

AT lab project submission

CollegeSavvy

A report

To

MANIPAL ACADEMY OF HIGHER EDUCATION

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Abstract:

The CollegeSavvy app is a feature-rich software application created to simplify and improve how student-related data and activities are managed within educational institutions. It functions as a central platform for organizing, storing, and retrieving student data while providing a range of features and modules to meet the unique requirements of students, teachers, and administrators.

The system's ability to facilitate collaboration and communication is one of its primary advantages. Through features like announcements, circulars, and messaging capabilities, it facilitates seamless contact between students. Students get access to course materials and essential notifications.

Timetable management is another integral component of the system. It offers the ability to generate and manage student timetables, allowing students to set alarms and notifications for classes, ensuring students have access to their class schedules, examination timetables, and any changes or updates. This helps students plan their academic activities effectively and reduces scheduling conflicts. Admins can answer questions, delete questions, and delete circulars or answers given by others. All admin contributions are verified with a tick to ensure their authenticity.

This app provides a simple and effective way to manage student-related tasks, foster good communication, and improve the educational environment within a school. It simplifies administrative procedures, increases information accessibility, and encourages student engagement and collaboration. An online marketplace created particularly for students is intended to make it easier for students to buy and sell a variety of goods and services. For students to communicate, trade, and exchange products in a setting that is specialized to their wants and preferences, it offers a secure atmosphere. Students can improve their student experience, save money, and participate in a cooperative and sustainable trading environment by utilizing this platform.

Overall, the CollegeSavvy app is designed to enhance the student experience by providing a centralized location for accessing educational materials, staying informed, and interacting with peers and administrators.

Scope:

Users can create accounts, log in, and manage their profiles using the app. Users can set passwords, register using their email addresses, and submit information such as their name, branch, batch, and section. Circulars or announcements can be created, viewed, and managed by users. Circulars provide details on occasions, crucial dates, or general announcements. Circulars can be published by users with the necessary permissions to target particular branches, sections, or batches.

The application offers a centralized platform for scheduling management. Timetables can be made and updated by users for various sections, batches, or courses. The schedule contains details about each class, including the date and the start and end times. Users have access to a FAQ section where they can ask inquiries and look for responses from administrators or other users. Commonly asked questions are answered in the FAQ area, which also acts as a forum for user-driven support.

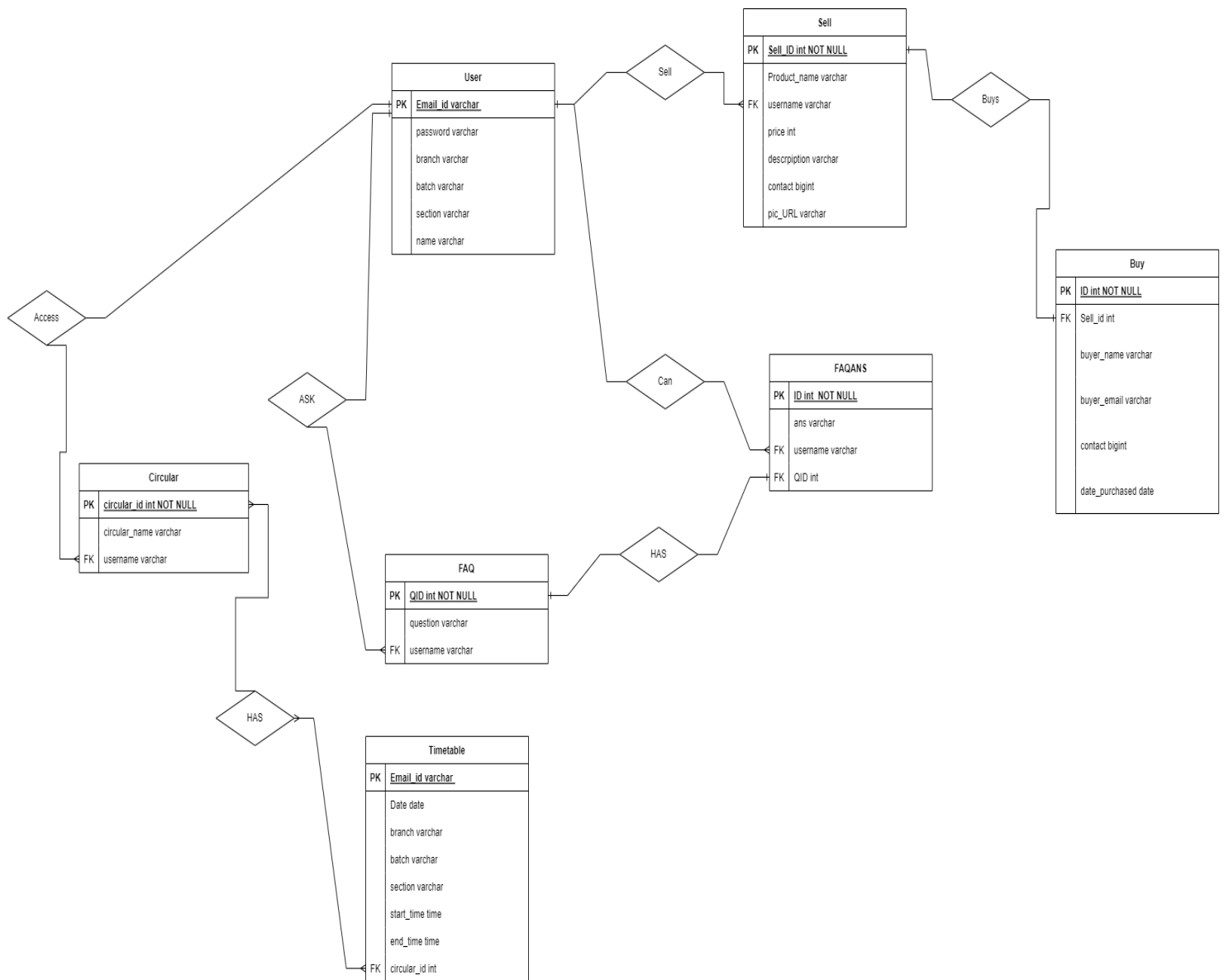
A marketplace is a feature of the app where users may list goods they want to sell. Based on their tastes, other users can browse and search for things. The marketplace makes it easier for buyers and sellers to communicate. Users can communicate with one another using the app by engaging in question-and-answer sessions, replying to announcements, and contacting sellers to make purchases. It encourages pupils to work together in a collaborative setting. Students may simply manage their schedules thanks to the system's alarms, which are provided. The app makes sure that the necessary access control and security mechanisms are in place to safeguard user information and uphold the confidentiality of sensitive data.

