

A Project Report

on

A Companion Application for Students: Companion App

*Submitted in partial fulfillment of the
requirement for the award of the degree of*

Bachelor of Technology in Computer Science and Engineering



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MAY – 2023



**SCHOOL OF COMPUTING SCIENCE AND
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CANDIDATE’S DECLARATION

We hereby certify that the work which is being presented in the project, entitled “**COMPANION APP**” in partial fulfillment of the requirements for the award of the **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING** submitted in the **School of Computing Science and Engineering** of Galgotias University, Greater Noida, is an original work carried out during the period of **JAN-2023 to MAY-2023**, under the supervision of **Dr. Anuj Kumar Singh Assistant Professor Department of Computer Science and Engineering** of School of Computing Science and Engineering, Galgotias University, Greater Noida.

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

19SCSE1010452 – VANSHIKA SINGH

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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor

(Dr. Anuj Kumar Singh, Assistant Professor)

ACKNOWLEDGEMENT

We would like to express my special thanks to our mentor Dr. Anuj Kumar Singh for his time and efforts he/she provided throughout the year. Your useful advice and suggestions were really helpful to me during the project's completion. In this aspect, we are eternally grateful to you.

We would like to acknowledge that this project was completed entirely by “VANSHIKA SINGH-19SCSE1010452” & “ANKITA GUHA-19SCSE1010435” and not by someone else.

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CERTIFICATE

The Project Viva-Voce examination of “**VANSHIKA SINGH-19SCSE1010452**” & “**ANKITA GUHA-19SCSE1010435**” has been held on _____ and their work is recommended for the award of **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**

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Date: May, 2023

Place: Greater Noida

ABSTRACT

Students often face difficulties in managing their academic schedule, keeping track of their assignments, and finding resources to support their learning.

To address these challenges, there is a need for a student companion app that can provide personalized support to students in managing their academic life, staying organized, and maintaining their motivation. The app should be easy to use and accessible to all students, regardless of their academic level or background. It should also be able to adapt to the changing needs of students and provide relevant resources and guidance based on their individual learning preferences and goals.

The student companion app can provide a comprehensive solution to the challenges faced by students. The app can provide students with access to resources such as study guides, video lectures, and interactive quizzes to support their learning. The student companion app can be a powerful tool for students to enhance their academic performance, reduce stress, and improve their overall well-being. By providing personalized support, access to resources, and motivational tools, the app can help students achieve their full potential and succeed in their academic endeavors.

The results and output of the student companion app would be beneficial to

students in several ways such as Improved academic performance, Reduced stress, Increased productivity, Enhanced learning, Community support .

The student companion app has significant potential to improve the academic and personal lives of students, and with continued development and innovation, it can become an essential tool for students of all levels and backgrounds.

Sections:

The project can be broadly classified into two sections:

- Setting up the UI for User and Admin
- Adding login and user profiles features.
- Using Firebase Storage to track user information and the state.

High-Level Approach:

- Build the UI, with the custom Dashboard, and various Card Views such as Upload Notice, Add Image, Delete Notice, Add Faculty, Add E-book/Notes
- Then We Set-Up our Firebase project for authentication and storage.
- Add Google sign-in feature to track user profile.
- Connect your local variables to the Firebase storage to make your app cloud-enabled.

Applications:

- This application can be built into a full-fledged College management type of app with proper research and a few additions.
- The skills learnt while building this app will allow you to build commercial and useful apps in the future.

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CHAPTER-1

Introduction

1.1 Introduction

Companion apps are designed to enhance the user's experience with a particular product or service. In the context of education, companion apps can be used to supplement classroom learning, provide additional resources, and help students stay on track with their academic goals.

Student assistant apps can offer a range of features to help students manage their academic life more efficiently. For example, some apps may provide access to a library of textbooks, course materials, and study guides, while others may offer features such as note-taking, flashcards, and practice quizzes.

Additionally, many student assistant apps offer features that facilitate collaboration among students. These features can include study groups, discussion forums, and peer-to-peer tutoring. Some apps also offer gamification elements, such as rewards and incentives, to motivate students to stay engaged and motivated. interaction and is an application of AI. It is one of the most straightforward and well-liked sorts of HCI (HCI). The design and implementation of the system is to provide service in institute and colleges.

The system is to provide comprehensive student information system and user interface is to replace the current paper records. College Staff uploads attendance, college notifications through a secure, online interface through admin. Student admission Management module explains how the college handles the admission of their student. The courses and subject management module will do the assigning of subjects for every course that the college offers. The admin of the college can have and monitor the information of the student.

1.2 Formulation of Problem

They can resolve the following issues, for instance:

A. Customer service: For a very long time, customer service departments have used chatbots. Human personnel are skilled in taking the customer's request and acting appropriately. The majority of support employees are unsure of what kind of issue the user is having, which causes delays and poor customer service.

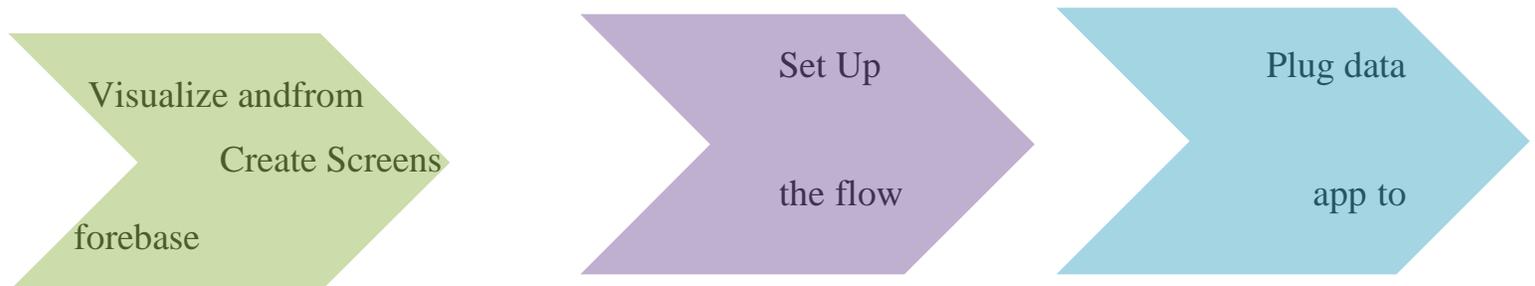
B. Sales Assistant: According to statistics and predictive analysis, many major firms will revamp their websites to support voice search. Their estimated 30% rise in digital commerce will result from this. While interacting with a

variety of clients, AI chatbots also compile statistics regarding customer preferences. They are able to retain a dataset, which they can then analyse to improve their service. Humans, on the other hand, can only keep a limited quantity of information, which is afterwards challenging to analyse. The advantages of having specific client data are enormous for an enterprise. It can be used to enhance corporate strategies, obtain deeper business understanding, and examine the causes of customers fall out.

1.3 Project Stages

The project can be broadly classified into three sections:

- Setting up the UI with the custom tabbar, fullscreen questions and other screens.
- Adding login and user profile features.
- Using Firebase Storage to track user information and the state.



Create Custom
AppBar
firebase

Create Login page

Connect local stage
variables to
Storage

Create Fullscreen
Debug
Questions page
transaction

Set Up Google
sign-in

Setup and
Firebase

Add double tap to
Disappear feature on
cards

Retrieve user data

1.4 Feasibility Analysis

A feasibility analysis of a student companion app would typically involve assessing the technical, economic, and operational aspects of developing and deploying the app.

- Technical Feasibility:

This would involve analyzing the technical requirements for the app, such as the programming languages, software tools, and databases needed to build and maintain the app. Additionally, considerations would need to be given to the compatibility of the app with various mobile platforms and devices.

- Economic Feasibility:

This would involve assessing the costs involved in developing and deploying the app. These costs may include hardware, software, personnel, and marketing expenses. Additionally, an analysis of the potential revenue streams for the app, such as subscriptions or in-app purchases, would be considered.

- Operational Feasibility:

This would involve analyzing the practical aspects of developing and deploying the app. For example, the app's potential user base, competition in the market, and regulatory requirements would be considered. Additionally, considerations would need to be given to the ongoing maintenance and support of the app.

Overall, a feasibility analysis of a student companion app would help determine whether the app is worth developing and deploying. It would also help identify potential challenges and risks associated with the project and guide decision-making.

1.4.1 Merits of Proposed Solution

There are several potential merits to developing a student companion app, including:

[A] Improved Access to Information: A student companion app could provide students with easy access to important information related to their coursework, schedules, and campus activities. This could help students stay organized and on top of their responsibilities, which could improve their academic performance.

[B] Enhanced Communication: A student companion app could facilitate communication between students, faculty, and staff. This could include features such as discussion forums, messaging systems, and notifications,

which could help students stay connected and engaged with their peers and instructors.

[C] Personalization: A student companion app could be customized to meet the individual needs and preferences of each user. This could include features such as personalized course schedules, reminders, and study tools, which could help students better manage their time and resources.

[D] Increased Efficiency: A student companion app could streamline administrative processes, such as registration, enrollment, and financial aid. This could help reduce the time and effort required for students to complete these tasks, allowing them to focus on their studies and other activities.

[E] Competitive Advantage: By providing students with a comprehensive and user-friendly companion app, educational institutions could differentiate themselves from their competitors and attract more students to their programs.

Overall, a student companion app could provide numerous benefits to students, faculty, and educational institutions. By leveraging the latest

mobile technologies and design principles, a well-designed and executed app could improve student outcomes and enhance the overall educational experience.

[F] For Cyber Security: The approaching era's new electricity is artificial intelligence. Similar to how power is today, it would be incorporated everywhere. Cybersecurity benefits greatly from artificial intelligence.

In the area of cyber security, some of the issues that artificial intelligence has been recognized to solve include-

- **An increase in cyber threats:** It is caused by filtering potential locations for threats and updating the number of check runs. Understanding the timing and location of an attack is the greatest approach to prepare for it. It greatly helps to warn the people in advance to exercise caution.
- **The unsupervised Artificial intelligence:** It can quickly identify a flaw or abnormality in the network and alert users before any potential harm is done. The chatbots gather data and analyses it to search the web for any suspicious trends or abnormalities.

1.5 Tools and Technology Used

- Install Android Studio on your machine.
- Install and set up JDK.
- Create a new Android project.
- Like any typical application, the source code of Java should be in a java folder and the source code of XML should be in a res folder.
- Connect with Firebase.

CHAPTER-2

Methodology

2.1 Overview

Our daily lives are becoming more and more entwined with mobile gadgets. New functions are added to these gadgets with each iteration, making them more practical and inexpensive, and we are always getting new apps that make our lives simpler. Because of these developments, educators and researchers are now using these tools to support teaching and learning. Mobile technology holds enormous promise for improving education by making the traditional classroom more engaging and participatory.

It enables teachers to impart knowledge without regard to place or time constraints, allowing for the continuation of learning after classes have ended or in settings other than classrooms where learning naturally takes place.

Additionally, it enables teachers to interact more personally with students via the devices that they frequently use. Finally, sensor technologies allow for personalized and tailored instruction for each learner. The research on mobile learning is expanding quickly due to the use of mobile devices in education and has been examined in a number of studies. Some studies concentrated on certain

facets of mobile learning, like mobile learning games, collaborative learning aided by computers, or mobile apps.

