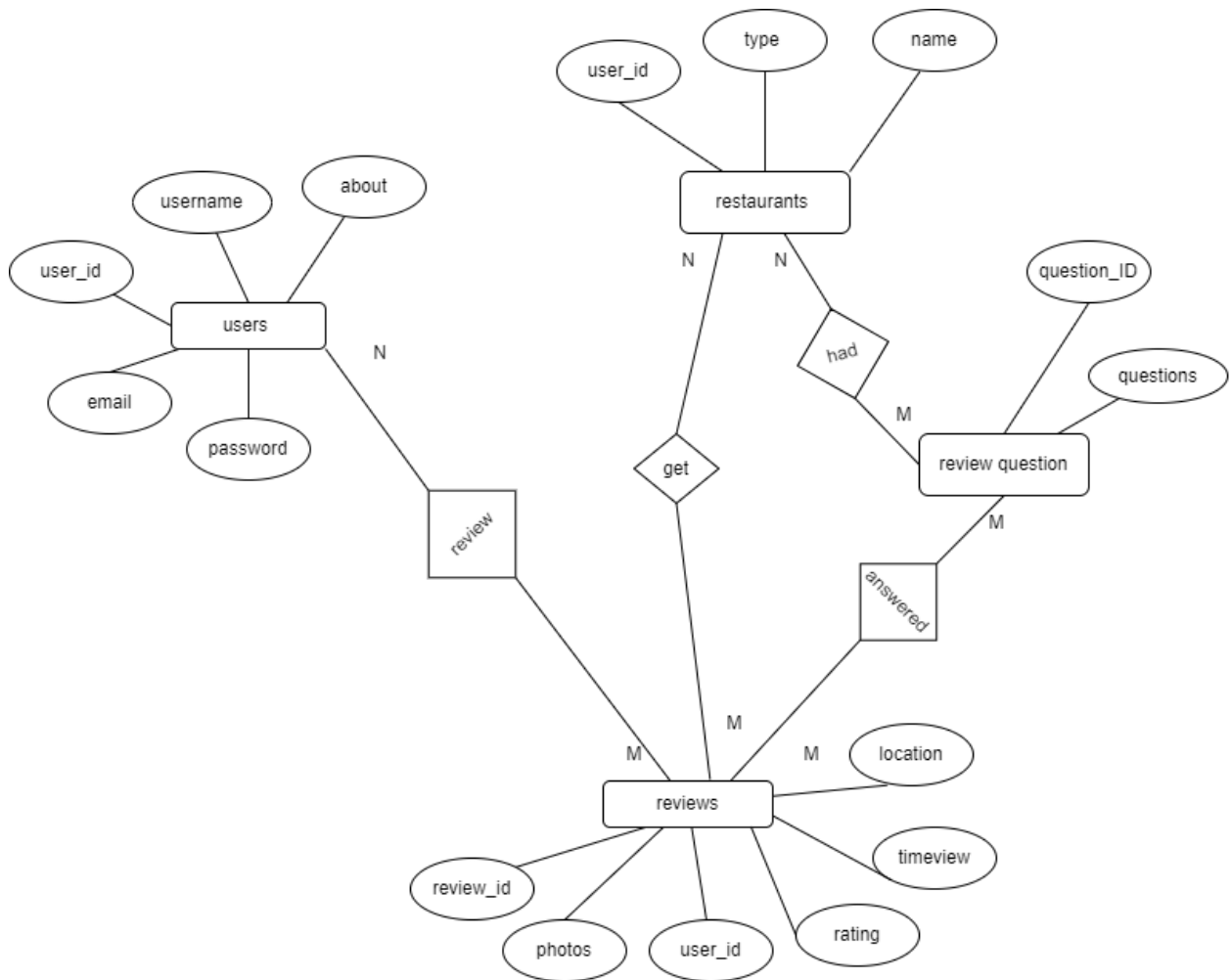


Figure 5.1.1: ER diagram

5.2 Implementation of Front-end Design

Creating the frontend design for the food review application involves utilizing XML and Java to build dynamic user interfaces. XML is employed to meticulously define the application's overall structure and visual arrangement. This includes delineating primary components such as header, footer, navigation, review sections, and form elements. XML files meticulously store and organize crucial application data, including restaurant information, user reviews, and authentication details. Java code breathes life into the static XML structure, empowering dynamic actions such as:

User interactions with forms and navigation elements, Data retrieval and display from XML files

, User authentication and session management, Handling review submissions and updates. Styling is achieved through a combination of XML layouts and possibly additional styling libraries, ensuring an aesthetically pleasing and user-friendly interface. Java plays a crucial role in the implementation, managing state, handling form interactions, and dynamically rendering components to create a seamless and responsive user experience.

5.3 Testing Implementation

I am currently conducting functional testing for my applications to verify its proper functionality. I employ Black-box testing, where I design a series of test cases based on user functional requirements. This testing approach specifically examines the system's inputs and outputs without delving into its internal structure.