The goal of the app is to give students a comprehensive platform for managing their calendars, keeping up with relevant notices, exchanging information via FAQs, and facilitating transactions within the student community. It wants to make students' academic and social endeavors more convenient, organized, and conducive to communication.

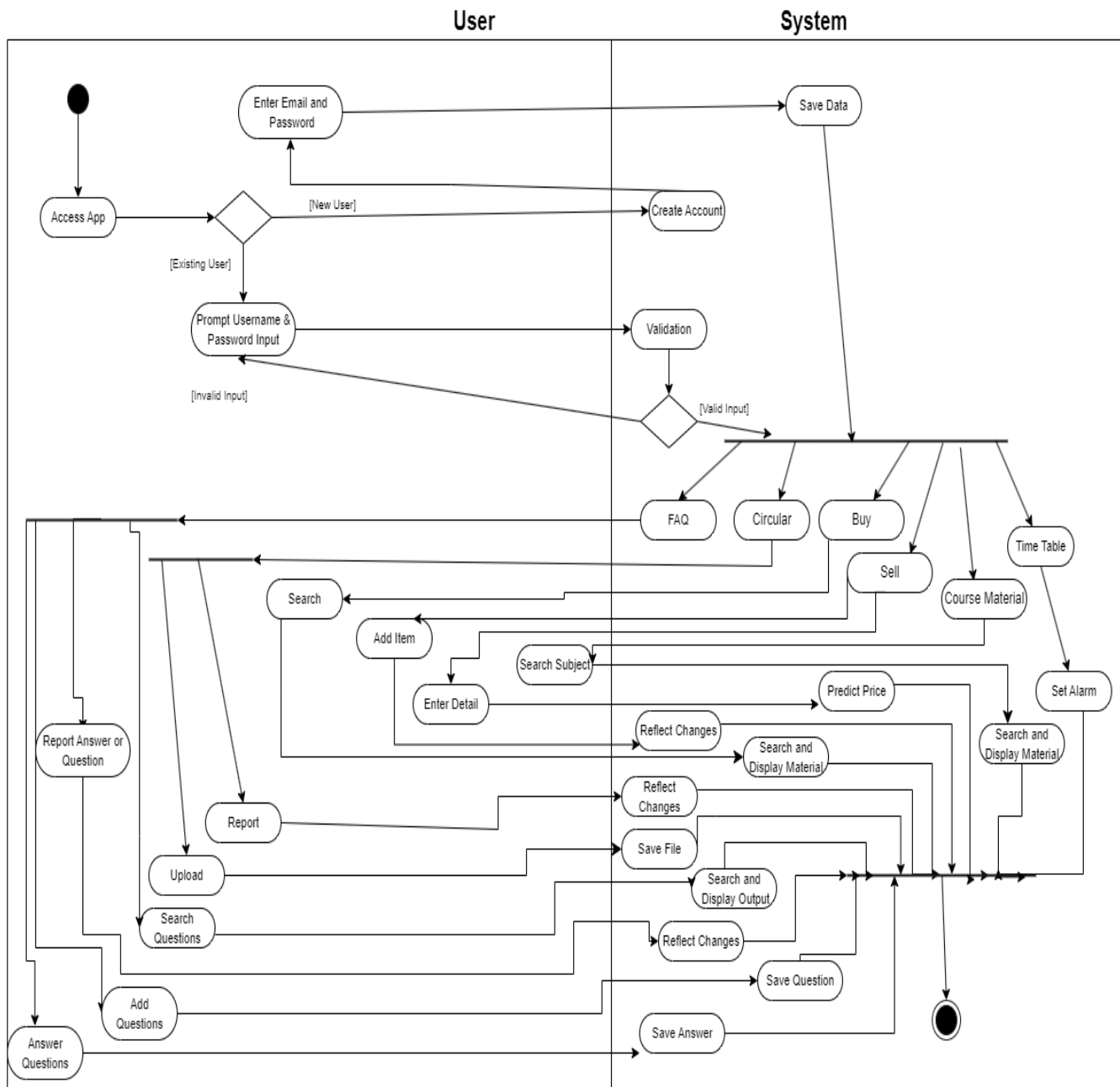
Applications:

