

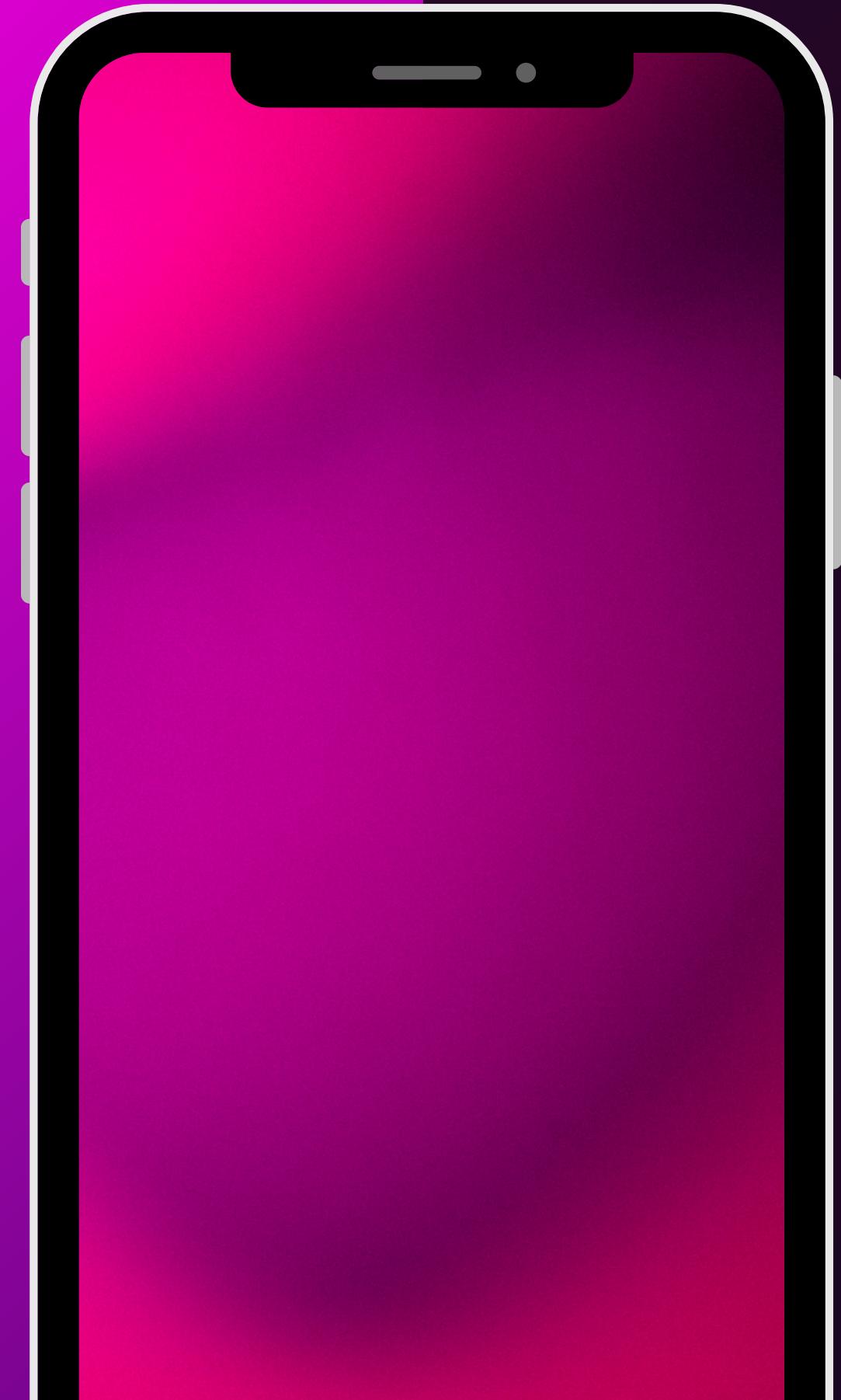


Mobile Application
Development Project

**Student
Academic
Management App**

NISSHA - ANDREA - BANU - AINAA





Problem Statement

Students face challenges in :