2.2 Background

For instance, evaluations evaluating the impact of mobile settings on learning outcomes showed contradictory results. We reviewed studies on mobile learning from 2008 to 2012 from a few journals, and we discovered that 83% of the studies that examined learning successes reported successful results. In a similar vein, we analyzed studies on mobile computer-supported collaborative learning from 2004 to 2011 and found that six of the nine studies demonstrated gains in students' conceptual knowledge and application. In contrast to these encouraging results, our assessment of studies on mobile games from 2001 to 2011 revealed a lack of solid data supporting the claim that they enhance learning outcomes.

Examining research on mobile devices from 2000 to 2008, it was discovered that there were no appreciable variations in students' test scores between trials comparing mobile devices to identical paper-and-pencil treatments. Additionally, they noted that claims of improved learning were frequently not put to experimental test.

There have been many insightful synthesis of earlier research on mobile learning, but some areas still call for more investigation. For instance, there is a lot

of room for mobile learning in science education because of a variety of factors that make the subject special and well-suited to the advantages of mobile technology.

With more and more people spending more time on their smartphones and mobile devices, the digital world is constantly evolving. If we could use this to our advantage and create an app that would boost visibility and put us ahead of the competition, it would give us a competitive edge. This smartphone app was created for both personal and professional uses. We are confident in what we have accomplished with the app and how it will increase sales.

2.3 Study Conducted

Some science content is difficult for students to perceive with the naked eye and necessitates graphical depictions in order for them to completely comprehend it, while other science subject occurs outside of the classroom and is perhaps better studied in its natural context. In addition, without an immersive experience that illustrates how the variables interact, scientific system models cannot be fully understood. The portability of more modern gadgets and their capacity to show interactive, three-dimensional images and simulations fit well with these distinct characteristics of science learning. However, there haven't been any analyses of the research that has been done so far on mobile scientific learning.

We conducted a thorough examination of the app market because it has helped us learn a lot about the competitors' tactics, advantages, and disadvantages. Through that study, we were able to avoid repeating our errors and become more cautious in our interactions. In order to determine what users like and dislike about an app, we have also thoroughly examined consumer reviews. To gain an advantage over rivals in the market, attend to the customers' pain points and fix any problems in your app.

People easily get bored and move on to more exciting things. The same applies to apps. Users quickly move on to the next app if one is not meeting their needs because there are millions of them. In order to keep users interested and attached to your app, conduct research in a way that makes your app both unique and intriguing.

Since patience is also constantly eroding, users cannot be compelled to wait. If your programme takes more than a few seconds to load, it is deadly. Users might get an unfavorable opinion and believe that the app is unquestionably broken. Find out through research how to speed up your app to meet user demand.

We also looked at the platforms on which we would be releasing our software. The two most popular app platforms are iOS and Android. iOS is a more widely used and safe platform, whereas Android has more users. If future funding becomes available, we will create the software for both the iOS and Android

operating systems in order to expand our user base. We only created it on Android since we lacked sufficient funding. We will be able to reach more users if we design our software for both platforms. Due to a limited budget, we chose and built the app for the most widely used platform. By doing this, we could master one platform and, if there is enough funding, launch our app on more platforms.

Getting people talking is crucial. Investigate effective marketing strategies to spread the word about your app to as many people as possible. The majority of app developers struggle to carry out their marketing strategy, which results in no buzz before the launch and customers who are unaware of anything so intriguing on the market. Therefore, it is best for developers to begin their marketing campaigns two to three weeks before to the launch, to ensure that as much word as possible spreads and, in some cases, helps to generate a large amount of interest. Developing an appropriate marketing strategy is crucial for developing mobile apps.

Even if innovation and applicability are key elements of an app, you should assess the app's applicability before it is released to the public. You must eliminate as many bugs as you can after the alpha testing phase so that the software performs better during the beta testing phase. App testing tools abound, and it is through these iterations of testing that you will learn the genuine worth of your app.

Although organizations are fully aware of how crucial research is to the process of developing a business mobile app, there is a lack of funding in this area. Because user research and UX design are both intangible, it is very difficult to persuade investors that the entire app development process might fail without them.

Without research, the process would be completely unfocused and aimless; we wouldn't know who to target or what to include in the app. The app may have a poor loading time and an unfriendly interface if there are financial constraints and little research has been done.

At every stage of developing a mobile app, research is crucial. Obtaining pertinent information and attending to user needs will help in the creation of an app that is practical, distinctive, and well-liked by the general public. To make sure that your app strikes the appropriate note in the market, you should continually test the apps' compatibility, pay attention to detail, stay informed about what end users want, and do a thorough analysis of the market. The smoothness of the road to success is made possible by research.

Always keep in mind that there are a ton of apps on the market, therefore whatever you are unable to do, another app will do so and steal your customers. The only method to close these gaps and allow the app to have the impact it should is research.

Tablets and smartphones are serving as connecting hubs for key aspects of our everyday lives, including business communications, interpersonal interactions, on-the-go purchasing, information searches, and management news about what is happening in the world. It has fully taken over not only our professional world but also every aspect of our personal lives. So the success of the app depends on what the end user wants, needs, and is aware of. Only market research can reach the biggest number of people and come up with strategies to keep them interested, which is why its importance in the market is expanding.

Users want mobile apps to fulfil this expectation, and it must always be complied with. Don't do anything if it can't be done flawlessly. In this case, a "perfect" app is one that is also data-efficient. Many programmers use a lot of data and then are abandoned. Make sure your app is useful and data-efficient to prevent it from being forgotten.

CHAPTER-3

Literature Survey

3.1 Objective Identification

The following conclusions were derived from past studies and surveys about AI Chabot's, their applications, and behavioral patterns:

- The Generative models generate a response word by word depending on the search query. This has very negative Grammatical errors in the answers. they discover sentences by and of themselves.
- A "decision engine" system was used by a significant online retailer was in charge of resolving consumers' questions, and over the response to 95% of the queries was "transfer to the agent".
- 47% of healthcare insiders have responded that their organization offers an AI training course to their employees. Only 67% said that they support AI adoption in their organization.
- AI algorithms can't be fully trusted unless they're developed and trained.
 - Acquiring high-quality datasets is important.

- AI-based applications are very helpful for youngsters. With growing chaos, anyone can carry out their tasks on the go requiring minimal interaction, using devices like tablets and smartphones. AI is used very efficiently in education and is proving to be very useful and cheap. Examples like Third Space Learning, Little Dragon, CTI, Brainly, Carnegie Learning, etc. prove this.
- A significant general issue in AI applications is biased. Since the AI systems generally rely on the volumes of data inputted into them to generate their predictive outputs, it is also important to make sure that the data fed to them is up to the mark and is relevant enough to make the AI system efficient and accurate.

3.2 Other Statistics

The Turing Test, which asks "Can machines think?" was put forth by Alan Turing in 1950, and it was at this time that the concept of a chatbot gained popularity. Eliza, the first chatbot ever created, served as a user's virtual psychotherapist and was created in 1966. It used simple pattern matching and a templatebased response mechanism. Its conversational ability was not good, but it

was enough to confuse people at a time when they were not used to interacting with computers and give them the impetus to start developing other chatbots . An improvement over ELIZA was a chatbot with a personality named PARRY developed in 1972. In 1995, the chatbot ALICE was developed which won the Loebner Prize, an annual Turing Test, in years 2000, 2001, and 2004. It was the first computer to gain the rank of the “most human computer”. ALICE relies on a simple pattern-matching algorithm with the underlying intelligence based on the Artificial Intelligence Markup Language (AIML), which makes it possible for developers to define the building blocks of the chatbot knowledge. Chatbots, like SmarterChild in 2001, were developed and became available through messenger applications. The next step was the creation of virtual personal assistants like Apple Siri, Microsoft Cortana , Amazon Alexa , Google Assistant and IBM Watson.

3.3 Background Research

Applications for smartphones (apps) give customers features to make their usage of smartphones as beneficial as possible in a variety of areas, including

finance, education, health, life, and entertainment. Apps store user data that is intimately tied to its user for these features. Thus, such data might be utilized as crucial digital forensics evidence. Some programmers, nevertheless, employ their own security measures.

to safeguard data from dangers outside. Data decryption is necessary in order to be utilized as evidence since security measures, which can successfully safeguard sensitive data, present significant hurdles to digital forensics.

Therefore, in order for forensic investigators to function effectively, a preliminary analysis of apps with security measures is crucial.

The note-taking apps ClevNote and Samsung Notes will be the subject of a forensic study in this research. Because user-written notes are stored as app data, note-taking apps are useful as evidence in forensic investigations. However, forensic analysis is challenging due to the security safeguards that protect app data. We investigated how to gather data from encrypted apps in a way that can be used as proof. To accomplish this, we used reverse engineering to expose the way

security functions operate in order to identify the security features for target apps and collect app data.

Applications (apps) for smartphones save a variety of user-related data in order to offer services. Apps frequently use security features to defend against external threats the data, which is their main target. Cryptographic algorithms are a key component in how security features in apps function. Features for security are a

powerful tools for data protection, but when used in digital investigations, they act as anti-forensics. Research on the security features of each app should be done in order for investigators to use the data from the apps as evidence.

Due to the features of the apps, which provide security functions using a distinct scheme, a study for each app is necessary. In this essay, we specifically examine note-taking apps that include security measures.

The primary cause of this is the fact that user-written notes are saved as data, making note-taking apps useful as evidence. We first group the security elements that note-taking apps can offer into several categories and generalize how each security feature works. After that, a case study for the forensic analysis is carried out using the note-taking applications ClevNote and Samsung Notes and our definition of security features.

Since several years ago, studies on smartphone apps with security features have been done. We looked at WhatsApp, an instant messaging app for the Android OS. This study investigated restoring deleted data and examined WhatsApp artefacts. On the Apple, Android, and Windows operating systems, we conducted research on Facebook, Twitter, and LinkedIn. The author concentrated on the logical data artefacts for each programme. We also looked into ChatSecure, a safe instant messenger, and found out how data is encrypted using a password given by the user.

We provide information on the cryptographic techniques used in the authentication process and other secure instant messaging protocols. the secure instant messenger's TextSecure protocols TextSecure.

We looked into the decryption of encrypted database files for Windows-based versions of KakaoTalk, NateOn, and QQ messenger. In contrast, research on the instant messenger Telegram has been ongoing for the past few years. Additionally, we conducted a log and packet analysis of both public and private conversation as well as an artefact analysis of Android-based Telegram users, contacts, and chat content. We analyzed he main components of Telegram's data structure.

We exposed Telegram's distinctive data structure and the potential for retrieving deleted chat data. Additionally, we looked at Telegram X and BBM Enterprise on desktop and mobile platforms, and we found

the decryption mechanism for each app and verified that memory analysis could be used to obtain the decryption key. Additionally, research was done on a number of apps, including Kik, Line, TikTok, and BiP.

CHAPTER – 4

Functionality

4.1 Basic Idea

Today's world seems to be powered by applications. There probably is an app accessible for it if it is something that people can interact with. Poorly designed apps are just annoying and don't perform what we want them to, whereas well-designed ones are attractive and encourage use. While some fundamentals like usability, functionality, and layout improve user experience, one of the most frequently voiced complaints about apps is to features, whether they are missing or being misused.

A companion application is a piece of software that plays on a device other than a console and contains content that is either a subset of or complimentary to the main experience. It is intended to be used alongside or to draw users to the software title or digital content.