Table 1: Whitebox Test Cases for Food Review Application

Test Case ID	Test Case Description	Expected Result	Actual Result	Pass/Fail
TC001	User Login	User successfully logs in, and the main menu is displayed.	User is successfully logged in, and the main menu is displayed.	Pass

TC002	View Restaurant List	List of restaurants under Daffodil International University is displayed.	List of restaurants under Daffodil International University is displayed.	Pass
TC003	Select Restaurant	Restaurant details and options to review, including ranking, are displayed.	Restaurant details and options to review, including ranking, are displayed.	Pass
TC004	Answer Food Questions	Answers to food-related questions and ranking are submitted successfully.	Answers to food-related questions and ranking are submitted successfully.	Pass
TC005	View Reviews	Existing reviews for the selected restaurant, including rankings, are displayed.	Existing reviews for the selected restaurant, including rankings, are displayed.	Pass
TC006	Rank Restaurants by Rating	Restaurants are ranked based on their average ratings, with the highest-rated restaurant appearing first.	Restaurants are ranked based on their average ratings, with the highest-rated restaurant appearing first.	Pass

5.4 Test Results and Reports

Test Date: 02-01-2024

Tester: Mr. Jewel Rana

Total Test Cases: 6

Passed Test Cases: 6

Failed Test Cases: 0

Pass Rate: 100%

Summary of Results:

All test cases executed successfully, indicating that the core functionalities of the Restaurant Review App are functioning as expected within the specified testing environment.

CHAPTER 6

IMPACT ON SOCIETY, ENVIRONMENT AND SUSTAINABILITY

6.1 Impact on Society

The food review app developed for Daffodil International University is poised to make a significant impact on the campus community and beyond. By empowering individuals to share their honest opinions about food options, it fosters transparency and accountability within the dining landscape. This, in turn, leads to several positive outcomes:

- Enhanced Food Quality and Variety: Restaurants and shops catering to the university community will receive direct feedback from their customers, motivating them to continuously improve their offerings. This can lead to a greater diversity of choices, improved quality, and a more satisfying dining experience overall.

- Increased Consumer Confidence: Students and staff will have a reliable platform to make informed decisions about where to eat. This reduces the risk of disappointment and encourages exploration of new culinary options, fostering a more vibrant and diverse food culture on campus.

- Nurturing a Culture of Feedback and Improvement: The app establishes a platform for constructive dialogue between consumers and food vendors. This open exchange of feedback can

lead to positive changes and a greater sense of collaboration within the community, fostering a culture of continuous improvement.

- Empowering Student Voices: The app provides students with a platform to express their opinions and shape the dining landscape that directly affects their daily lives. This sense of agency and participation can contribute to a more engaged and satisfied student body.

Beyond its immediate impact on campus, the app has the potential to serve as a model for other educational institutions and communities, promoting transparency and accountability in the food industry and empowering individuals to make informed choices.

6.2 Impact on Environment

Developing my food review application focused on restaurants and shops near Daffodil International University can have several positive impacts on the environment. Here are some potential ways my application could contribute:

Encouraging Sustainable Practices: By allowing users to review and rate the food establishments, application can highlight businesses that prioritize sustainable and environmentally friendly practices. This might include restaurants that source locally, use organic ingredients, or have eco-friendly packaging.

Reducing Food Waste: Users can share information about portion sizes and whether restaurants have policies in place to minimize food waste. This could encourage businesses to adopt practices such as offering smaller portion sizes or implementing donation programs for surplus food.

6.3. Ethical Aspects:

Developing a food review application near Daffodil International University involves ethical considerations to foster a trustworthy and inclusive platform. Prioritizing honesty and transparency, the app encourages users to provide genuine reviews while discouraging fake or biased feedback. Robust user authentication measures are implemented to maintain the authenticity of reviews. Fair treatment of businesses is ensured, allowing establishments to respond to reviews and promoting healthy competition. User privacy is a top priority, with explicit consent for data collection and adherence to privacy regulations. The app strives to be inclusive, encouraging reviews for a diverse range of establishments and designing an accessible platform for users with different backgrounds. A zero-tolerance policy against discriminatory content is enforced, and regular audits are conducted to address ethical concerns. Clear communication of community guidelines guides user behavior, creating a positive and responsible community around food reviews in the university's vicinity.

6.4 Sustainability Plan

The sustainability plan for our food review application is multi-faceted, encompassing environmental, social, and economic considerations. To reduce our environmental impact, we prioritize green hosting, opting for providers that utilize renewable energy sources. We promote paperless operations by encouraging digital receipts and minimizing administrative paper use. Emphasizing inclusivity, the app is designed to be accessible to a diverse audience, and community engagement is fostered through events and collaborations with local businesses. We advocate for fair employment practices, supporting establishments that treat their employees ethically. Economic sustainability is achieved by promoting reviews for local businesses, boosting the local economy, and ensuring affordability. User engagement includes educating users on sustainable dining practices and regularly updating the app to align with evolving sustainability standards. To maintain financial viability, revenue streams such as partnerships and premium features are explored. Continuous improvement is driven by user feedback, and metrics are tracked for an annual sustainability report, providing transparency about achievements, challenges, and future goals. Through these initiatives, our application strives to create a positive impact on the environment, society, and the local economy.