- Managing multiple courses and assignments
- Tracking assignment deadlines
- Calculating and monitoring CGPA
- Organizing academic information efficiently



Technologies Used

01

Development Environment

- Programming Language: Java
- IDE: Android Studio
- Version Control: Git

02

Backend Technologies

- Firebase Authentication
- Firebase Realtime Database

03

Frontend Technologies

- Android Native XML
- Material Design Components
- RecyclerView Implementation





Solution : Key Features

01

Course Management

- Add, edit, delete courses
- Basic schedule tracking (day/time)
- Course listing

02

User Profile System

- Basic user information
- Edit profile details
- Log out functionality

03

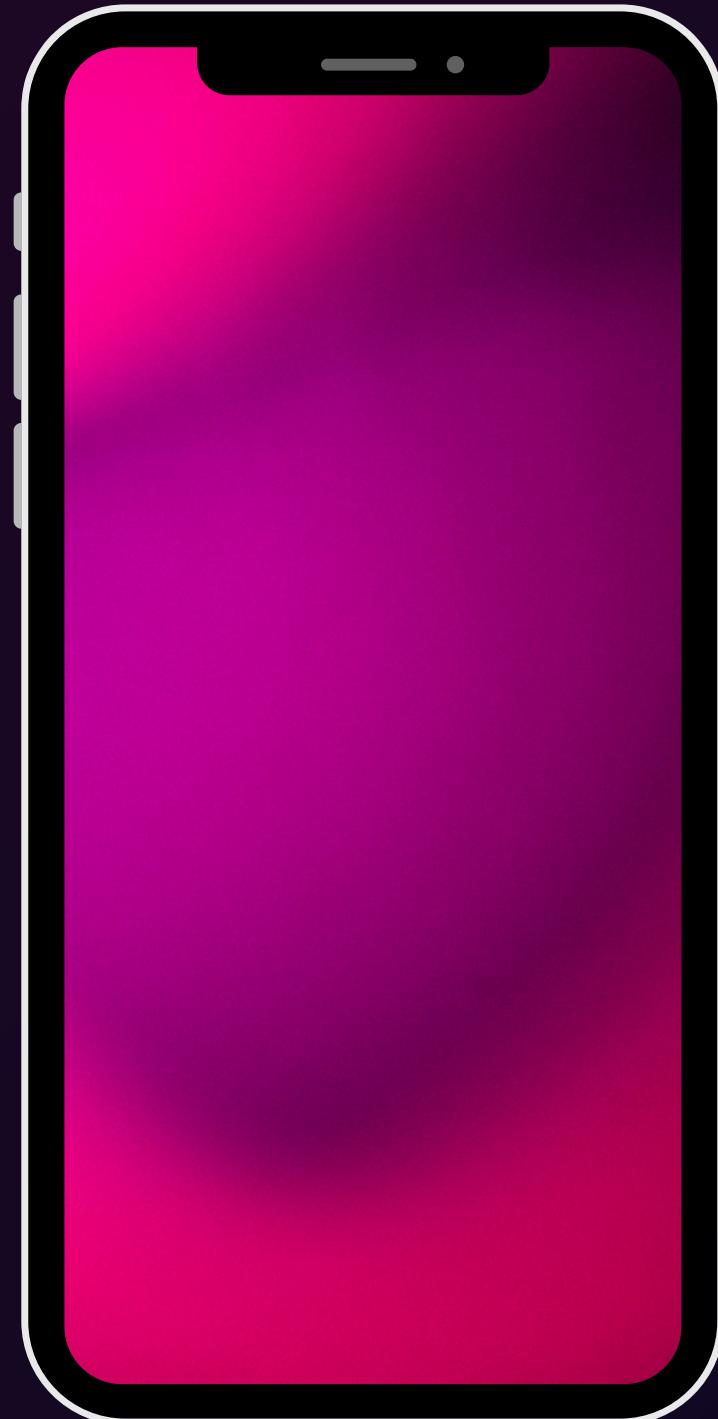
Assignment Tracker

- Add, edit, delete assignments
- Search functionality
- Filter by due date, title, course code
- Assignment status tracking (Done)