Now that we have a solid foundation, a suitable layout, and a pleasing color scheme, we must consider what the customer actually wants. If we don't satisfy their needs, a rival might, and as a result, we risk losing a sizable portion of our market share. There are certain features that are good to have and some that are necessities, but many will make your app stand out significantly.

A piece of software known as a companion application runs on a device other than a console and includes material that is either supplementary to or a subset of the main experience. It is meant to be used in conjunction with or to attract users to the digital material or software title.

4.2 Features of our App

4.2.1 Simplicity

Many individuals have short attention spans, so making your app challenging to use will cause them to lose interest quickly. Customers will become impatient and find another way to access their information, potentially by using a competitor's app, if they cannot do so swiftly and simply. Our app's streamlined displays, clear directions to the following step in the process, and lack of ambiguity enhance user experience and motivate users to keep using it.

4.1.1 Speed

Rapid screen loading is essential. Nobody like waiting, especially when all they can see is a loading symbol on the screen, and this annoyance

quickly gives way to boredom, which prompts a decision to look for something better. Speed does not mean retrieving massive tables and databases, but rather a suitable choice of graphics. Keep it brief and straightforward.

4.1.2 Flexibility

To get the most out of your app, it must be compatible with all three of the major mobile operating systems: iOS, Android, and Windows. While it's simple to post Android apps to the Play Store, Apple must first test and approve iOS apps before they can be sold on the App Store. Even though the coding might not be different, you might be working with screens of various sizes and resolutions, therefore test on both platforms before publishing.

4.1.3 Security

The issue of internet security is only becoming worse, and your app is no exception. Security is crucial because many applications store credit and debit card information as well as sensitive personal information.

Hackers might try to:

- Install malicious software on devices and in apps so that it can access data and

- steal screen lock passwords.
- intercept confidential data being transmitted over the networkstealing consumer information for fraud or identity theft.
- Obtain private company assets

Because of all of these possible problems, your app security must be completely thought out and not added as an afterthought.

4.1.1 Search Options

Although it seems straightforward, many apps fail to include this crucial feature despite the fact that many users rely on it. While it won't function as well for game-based apps, having the option to search the app or the internet is crucial for the commercial and social varieties.

4.1.2 Updates

You can figure out how to make your app more relevant to your users once you have their feedback, and you can then send out updates on a regular basis. As a result, not only do you get a better product, but you can also address security issues as they come up. Updates give the user more of what they want while

keeping your app fresh.

4.1.3 User Feedback

There will always be additional methods to improve it and make it better fit the user, even though you would like to create the ideal app the first time. Asking the user directly is the best method to understand this. Feedback is a great method to hear what your customers want and filter that information into what needs to be added or removed, what can be done with some work, and what can be ignored. By including a feedback button on the app, you provide the user the opportunity to suggest improvements.

4.2 Good GUI

While balancing app speed with functionality and resolution, it's also important to make sure that the content on the screen is adequately detailed to provide a satisfying user experience. Blocky graphics are a thing of the past; today's users demand hi-definition and 16 million colors. Your app sales will be limited by anything less.

Customers will be drawn in by basic elements like eye-catching color palettes. You can create an app that looks both fashionable and professional if you pay attention to the complementary colors on the color wheel.