1. Educational Institutions: The system can be used by educational institutions, such as schools or colleges, to manage student-related information, circulate announcements or circulars, schedule timetables, and provide a platform for FAQs.
2. Convenience: The app can offer convenient access to academic resources, such as course materials and timetables. Students can access these resources from anywhere at any time, making it easier for them to manage their academic schedules.
3. Online Community: The system can serve as an online community platform where users can interact, ask questions, and provide answers. It can be implemented in forums, knowledge-sharing platforms, or social networking sites.
4. E-commerce Platform: The system can be adapted for an e-commerce platform where users can sell products or services. It allows users to list their items, provide descriptions and prices, and track purchases made by buyers.
5. Timetable Management: The system can be used to generate and manage student timetables. It allows students to view their class schedules, and any changes or updates to their timetable. It also helps a student to set an alarm based on his/her schedules.
6. FAQ and Helpdesk Support: The system can provide a platform for students to ask questions and receive answers. It can feature an FAQ section where common queries and their solutions are provided, as well as a helpdesk support system where students can submit their questions or issues.
7. Authenticity: To prevent the circulation of fake circulars, the app also includes a review process triggered by student reports. It will make it easier for newer students to get acquired to the new environment.

ER Diagram:



Activity Diagram



An Overview of the Design:

1. Login:

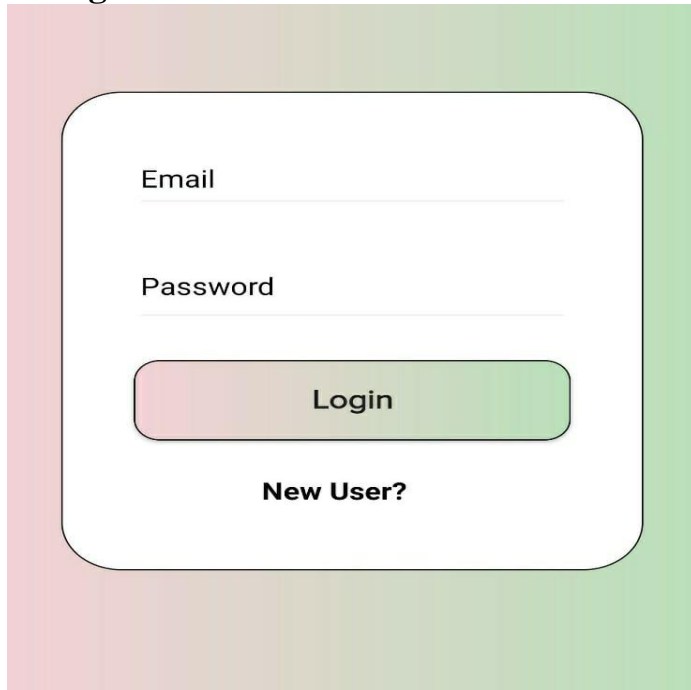
The login form is a white rounded rectangle centered on a background with a pink-to-green gradient. It contains two text input fields labeled 'Email' and 'Password'. Below these is a green 'Login' button with rounded corners. At the bottom of the form is a link labeled 'New User?'.