04

CGPA Calculator

- Basic CGPA calculation
- Grade input for courses
- Simple grade tracking





Technical Implementation

01

Backend Infrastructure

- Firebase Authentication for user management
- Firebase Realtime Database for data storage
 - Course data management
 - Assignment data management
 - User profile storage
- Basic database operations (CRUD)

02

Frontend Development

- Android Studio
- User-friendly interface
- Responsive design

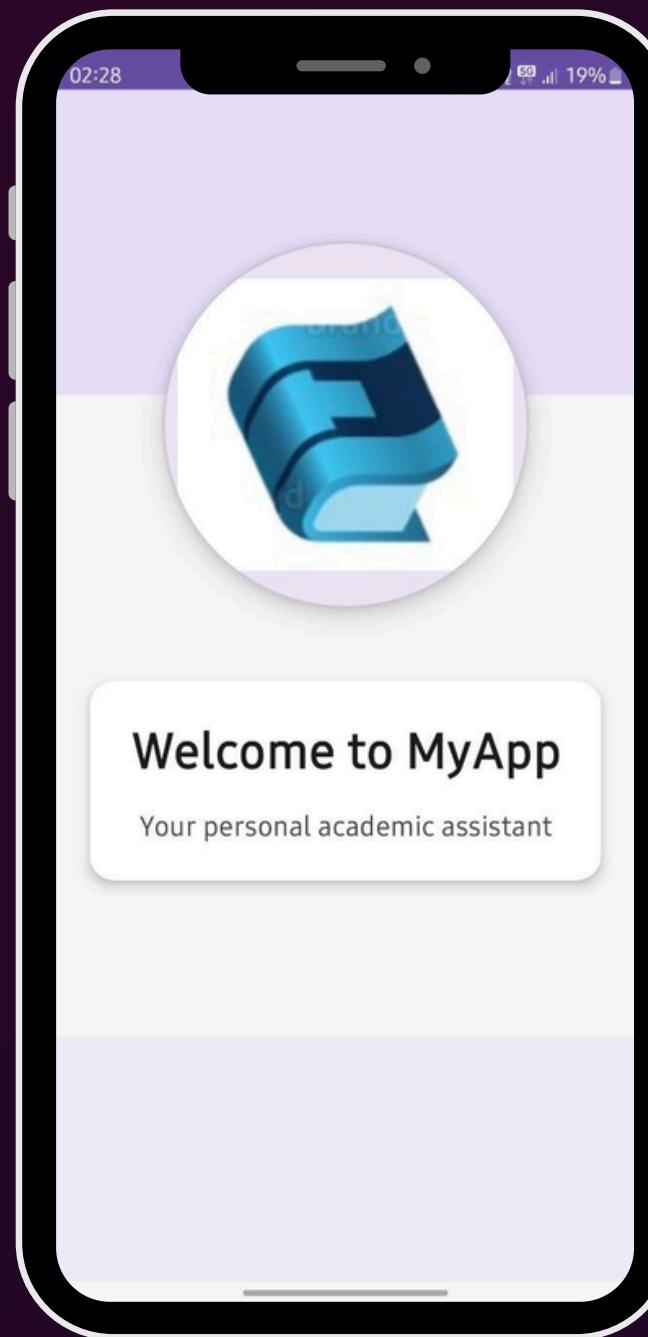


Quality Assurance

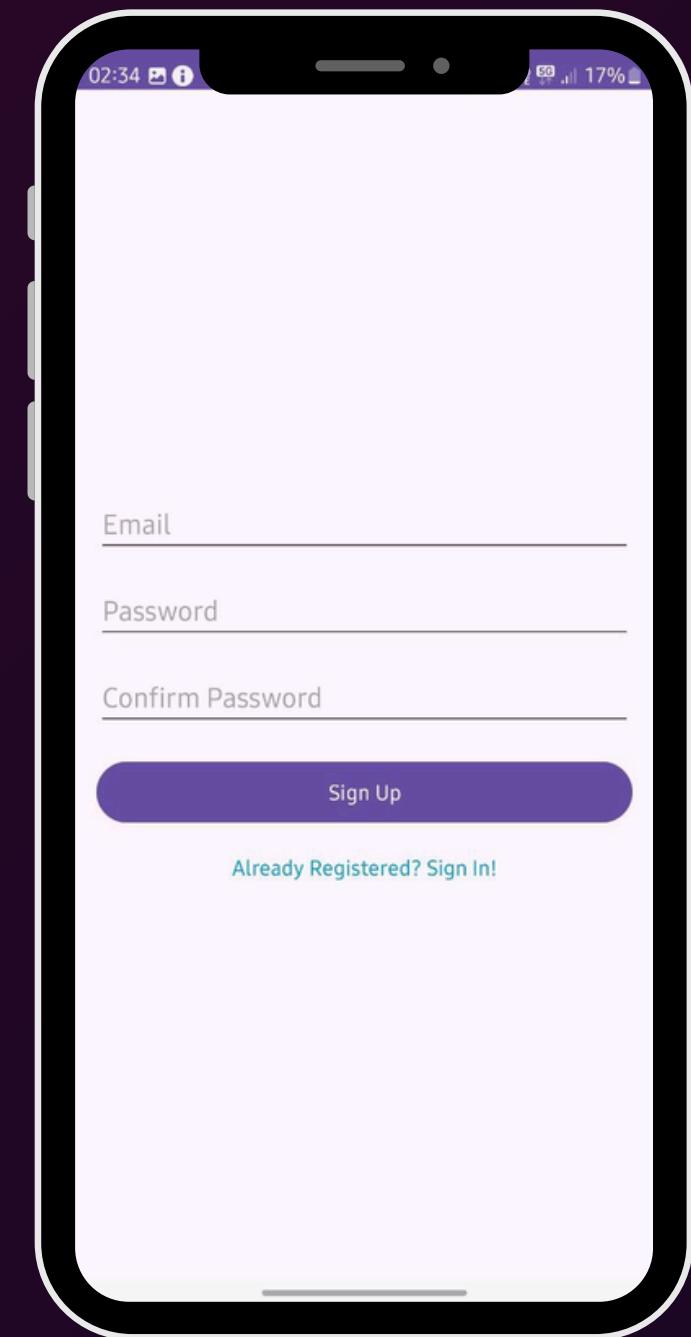
Comprehensive Testing

- 35+ test cases
- Key areas tested :
 - User authentication
 - Course management
 - Assignment tracking
 - CGPA calculation
 - Profile management