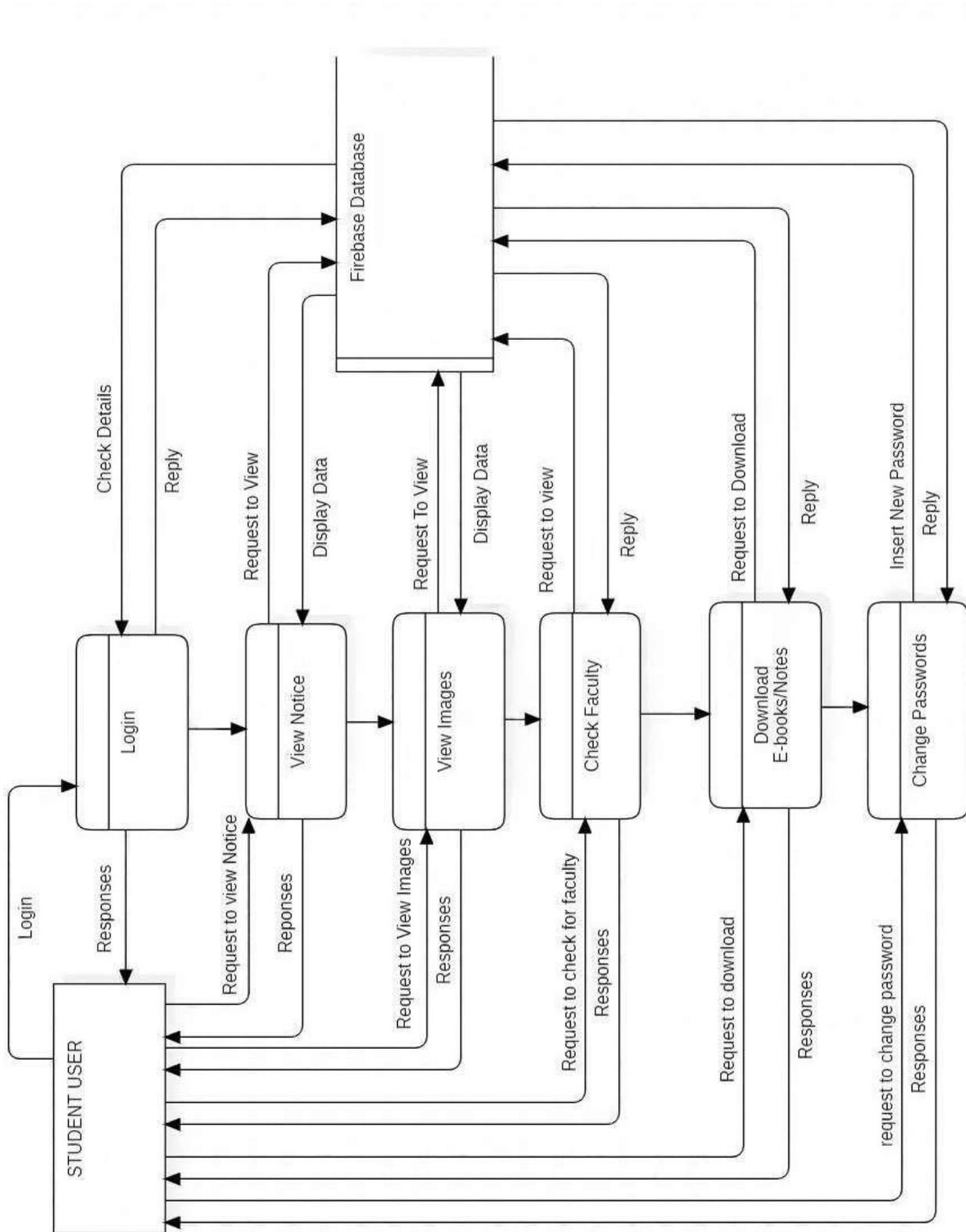
CHAPTER – 5

Working of Project

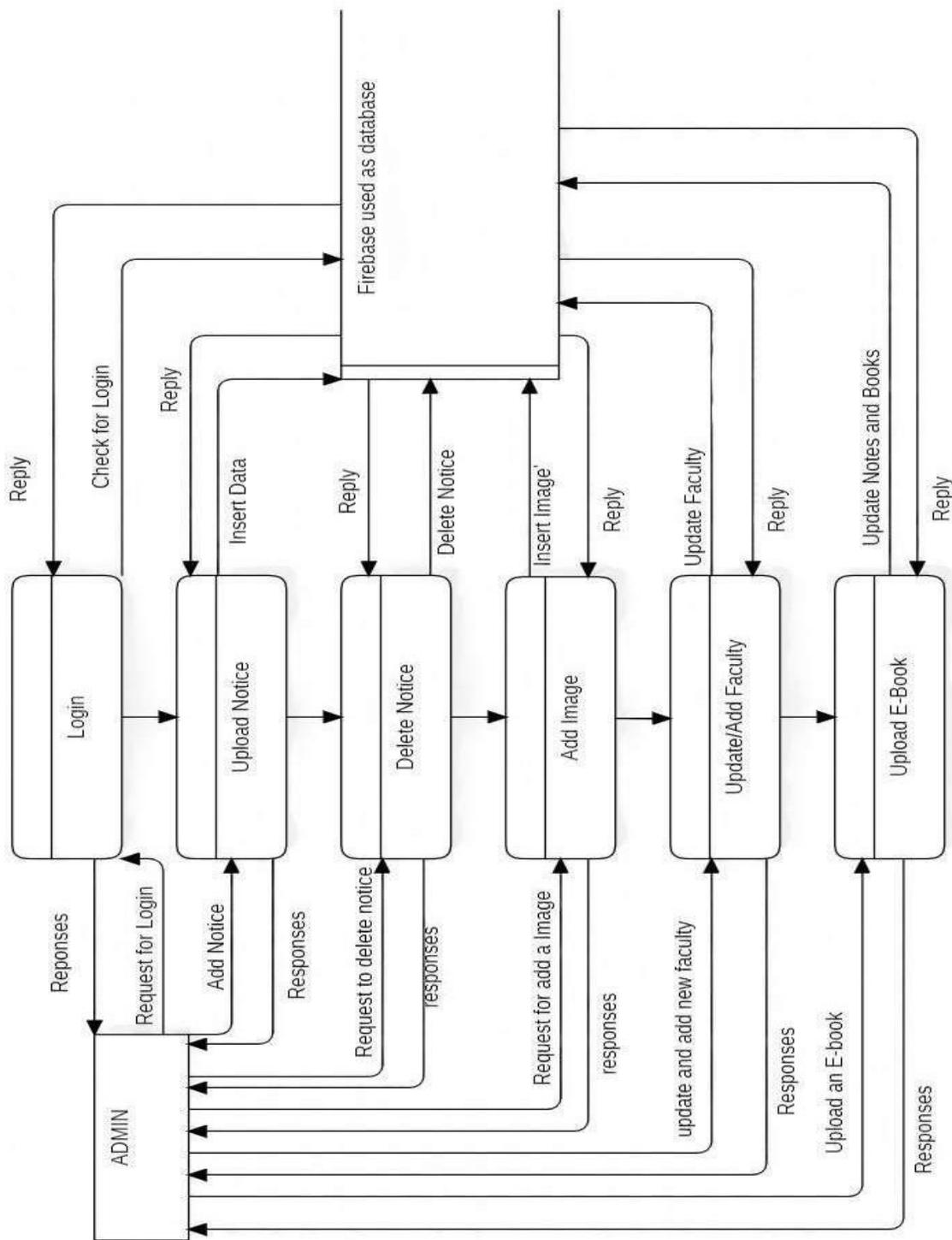
5.1 Diagrams for proposed Methods



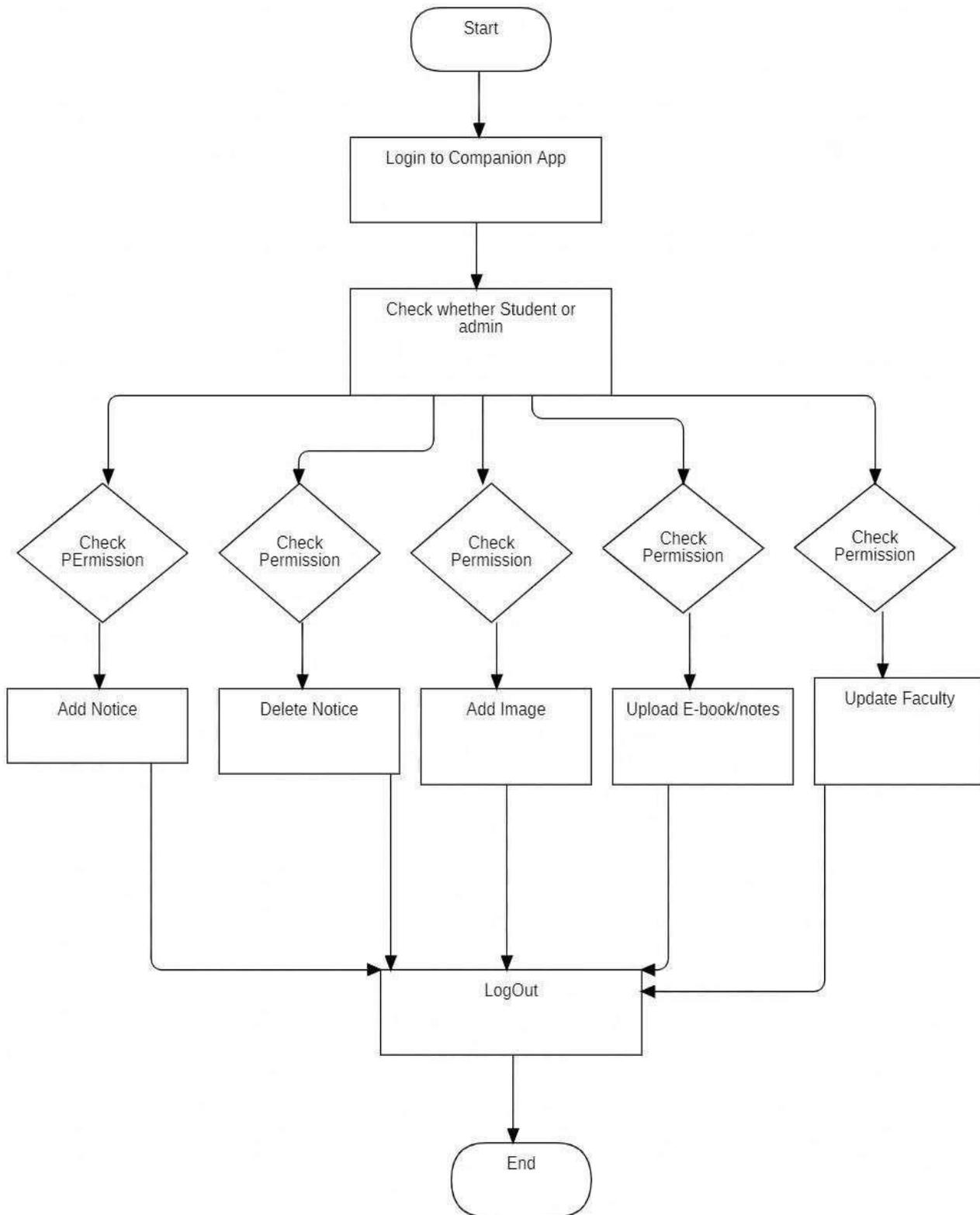
5.2 Data Flow Diagram of User



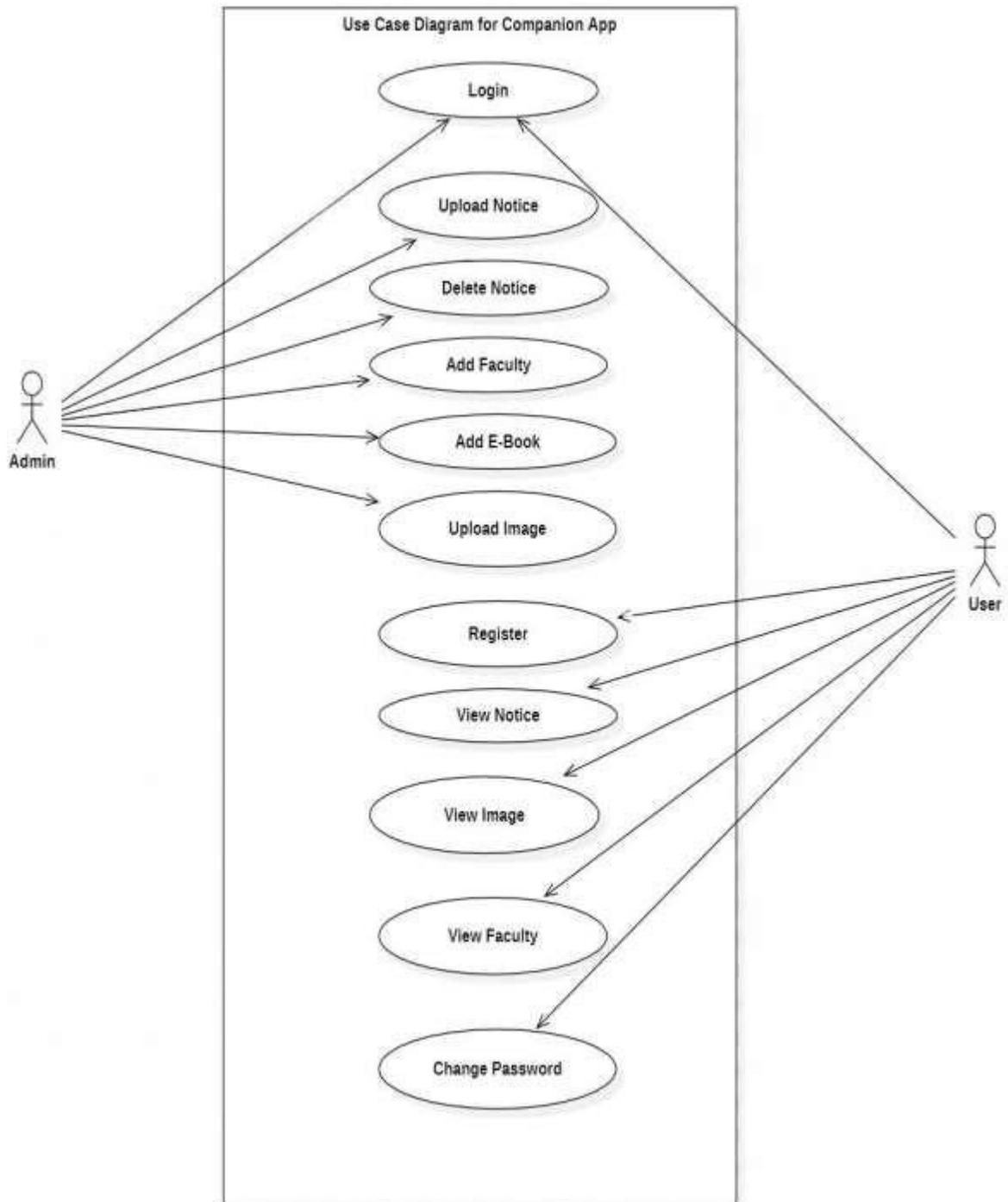
5.3 Data Flow Diagram of Admin



5.4 Flow Chart

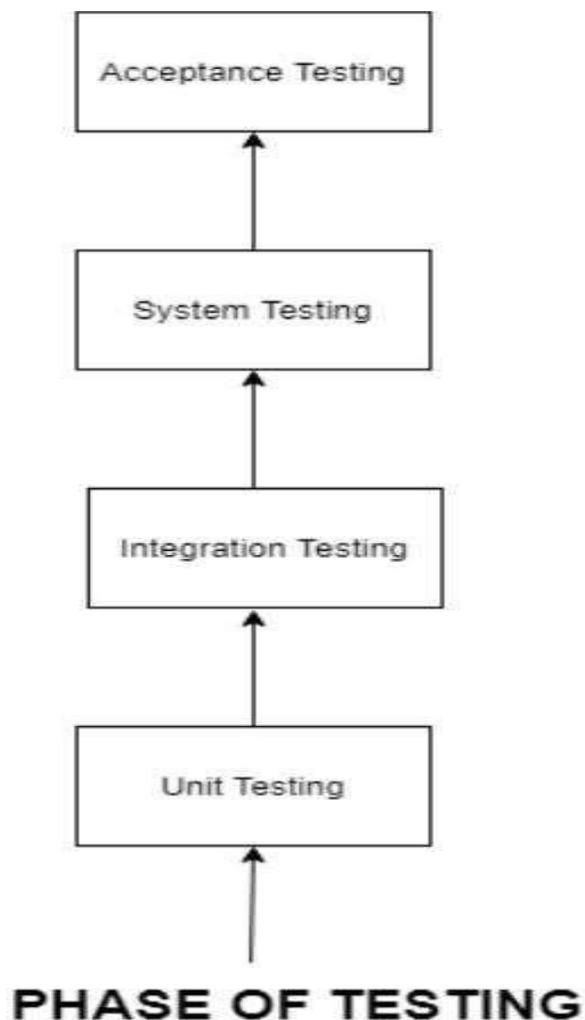


5.5 Use-Case Diagram



5.6 Testing

Testing is that the method of evaluating a system or its elements with the intent to seek out that whether or not it satisfies the required necessities or not. This activity ends up in the particular, expected and distinction between their results i.e. testing is execution a system so as to spot any gaps, errors or missing necessities in contrariety to the particular need or necessities. In order to form positive that system doesn't have any errors, completely different the various levels of testing ways that are applied at different phases of Software package development are-



5.7 Pre-processing

The Preprocessing is nothing however filtering the extracted knowledge before analysis. It includes characteristic and eliminating non-textual content and content that's irrelevant to the realm of study from the information. Of all knowledge, text is that the most unstructured kind and then suggests that we've loads of improvement to try to. These processing steps facilitate convert noise from high dimensional options to the low dimensional house to get the maximum amount correct info as doable from the text. Preprocessing knowledge will contain several steps reckoning on the information and therefore the scenario. Some of them are:

- Tokenization
- Stop words
- normalization
- Casing the character
- Negation handling
- Removing

CHAPTER-6

Result analysis and conclusion

6.1 Points to Remember

We discovered that mobile science learning apps had a number of common design elements, such as technology-based scaffolding, location-aware functionality, visual/auditory representations, tools for creating and sharing digital knowledge, and differentiated roles. Numerous studies referenced a particular theoretical framework, primarily contextual learning theory, and used it to inform the creation of mobile learning environments. Students' fundamental scientific knowledge or conceptual comprehension was the most often measured outcome. As a result of this evaluation, several recommendations were made.

As a result of this evaluation, several recommendations were made. Future research must make use of more recent, readily accessible technology, isolate the testing of particular app features, and create new tactics for employing mobile apps for collaboration. In order to better connect theory and practice, researchers need to be more specific about the relationships between the design elements of their mobile learning environment and the instructional principles. More research is required to evaluate students' higher-level cognitive outcomes, cognitive load, and

skill-based outcomes like problem solving, according to this study, which also pointed out the need for a stronger alignment between the underlying theories and assessed outcomes. Finally, more research is required to determine how science mobile apps may be used with a wider range of consumers and scientific themes.

