

Mess Ease

Streamlining hostel life with technology

Banoth Tanusri(221210029)

Bathula Venkata Mounika(221210030)

Bhumika Baranwal(221210031)



The Problem

Manual Operations

Time-consuming and prone to errors

Communication Gaps

Delayed feedback, lack of transparency

Fee Management Challenges

Unorganized tracking, manual payments



Our Objectives

1

Simplifying Mess Operations

Efficient menu management, real-time updates

2

Streamlining Fee Payments

Transparent tracking, digital payments

3

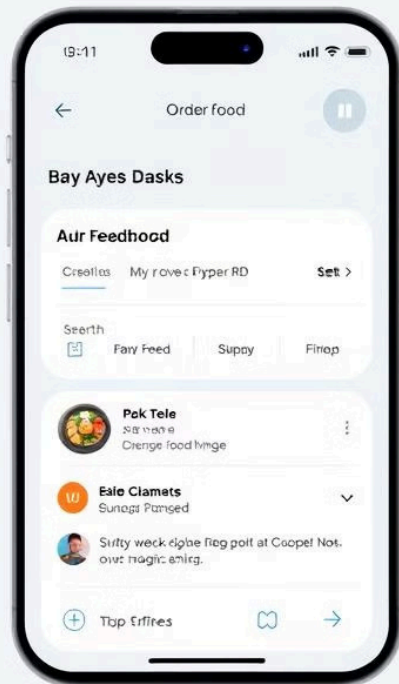
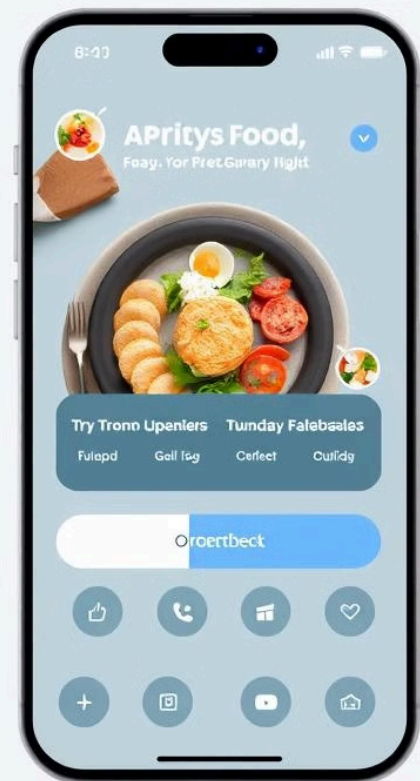
Direct Communication