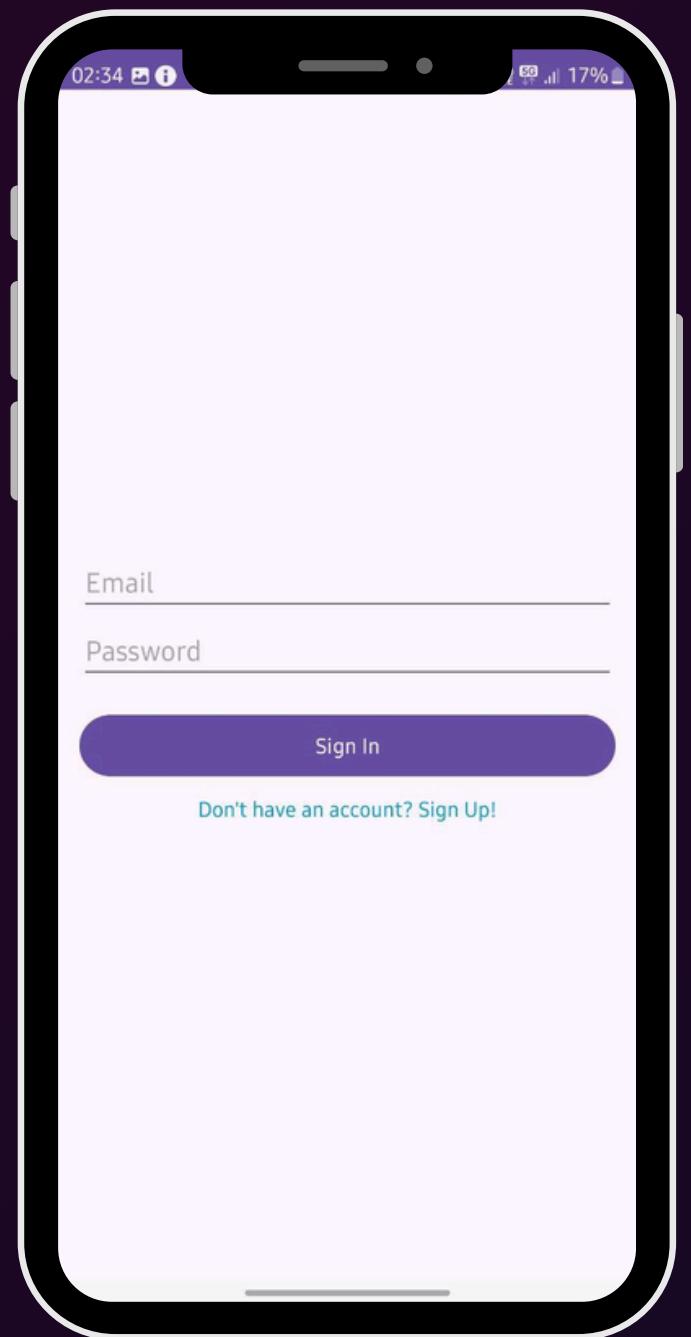
App Screenshots



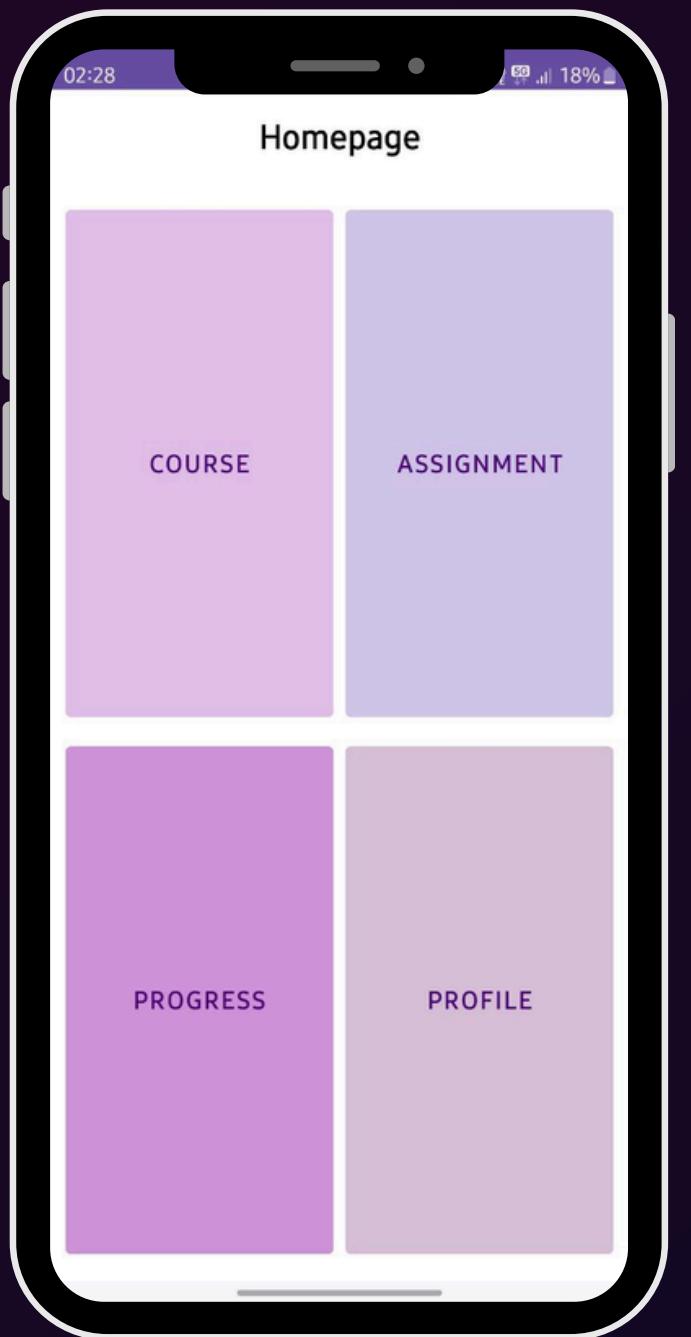
Welcome Page shows the app name and logo.