6.2 End Notes

Smartphones and tablets are more adaptable, practical, convenient, and personal thanks to mobile apps that are created just for these gadgets. Because of the nature of the technological sector, change is faster every day, which also increases the risk of the various technological applications that have been incorporated into daily life. An accurate identification of the target market and a functional study of prospects are crucial for becoming the market leader in mobile technology.

6.3 Limitations

Due to the rapid pace of change, time management is essential for businesses. To succeed, businesses must increase their market penetration more quickly. On the other hand, changes in the acceptability of new products are brought about by the mobile

communication market's dynamic structure; customer behavior appears to diverge from that of traditional product life cycles.

With the quick advancement of technology, new information and communication technologies—which are starting to overtake traditional media as the preferred form—are infiltrating and spreading into every aspect of our personal life. Since traditional media have numerous uses within of them, new media components like the internet, social media, and mobile phones have become necessities for the general public. Mobile phones have ushered in a new era in communication thanks to features that are constantly evolving and removing time and space limitations in the context of new information and communication technologies.

6.4 Advantages

The security of a mobile app is arguably the most crucial feature. Today, we use our phones for more activities than ever before. And as a result, in order to enjoy mobile applications' services, we must provide them with our private information. Email addresses, phone numbers, IP addresses, home addresses, dates of birth, photographs, bank information, etc. may be included in this data.

When a new user registers for your app, they count on you to fully commit to ensuring that their data is secure, free from hacks, and only used for what they intended.

In addition to prompting new signees to create a stronger password that contains numbers, upper and lower case letters, special characters, etc., we also gave our users the option to enable multi-factor authentication. In other words, the simpler you can make it for them to believe in you, the better.

The goal is to utilize these widely recognized design components while maintaining a recognizable app layout. By eliminating the need to guess or try in order to get the programmer to behave how they want, users can save time. A good design is one that is straightforward, hospitable, and practical.

6.5 Outputs

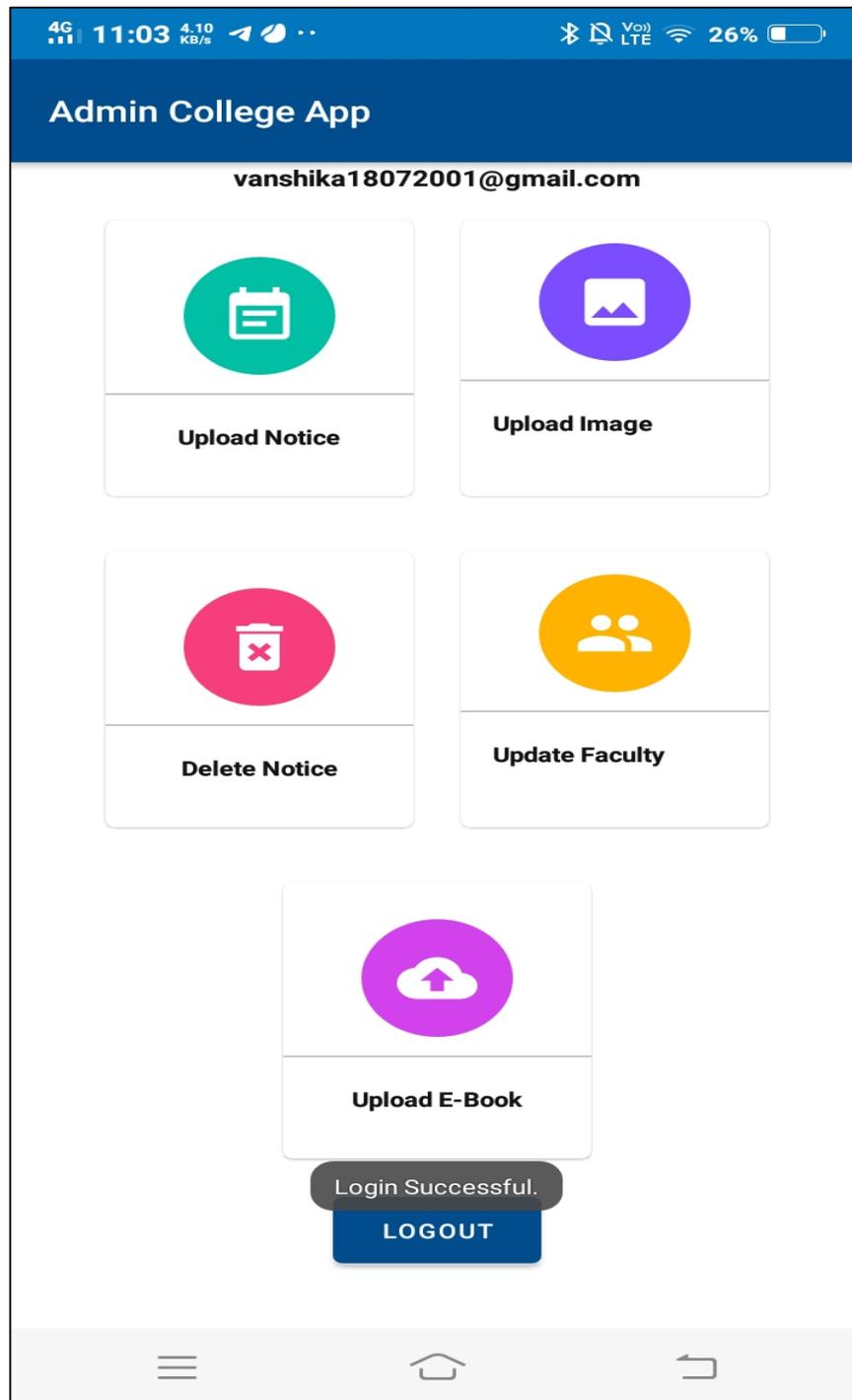
ADMIN (FACULTY) PART

A. Registering and login page

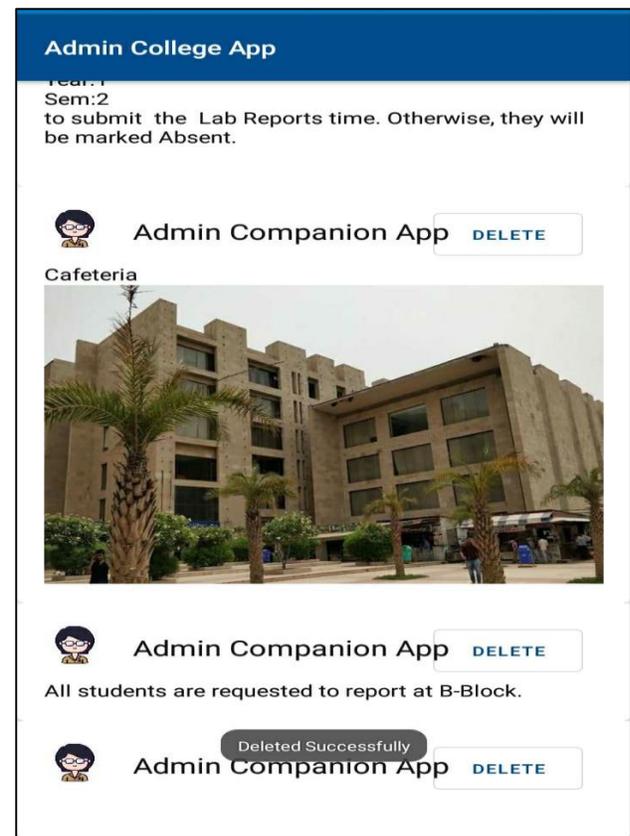
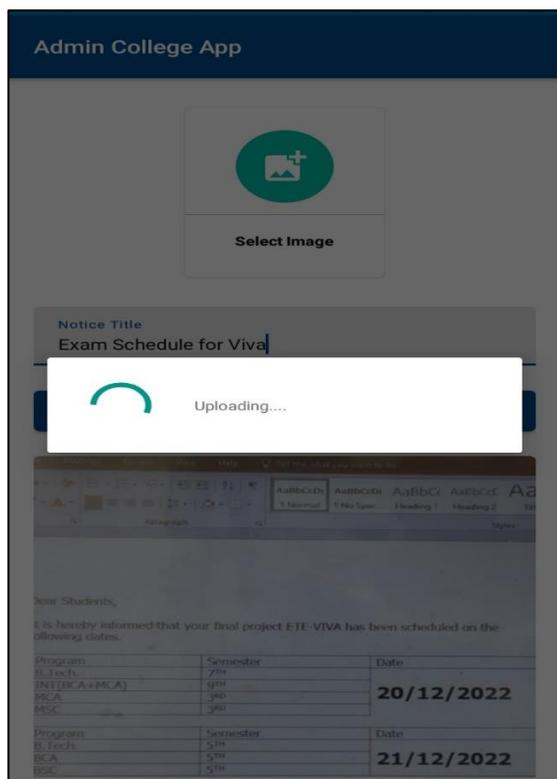
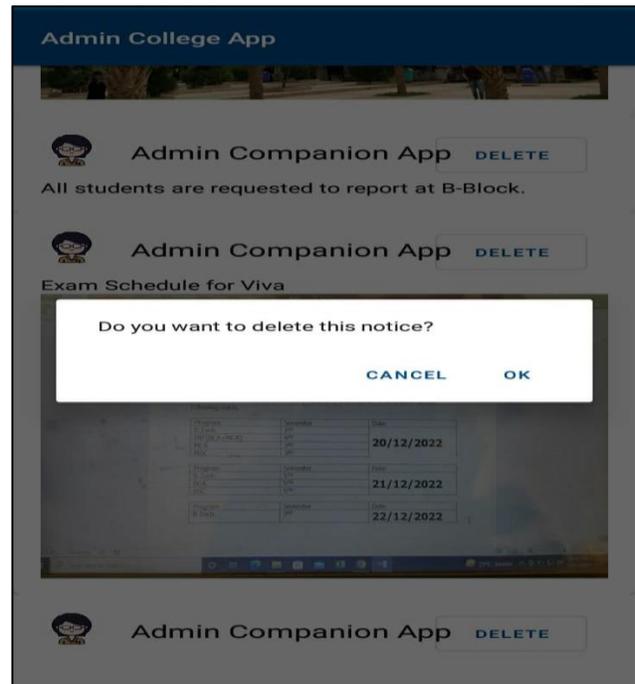
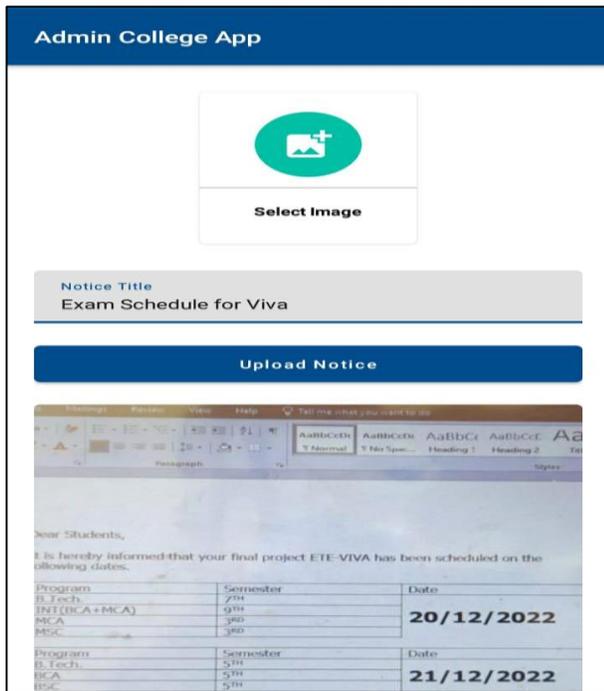
The screenshot shows the Register page of the Admin College App. The status bar at the top displays 4G, 11:03, 3.30 KB/s, VoLTE, and 26% battery. The app title "Admin College App" is in a blue header. The page title "Register" is centered. Below it are two yellow input fields: "email" with the value "vanshika18072001@gmail.com" and "password" with the value "101010". A blue "REGISTER" button is positioned below the fields. At the bottom, there is a link labeled "Click_to_login". The Android navigation bar is visible at the very bottom.