Figure 1. The login page enables the students to get access to the app. The student's email and password are stored in the database which when entered correctly authenticates the user.

2. Register:

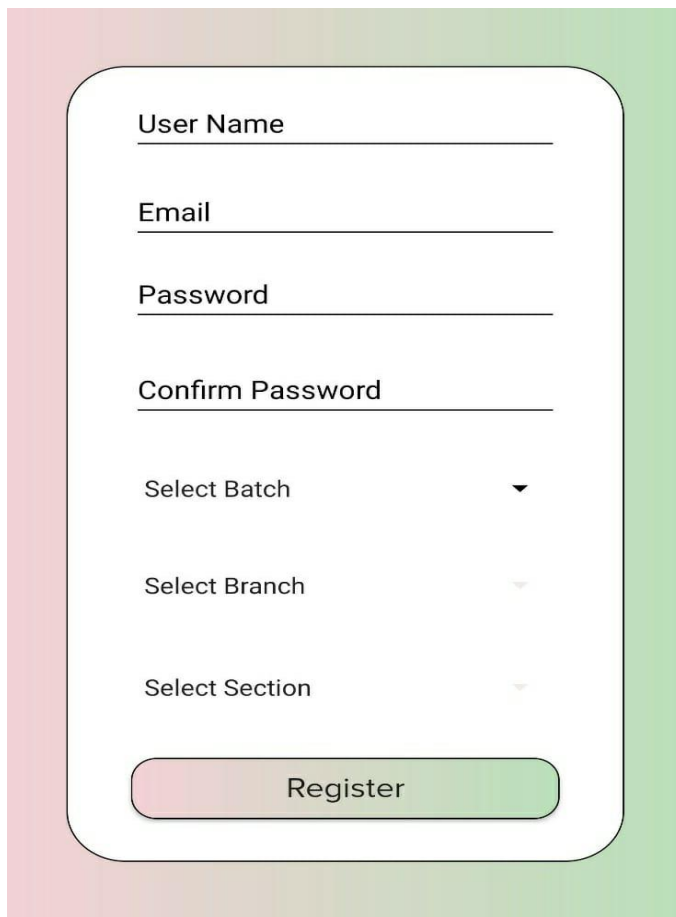
The register form is a white rounded rectangle centered on a background with a pink-to-green gradient. It contains five text input fields labeled 'User Name', 'Email', 'Password', and 'Confirm Password'. Below these are three dropdown menus labeled 'Select Batch', 'Select Branch', and 'Select Section'. At the bottom of the form is a green 'Register' button with rounded corners.

Figure 2. The register page is for the students who want to have access to the app. They need to get register first by entering all the details like batch, branch, section etc.

3.Timetable:

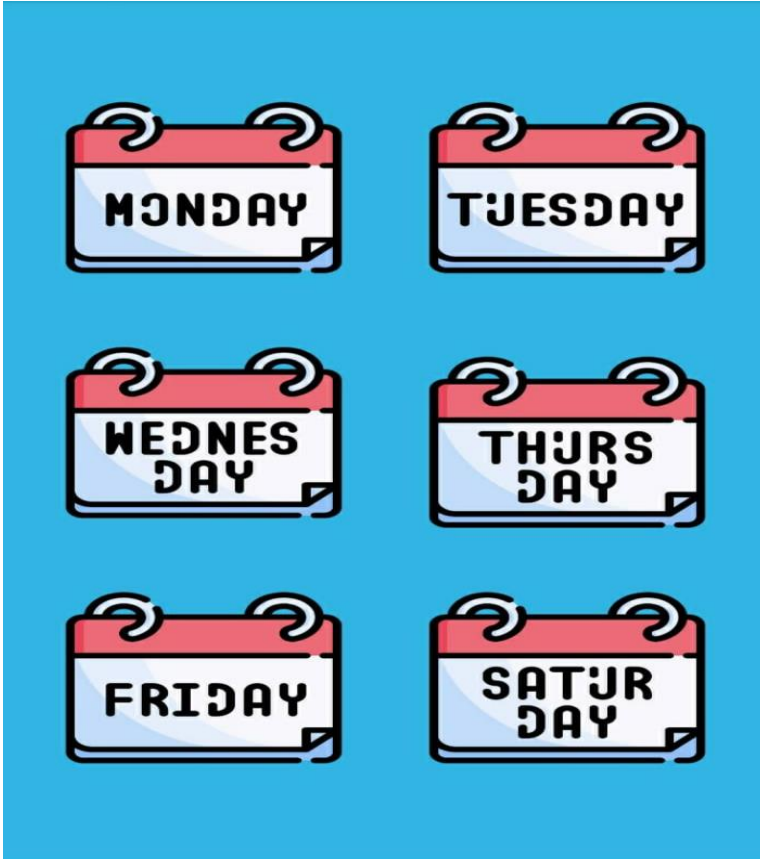


Figure 3.The Main Page of the app shows the timetable of the student generated from the database according to his branch and section, which helps the student in various management purposes.