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

7.1 Discussion and Conclusion

The envisioned food review app for Daffodil International University holds immense potential for transforming the campus dining experience. Its ability to foster transparency, accountability, and community engagement is noteworthy, promising improvements in food quality, service standards, and the inclusivity of dining options. Nevertheless, ethical and environmental considerations must be carefully addressed. Upholding objectivity in reviews, safeguarding user data, and championing responsible food choices are imperative. The app's environmental footprint should be minimized through sustainable design and partnerships with eco-conscious establishments. In conclusion, by meticulously navigating these considerations and implementing the recommended measures, the app can not only enhance decision-making and community dialogue but also stand as a model for ethical technology development within the university and beyond.

In conclusion, the food review application for Daffodil International University holds the promise of significantly improving the campus dining experience. By empowering users to share genuine feedback and make informed decisions, the app can contribute to a more transparent, diverse, and accountable food culture within the university. To ensure its success and ethical alignment, it is vital to address concerns related to objectivity, privacy, and responsible food choices. By incorporating these considerations into the app's design and functionality, it can become a valuable tool for fostering a positive and responsible food community within the university setting

7.2 Scope for Further Developments

Food reviewing application are Tring to develop as a complete application. But there are some potential areas to explore:

Menu Integration: Incorporate seamless access to restaurant menus within the app, eliminating the need for external browsing. Facilitate informed decision-making and streamline the dining process

Advanced Review Filtering: Empower users to filter reviews based on dietary restrictions, budget preferences, specific dishes, and other relevant criteria. Personalize the app experience and cater to diverse needs.

Data Analytics and Insights: Utilize collected data to analyze trends, identify popular dishes and restaurants, and uncover opportunities for improvement. Inform decision-making, enhance user experience, and support restaurant success.

Integration with Campus Systems: Explore integration with campus meal plans to streamline dining hall experiences and provide enhanced information. Promote convenience and informed choices for students.

Research Collaborations: Collaborate with faculty and researchers to utilize app data for food-related studies and projects. Contribute to knowledge advancement and potential innovation in the food sector.

experience and research ecosystem within universities, ultimately contributing to knowledge creation and societal progress.

REFERENCES

- [1] “Food Gulliver-Food Review App - Apps on Google Play,” *play.google.com*.
<https://play.google.com/store/apps/details?id=com.foodgulliver.reviewapp&hl=en&gl=US>
(accessed Jan. 22, 2024).
- [2] “Food Gulliver-Food Review App - Apps on Google Play,” *play.google.com*.
<https://play.google.com/store/apps/details?id=com.foodgulliver.reviewapp&hl=en&gl=US>
(accessed Jan. 22, 2024).
- [3] “Yelp: Food, Delivery & Reviews - Apps on Google Play,” *play.google.com*.
<https://play.google.com/store/apps/details?id=com.yelp.android&hl=en&gl=US>
- [4] “Burpple - Food Reviews & Deals - Apps on Google Play,” *play.google.com*.
<https://play.google.com/store/apps/details?id=com.burpple.app&hl=en&gl=US> (accessed Jan. 22, 2024).
- [5] “Urbanspoon Restaurant Reviews - Apps on Google Play,” *play.google.com*.
<https://play.google.com/store/apps/details?id=com.urban Spoon&hl=bn> (accessed Jan. 22, 2024).
- [6] “Foodi - Food Delivery - Apps on Google Play,” *play.google.com*.
<https://play.google.com/store/apps/details?id=com.foodiBd> (accessed Jan. 22, 2024).
- [7] “Uber Eats: Food Delivery - Apps on Google Play,” *play.google.com*.
<https://play.google.com/store/apps/details?id=com.ubercab.eats>
- [8] “Pathao - Apps on Google Play,” *play.google.com*.
<https://play.google.com/store/apps/details?id=com.pathao.user> (accessed Jan. 22, 2024).
- [9] Grab Holdings, “Grab - Transport, Food Delivery, Payments,” *Google.com*, 2010.
<https://play.google.com/store/apps/details?id=com.grabtaxi.passenger>

FOOD REVIEW MANAGEMENT

ORIGINALITY REPORT

23%	21%	4%	19%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	dspace.daffodilvarsity.edu.bd:8080 Internet Source	8%
2	Submitted to Daffodil International University Student Paper	7%
3	Submitted to University College Birmingham Student Paper	2%
4	Submitted to Independent University Bangladesh Student Paper	1%
5	steemit.com Internet Source	<1%
6	Submitted to University of Hertfordshire Student Paper	<1%
7	eprints.utar.edu.my Internet Source	<1%
8	play.google.com Internet Source	<1%
9	Submitted to Monash University Student Paper	<1%