The screenshot shows the Login page of the Admin College App. The status bar at the top displays 4G, 11:03, 9.00 KB/s, VoLTE, and 26% battery. The app title "Admin College App" is in a blue header. The page title "Login" is centered. Below it are two yellow input fields: "email" with the value "vanshika18072001@gmail.com" and "password" with the value "101010". A blue "LOGIN" button is positioned below the fields. At the bottom, there is a link labeled "Click To Register". The Android navigation bar is visible at the very bottom.

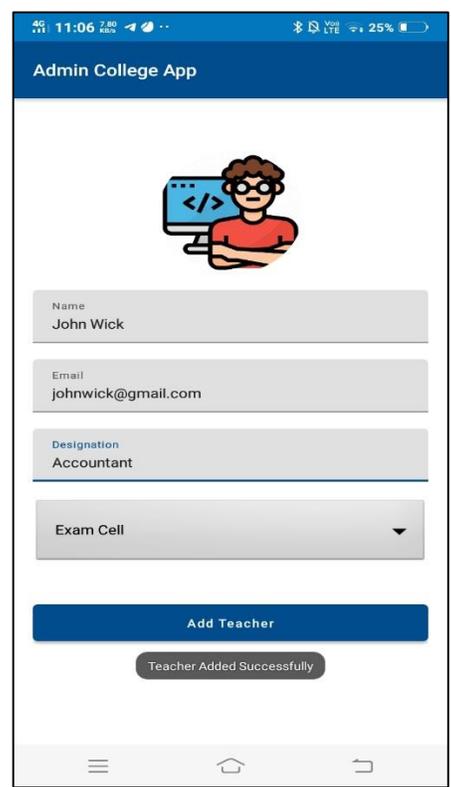
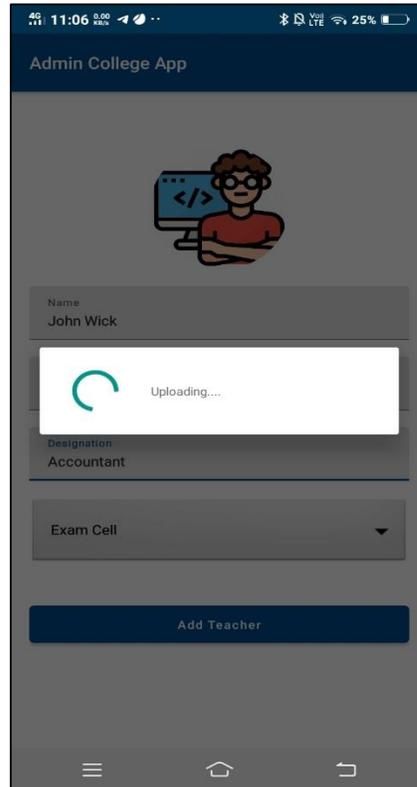
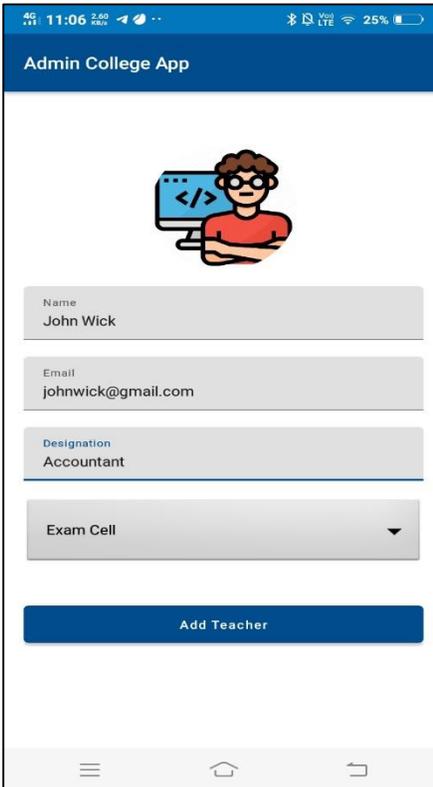
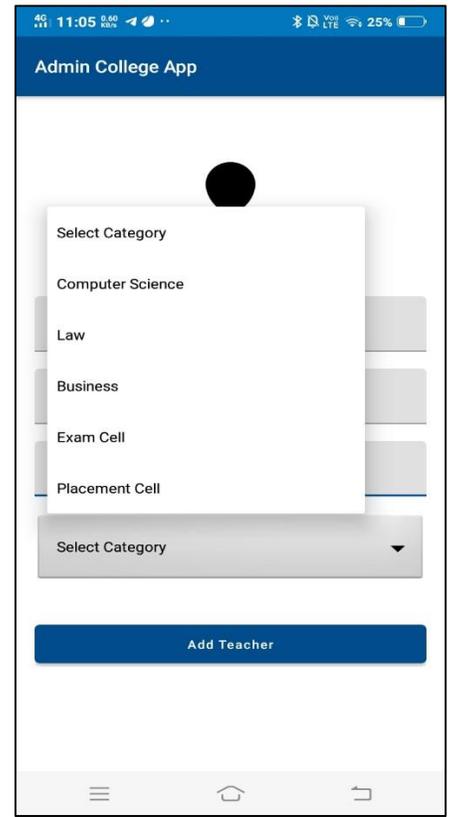
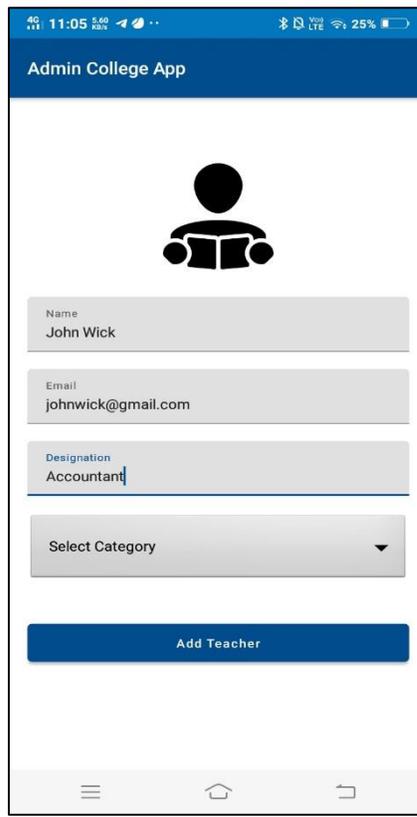
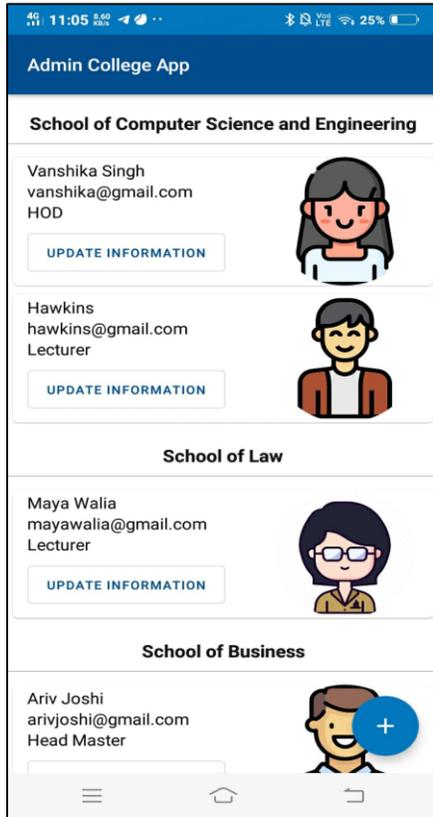
B. App Dashboard



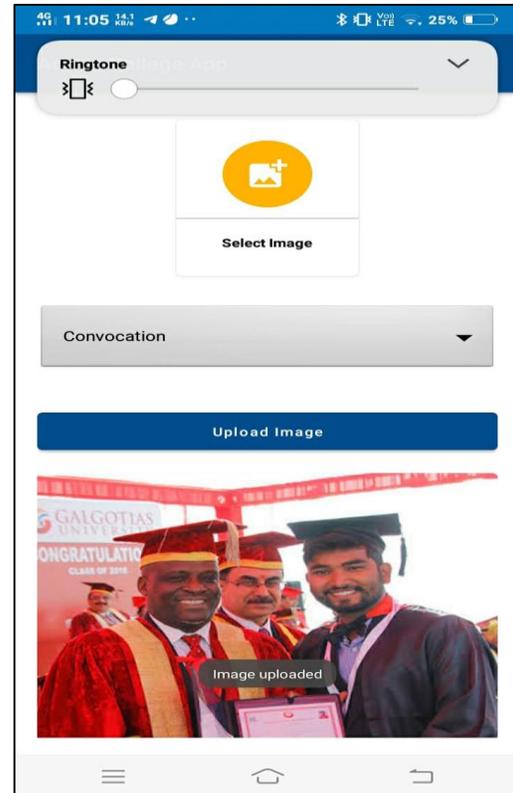
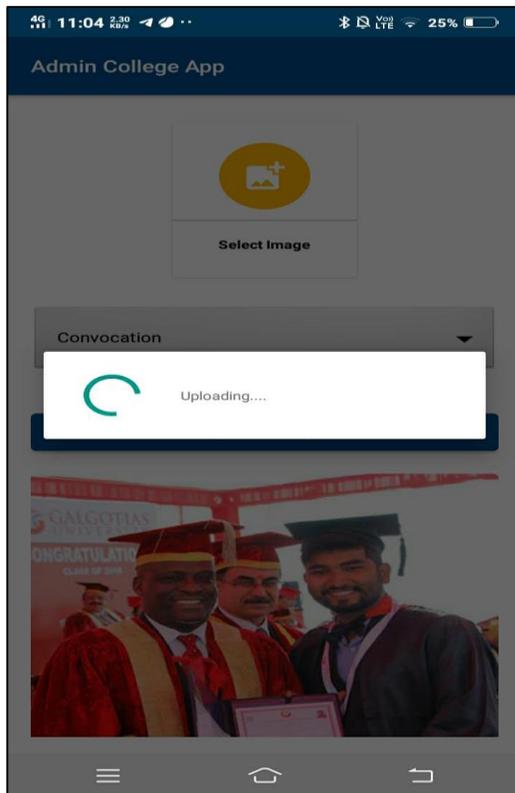
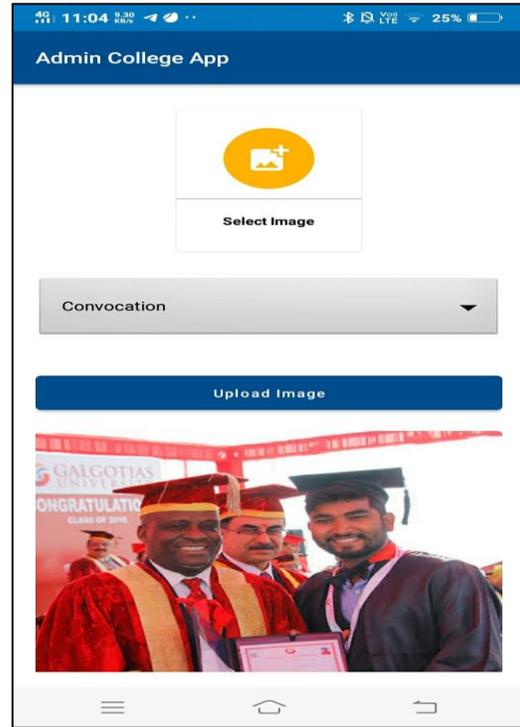
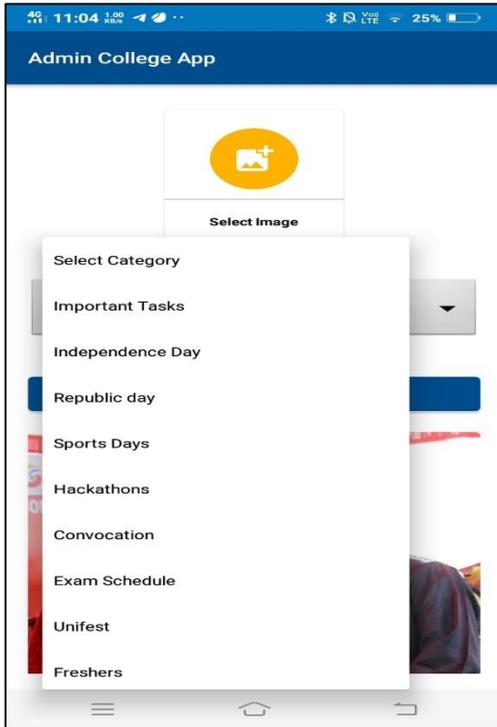
C. Upload & Delete Notice