4.Menu Bar:

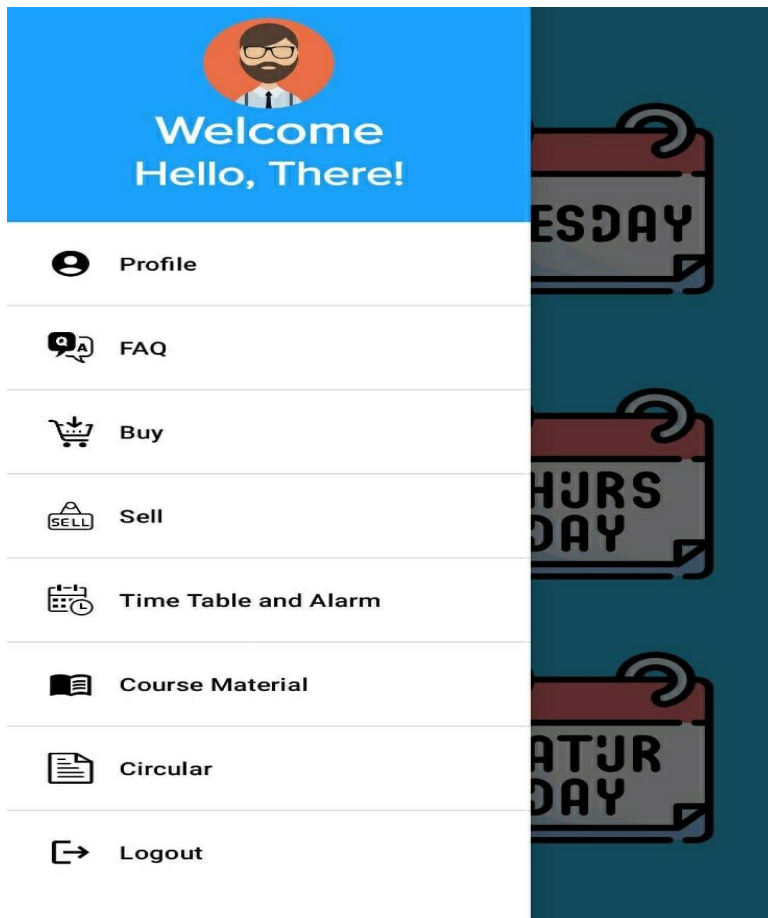


Figure 4.The menu bar shows various pages which could be accessed such as Profile, FAQ, Buy, Sell, Circular, Alarm, Course Material

5.Profile:



admin3



admin3@gmail.com

Branch: Mechanical Engg

Batch: 2025

Section: B

6.FAQ:

Search

+

what is best cgpa?
admin2

How many dept are there?
✓
admin3

Figure 6. The FAQ section enables students where they can ask questions regarding academic details or anything related to the institution, the tick mark is to verify the question that only the admin has access to.

7.FAQANS:

Report

+

what is best cgpa?
admin2
Answer:
8.5
✓
admin3
9
admin2

Figure 7. The FAQANS enables the students to check the answer and the verified states that the tick marked one is the correct answer. There is a report button which enables the admin to remove the questions which are irrelevant. The questions are removed when 75% of students report the question.