Instant feedback, complaint resolution

4

Automated Notifications

Reminders for pending dues



Key Features



Mess Menu Display

Students can view the daily mess menu



Student Fee Management

Track dues and pay through QR codes



Complaint and Feedback

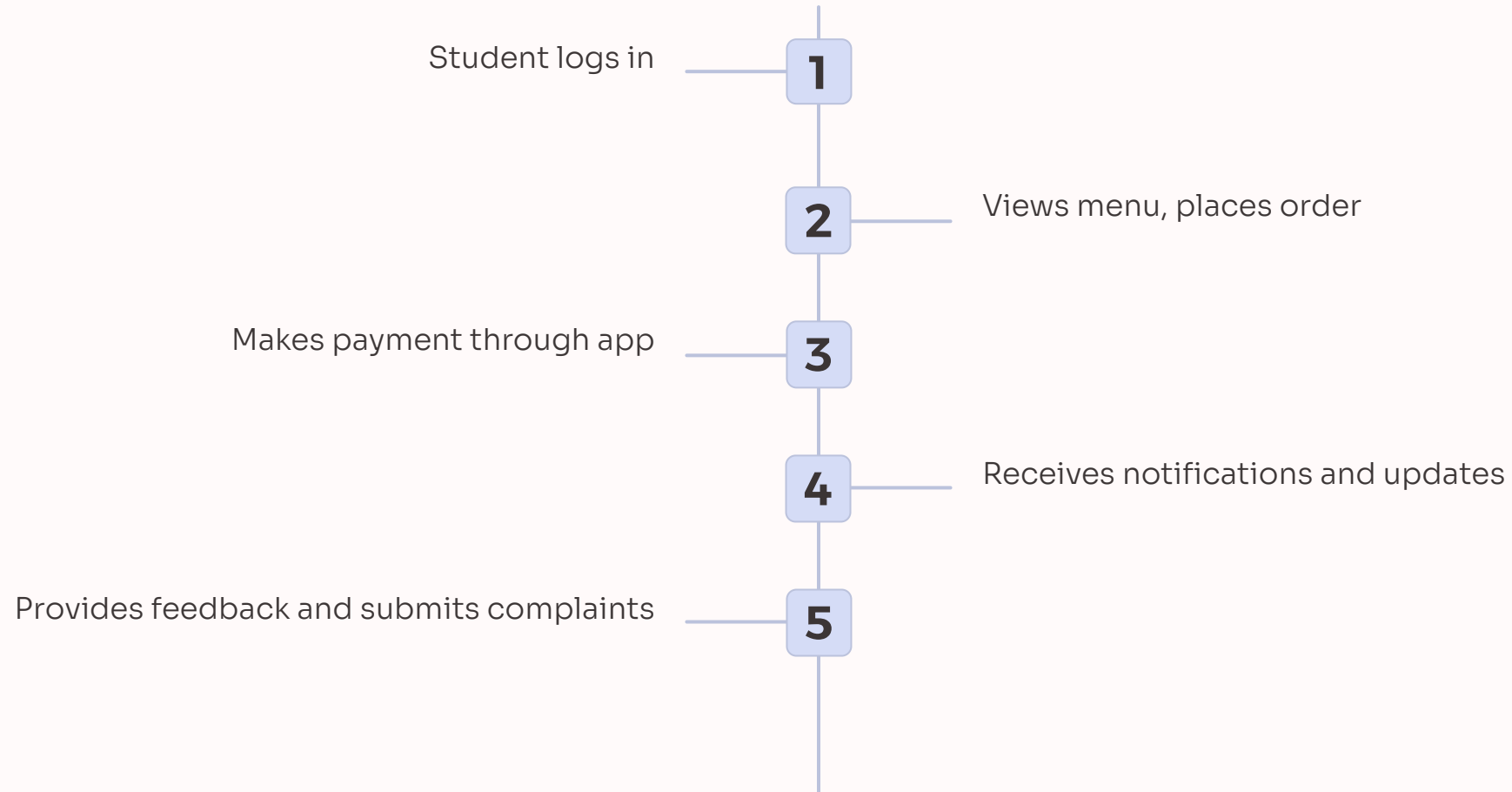
Submit and review feedback anonymously

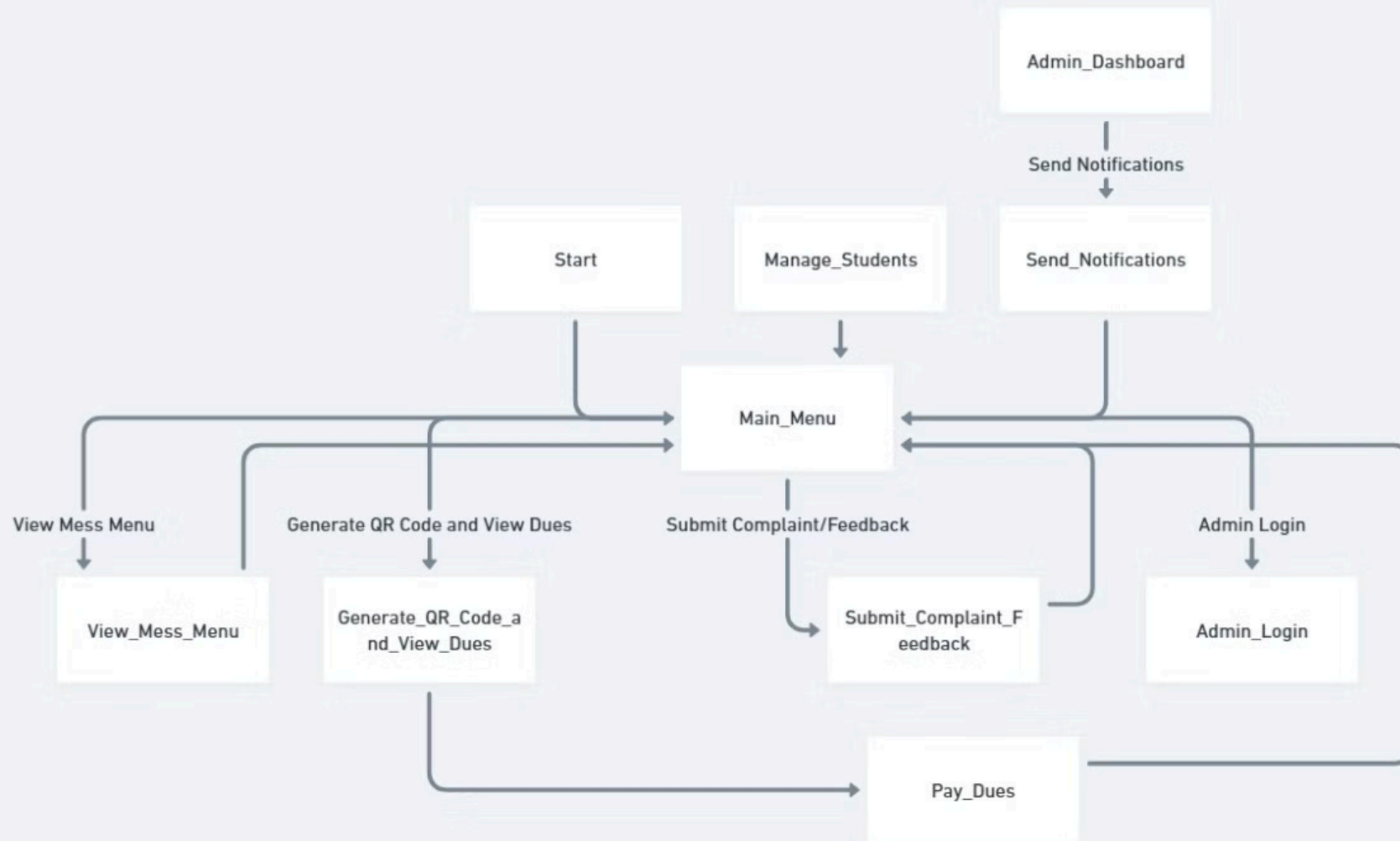


Admin Dashboard

Manage student records, send notifications, and monitor feedback

App Workflow





Technical Stack

Frontend

Flutter for cross-platform compatibility

Backend

Firebase for scalability and reliable hosting

Database

Firestore for real-time data synchronization

Payment Integration

Razorpay/GPay API for secure transactions

Frontend:

1. Flutter

- Cross-platform framework (Android, iOS, Web)
- Fast development, beautiful UI
- UI: Menus, QR scanner, feedback forms, admin dashboard

Backend:

1. Firebase

- Serverless, real-time capabilities
- No server management, real-time updates, secure storage
- Database interactions, authentication, data storage

Database:

1. Firebase Firestore

- Scalable, real-time NoSQL database
- Real-time sync, security rules
- Stores student, payment, menu, feedback data

Authentication:

1. Firebase Authentication

- Secure email/password and Google Sign-in for students and admins.

QR Code Management:

1. Flutter Barcode Scanner Plugin

- Easy QR code scanning for viewing and paying dues.