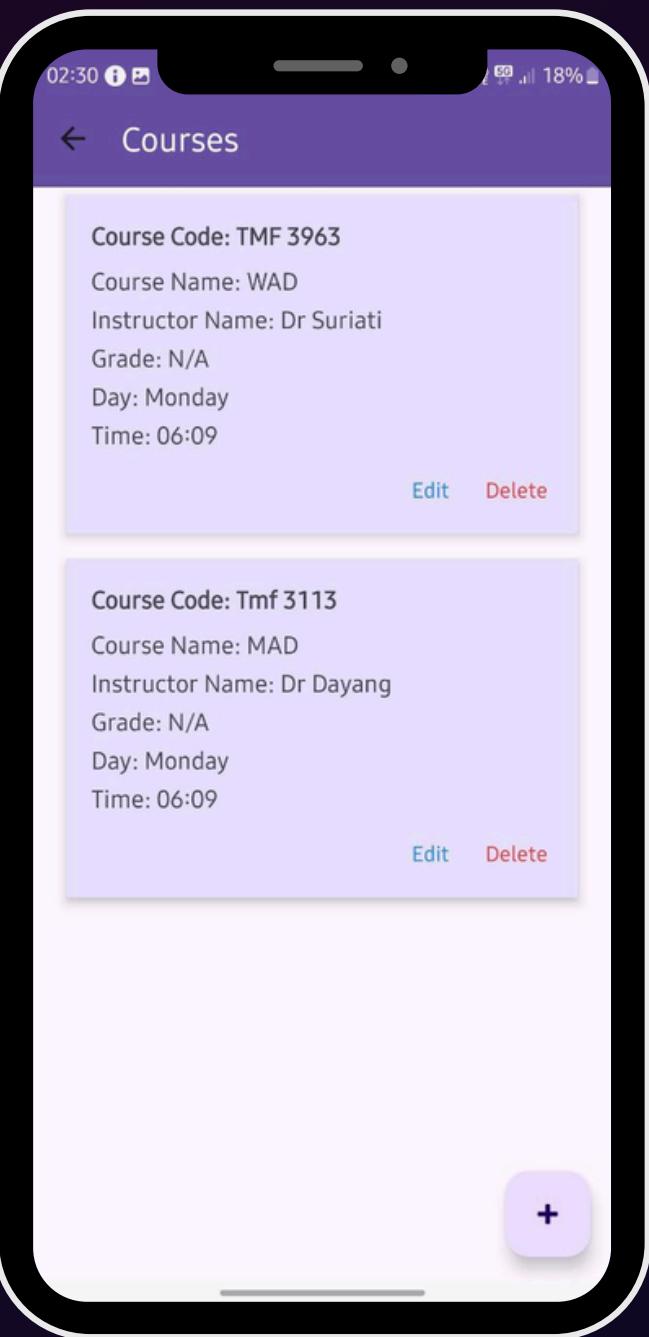
Sign Up Page



Sign In Page



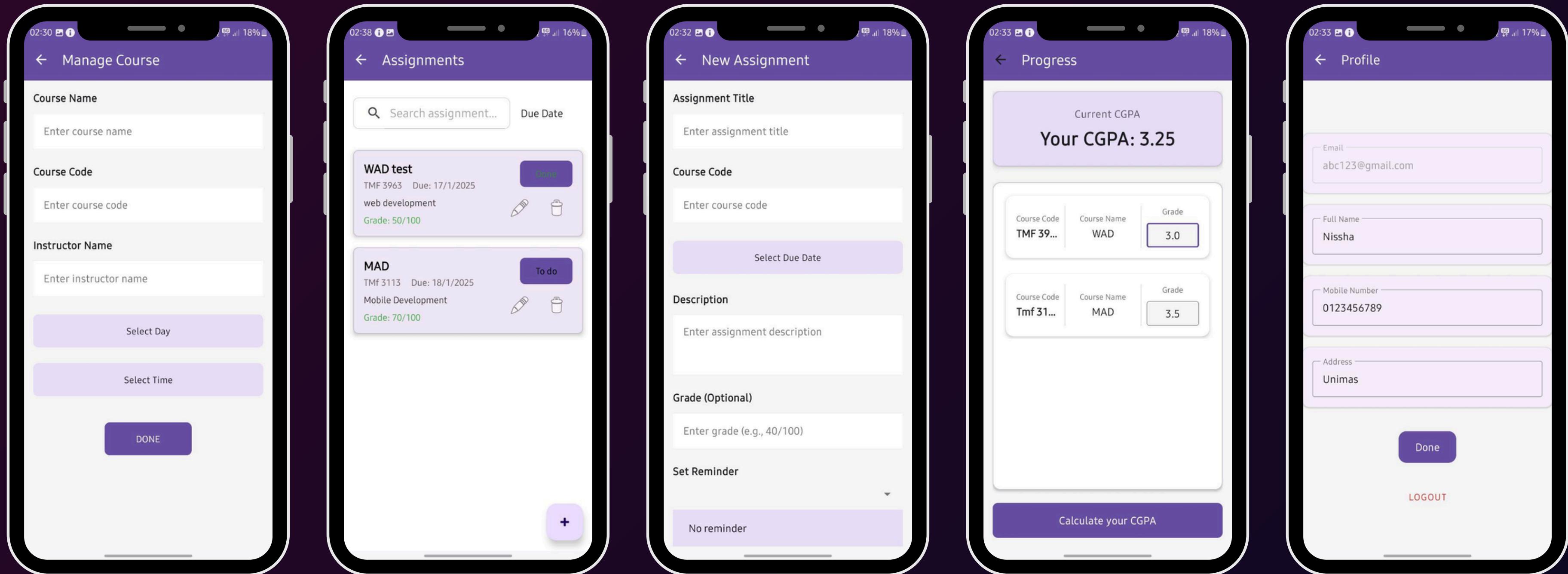
Homepage with four buttons to navigate to specific pages.



Courses page. Users can edit, delete and add courses.



App Screenshots



When add button is clicked, it will redirect users to Manage Course with a form to fill in course details.

Assignment page. Users can edit, delete and add assignments. Users can search desired assignments and also filter according to due date, title and course code.

When the add button is clicked, users are redirected to New Assignment page, where they must fill up the form to create a new assignment.

When users click on the Progress button in the Homepage, they are brought to this page. Here, users can calculate their CGPA by inputting their grade for each course.

Profile Page where users can edit user details and log out

Key Achievements

01

Functionality

- Complete course and assignment management system
- Firebase database integration
- User authentication system
- Profile management capabilities

02

Quality

- Comprehensive test coverage (35+ test cases)
- User-friendly mobile interface
- Secure data handling through Firebase
- Validated user inputs and error handling

Future Enhancements

01

Enhanced Assignment Features

- File attachment support (suggested feature)
- Assignment submission tracking
- Progress status updates

02

Extended CGPA Features

- Semester-wise GPA tracking
- Grade prediction
- Academic progress visualization

03

Improved Course Management

- Course attendance tracking
- Class reminder system
- Course material links

04

User Experience Improvements

- Offline mode support
- Dark mode option
- Customizable dashboard





Thank You

I extend my gratitude to my Teammates
for their dedicated efforts and to our
Professor for their invaluable guidance in
ensuring the successful completion of
our project.