8. Buy:

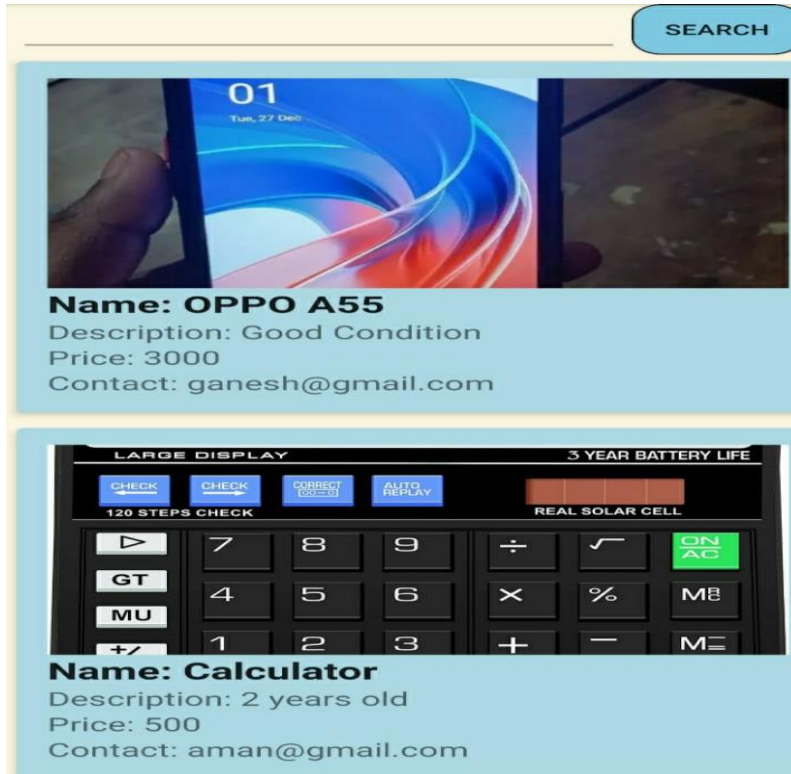


Figure 8. This app has a marketplace for students where users can buy and sell products. It allows users to list their items, provide descriptions and prices. Based on their tastes, other users can browse and search for things. Students can save money and participate in a cooperative and sustainable trading environment by utilizing this platform.

9. Sell:

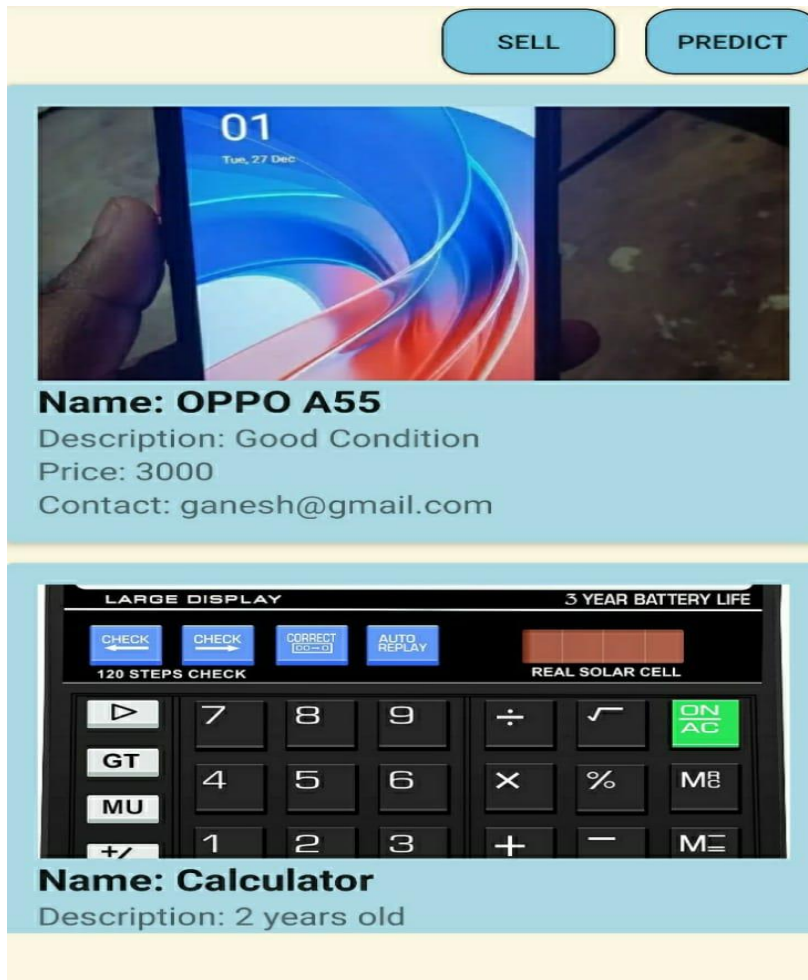
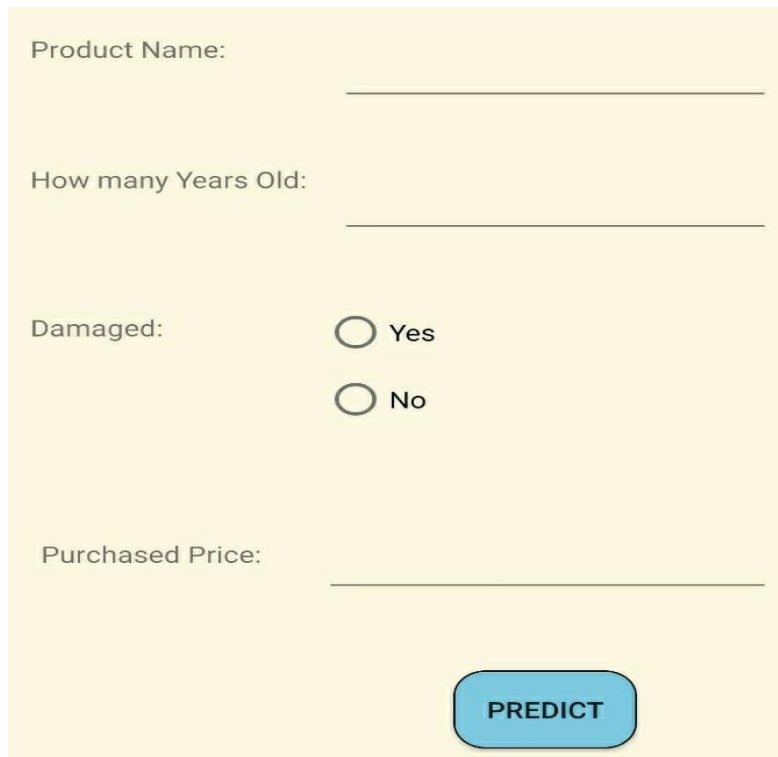