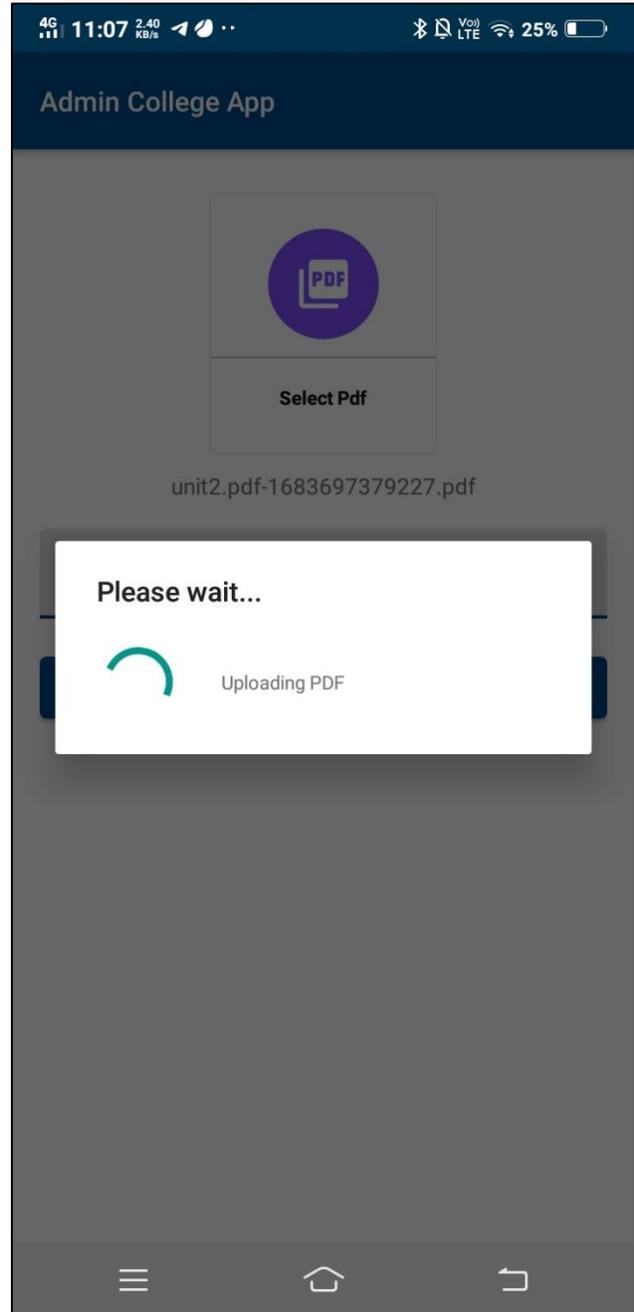
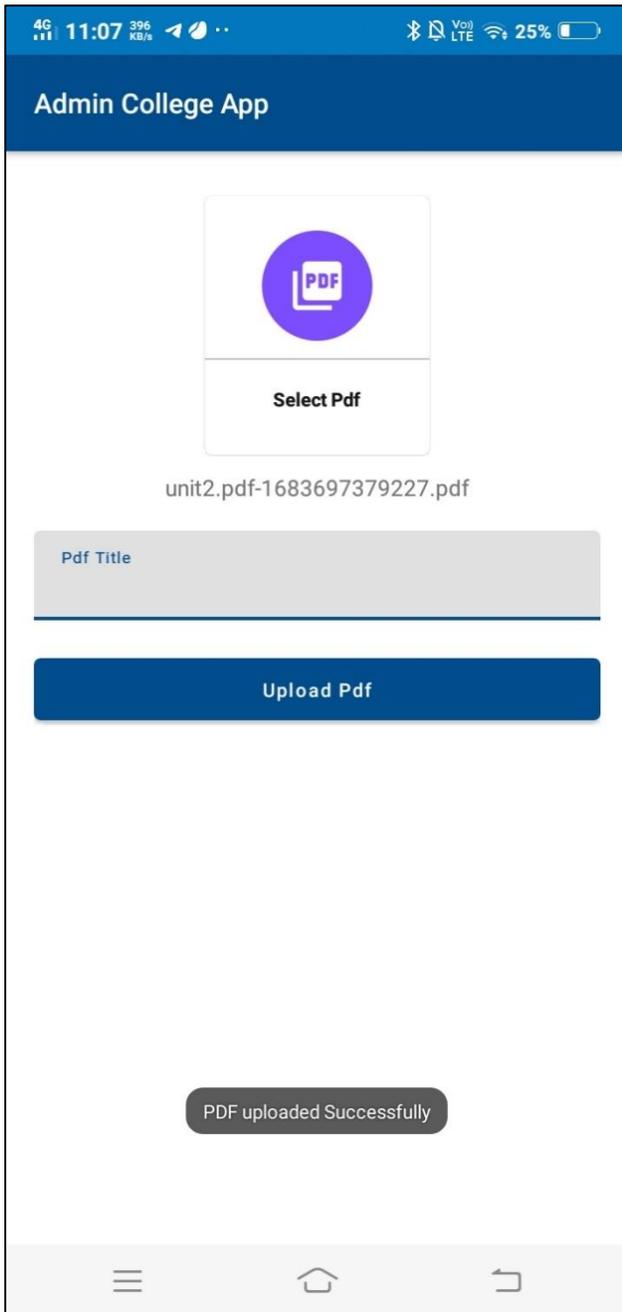
D. Update Faculty



E. Upload Image

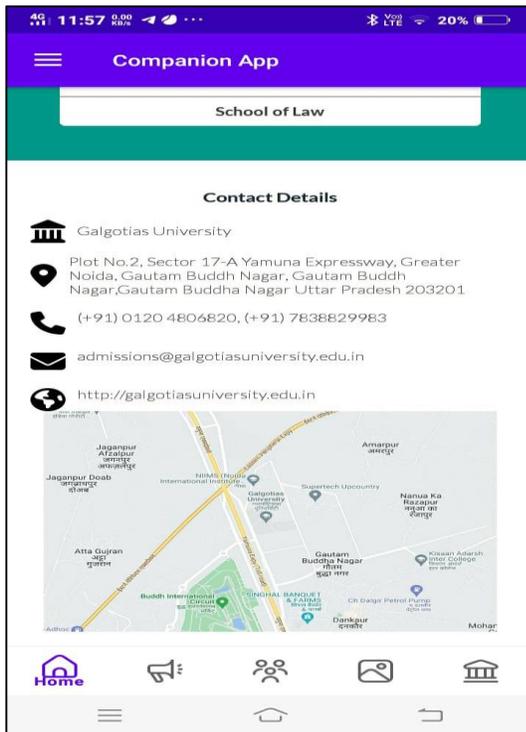
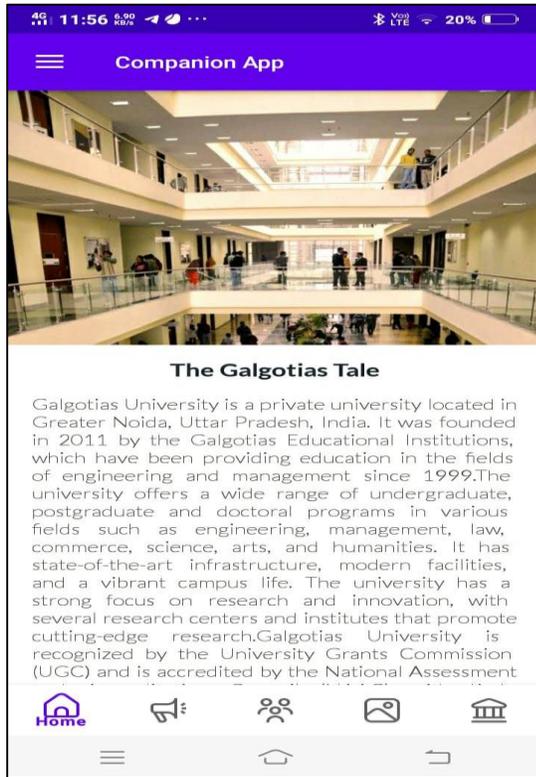