Payment Gateway:

1. Razorpay or Paytm

- Reliable Indian payment gateways for secure online transactions.

Hosting:

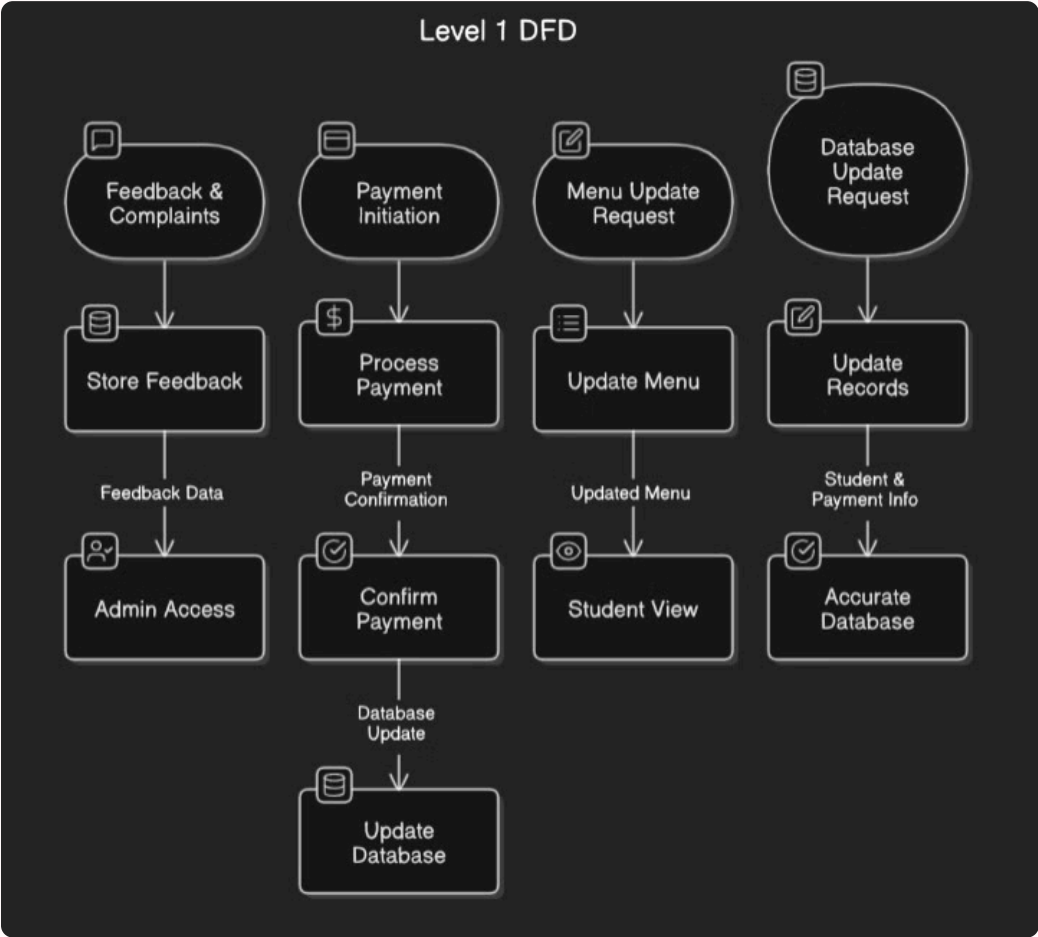
1. Firebase Hosting

- Fast, secure, and scalable hosting for web app and APIs.

Development Timeline



DFD:



Conclusion

"Mess Ease" aims to revolutionize hostel management by providing a seamless experience for both students and administrators. With features like mess menu tracking, fee management, complaint handling, and real-time communication, the app enhances transparency and efficiency. Its cross-platform design ensures accessibility and ease of use, making it an essential tool for improving hostel operations and fostering better engagement. Through this app, we strive to create a more organized and user-friendly environment, simplifying hostel life for all.