Figure 9. A marketplace is a feature of the app where users may list goods they want to sell. The marketplace makes it easier for buyers and sellers to communicate. It has a sell and predict option for sellers.

10. Predict price:



Product Name: _____

How many Years Old: _____

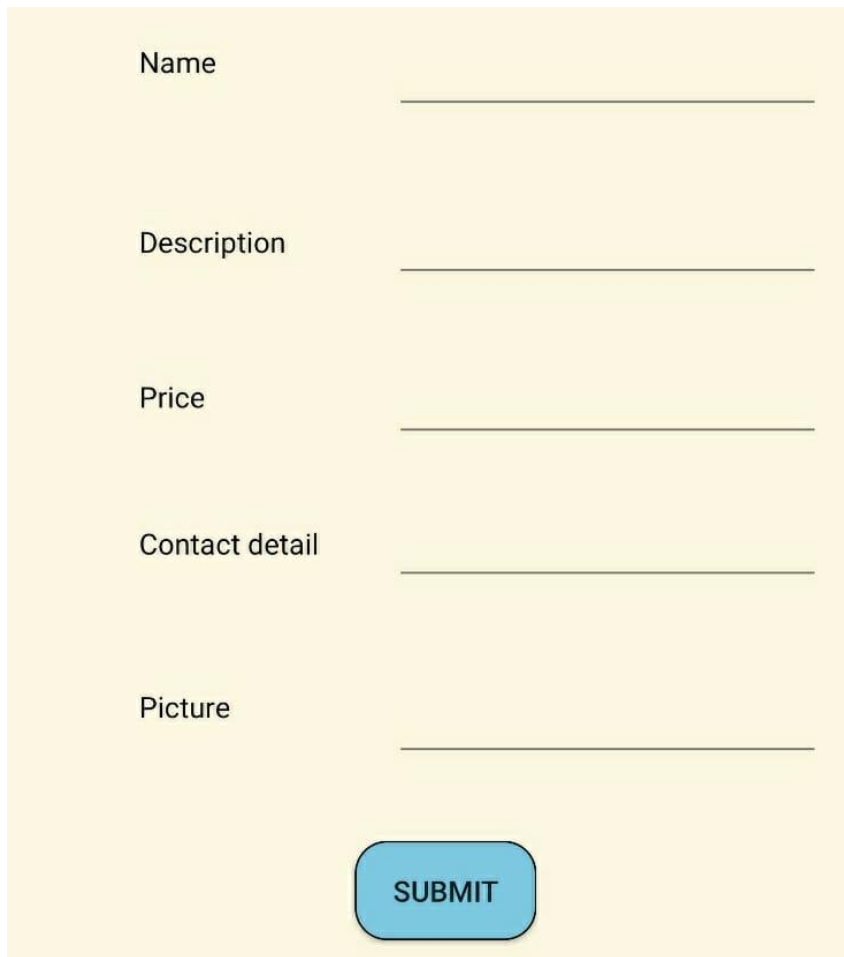
Damaged: ☐ Yes ☐ No

Purchased Price: _____

PREDICT

Figure 10. The Seller can predict the price of the item he wants to sell based on the condition, time period, cost price. The price is predicted using Decision Tree which the user will be get after he fills the info of the product.

11. Add Item:



Name _____

Description _____

Price _____

Contact detail _____

Picture _____

SUBMIT

Figure 11. The Seller has to give a detailed info of the product because the app ensures a secure environment that its users are always satisfied. The seller has to submit picture of the product, his contact etc.