F. Upload eBooks & Notes

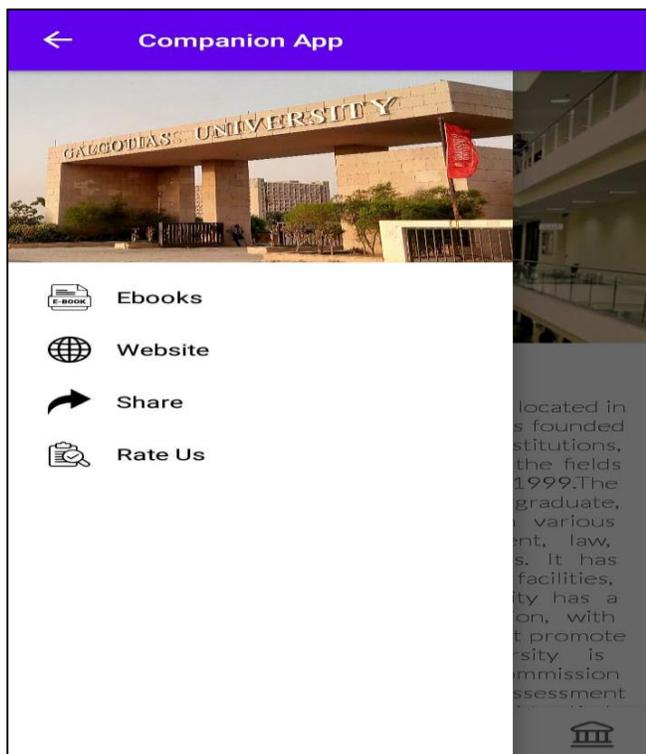


USER (STUDENT) PART

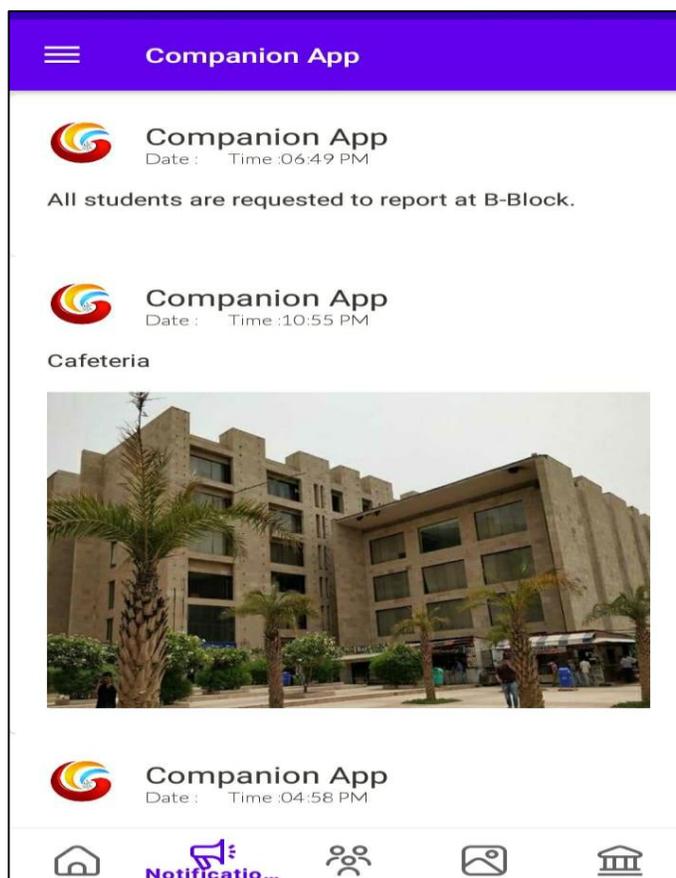
A. Dashboard with bottom navigation



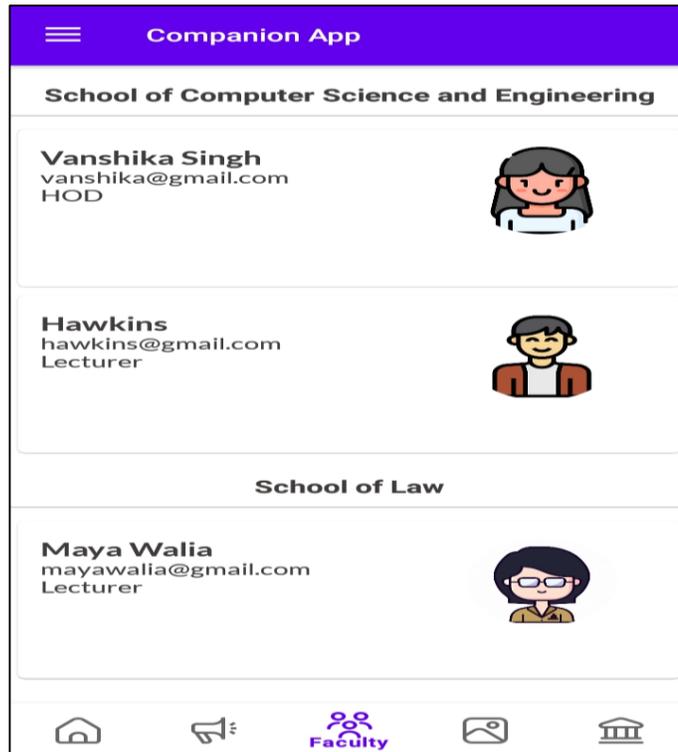
B. Navigation Drawer



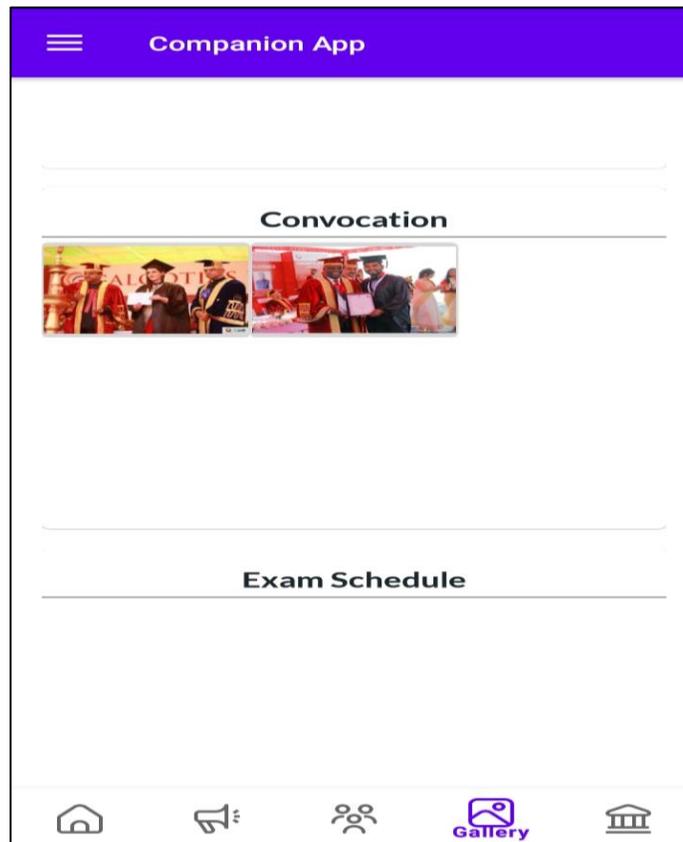
C. Notification



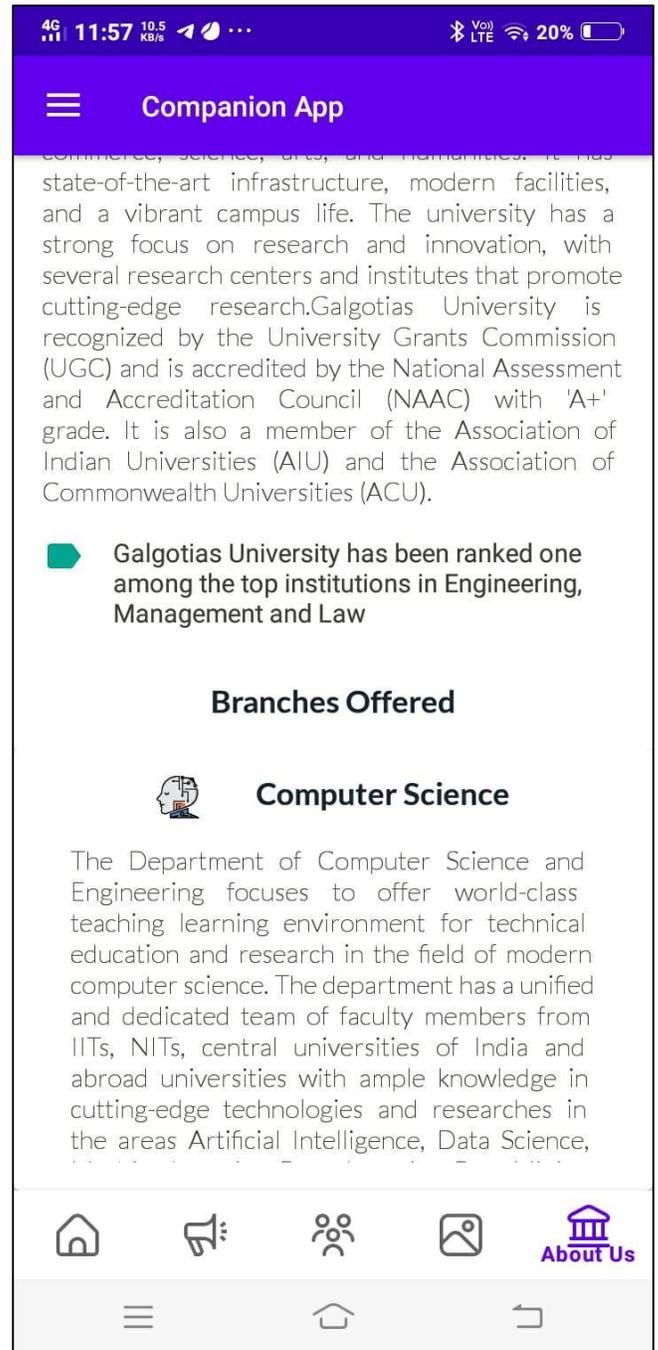
D. Faculty



E. Gallery



F. About Us



CHAPTER-7

Conclusion and Future Scope

7.1 Conclusion

The student assistant app will greatly simplify and speed the management process. It will describe the paper work. The admin, faculty or the student will perform all the task very easily and more convenience way. The system offers reliability, security, time savings and easy control. The proposed system will describes the work time of the admin as well as the faculty. This will brings more perfection to the work. In this article, we used ClevNote and Samsung Notes as a case study and generalized the security characteristics of note-taking applications. Access control and data encryption are two security measures that note-taking applications incorporate into their own system. Since security features prevent the use of app data in digital forensics, a thorough review of each app's security measures is necessary.

Tablets and smartphones are serving as connecting hubs for key aspects of our everyday lives, including business communications, interpersonal interactions, on-the-go purchasing, information searches, and management news about what is

happening in the world. It has fully taken over not only our professional world but also every aspect of our personal lives. So the success of the app depends on what the end user wants, needs, and is aware of. Only market research can reach the biggest number of people and come up with strategies to keep them interested, which is why its importance in the market is expanding.

7.2 Future Scope

Although note-taking is something we are taught in school, during the past ten years, it has undergone significant change. Today, we observe a range of note-taking cultures in the classroom. While some professors encourage students to use laptops in class for note-taking, others are concerned about the distractions that may be caused by what is on the other side of the screen. Our App provide a solution for this type of problem.

This Android Application will be very simple and it will also simplify the and speed up the result preparation and management process.

B. Students do not need to check the notice board every day and every one will stay updated.

This project will cater facilities to all the existing versions of the system.

For rapid thought capture, use the Notes app. You may construct checklists, add sketches and pictures, and even scan documents. Additionally, thanks to iCloud, your notes are always up to date across all of your devices.

Password less authentication is the future. Gartner predicts that 60% of large and global enterprises, and 90% of midsize enterprises, will implement password less methods in more than 50% of use cases.

We also looked at the platforms on which we would be releasing our software. The two most popular app platforms are iOS and Android. iOS is a more widely used and safe platform, whereas Android has more users. If future funding becomes available, we will create the software for both the iOS and Android operating systems in order to expand our user base. We only created it on Android since we lacked sufficient funding. We will be able to reach more users if we design our software for both platforms. Due to a limited budget, we chose and built the app for the most widely used platform. By doing this, we could master one platform and, if there is enough funding, launch our app on more platforms.

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With Regards
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