12.Alarm:

SET ALARM

Start Time: 8:30AM
End Time: 11:30AM
Subject: DWDM-B1/ITT-B2 LAB

Start Time: 11:30AM
End Time: 1:00PM
Subject: Lunch Break

Start Time: 1:03PM
End Time: 4:00PM
Subject: fd

Figure 12. The Alarm page shows the timetable of the classes and sets the alarm of those classes so that the student perfectly manages his schedule. The student can set an alarm for himself if he wishes to if there's an extra class or any other activity.

13.Circular:

Upload Company Criteria_3 Years.p

 CollegeSavvy.pdf



Report

 Company Criteria_3 Years.pdf

Report

Figure 13. Circulars provide details on occasions, crucial dates, or general announcements. Circulars can be published by users with the necessary permissions to target particular branches, sections, or batches. The tick identifies that the circular is an authenticated one and if the circular is reported 75% then it is deleted.

14. Course Materials:

Enter the subject

Search

Introduction to Algorithms

Writers: Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein.

https://pd.daffodilvarsity.edu.bd/course/material/book-430/pdf_content

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Data Structures and Algorithms Made Easy

Writer: Narsimha Karumanchi

https://www.academia.edu/43202003/Data_Structures_And_Algorithms_Made_Easy_To_All_My_Readers

Object Oriented Programming Using C++

Prepared by Dr. Subasish Mohapatra

https://www.cet.edu.in/noticefiles/285_OOPS%20lecture%20notes%20Complete.pdf

Figure 14. The app provides that the students can have access to various course materials he wishes to study from, without having the trouble to go the library and rent a book. This makes it feasible for students.

Product Module:

The Alarm Manager module allows users to set multiple alarms based on a timetable. Timetables can be generated for different branches using data stored in a database. Users have the option to turn alarms on or off as needed. The FAQ module offers a question-and-answer format. Admins can use tick marks to indicate if a question or an answer is legitimate or accurate. The module also enables keyword searches for specific queries. While admins and users can both report objectionable content, users can post new questions and answers. A question or response is immediately deleted if it receives 75% of user reports. Reports to the admin result in instant deletion.

The Buy module simplifies the purchasing process by offering comprehensive product information. Users can use keywords to search for products, allowing them to find particular items of interest. Users can upload images of the goods they want to sell in the Sell module. On the platform, these images are retrieved and shown. The module also has a prediction function that makes use of a Python Decision Tree model. Users can forecast the price of their products by providing descriptions through the Flask server, which runs the model. Users can also mark products as sold and remove them from the marketplace using the module.

Users can use keywords to search for topics in the Course module. It offers a thorough database of all materials that are out there and relevant to the topic you searched for. The Circular module allows for keyword-based circular searching. Both students and administrators have the authority to upload circulars, but students also have the option to report any circular they believe to be fraudulent or untrue. Circulars submitted by administrators are deemed to be legitimate and cannot be removed by user reporting.

Future Scope and Conclusion:

The future scope includes integrating it with a calendar feature to easily set alarms for important events, integrating it with a reminder feature, and allowing users to set recurring alarms for specific days of the week. The app includes implementing a chatbot to provide automated responses, allowing users to rate the answers provided, and using machine learning to improve the accuracy of the answers.

The future scope includes implementing a rating system for sellers and products, allowing users to filter products based on location, and implementing a bidding system for auctions. The app includes implementing a messaging system for buyers and sellers to communicate, integrating it with a payment gateway for secure transactions, and implementing a review system for buyers to rate sellers.

The future scope includes implementing a feature for users to suggest resources to add to the database, integrating it with a learning management system to provide a more comprehensive learning experience, and implementing a progress tracking feature for users. We can use google book API for more resource and also fast search of the book name. It includes implementing a feature for administrators to verify circulars before they are uploaded, allowing users to filter circulars based on department or category, and implementing a feature for users to subscribe to specific circulars.

In conclusion, the application offers a range of features that cater to the needs of students and administrators. The Alarm Manager feature helps students manage their schedules, the FAQ feature provides a platform for students to ask questions and get answers, the Buy and Sell features provide a marketplace for students to buy and sell products, the Course feature provides resources for students to learn, and the Circular feature provides updates on important information. The future scope of the application includes improving and expanding upon these features to provide an even better user experience.

System Requirement: FRONT END and BACK END:

The front-end and back-end technologies that you can use for an Android app project.

FRONTEND

- Android Studio: the official IDE for Android app development
- Java programming language
- XML: used for layout design
- Glide: libraries for loading and displaying images in Android app
- Volley: used in Android Studio for handling network requests and parsing data in JSON format

BACKEND

- SQLite: used for local database storage
- Firebase: used for cloud-based storage and data synchronization
- Flask: used to run the model for serving API requests
- PyCharm: used to run the server

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