INTERACTIVE CLASSROOM

Janhavi Jagtap*1, Shazia Shaikh*2, Rohini Ghayal*3, Pranay Jadhav*4, Pravin Hole*5

*1, 2, 3, 4BE Computer Engineering Student, Terna Engineering College, Nerul, Maharashtra, India.

*5Professor, Dept. Computer Engineering, Terna Engineering College, Nerul, Maharashtra, India.

ABSTRACT

A lot of us endured difficulty with online platforms that were employed to conduct lectures during the Coronavirus epidemic. During this phase, both the educator and the tutees faced problems with communication. Academic curriculum lagged. Taking tests and assigning assignments became troublesome. The solution proposed in this paper consolidates different functions available on different platforms on a single app. Interactive Classroom is one such app in which tutees and educators can communicate with each other, produce assignments, create tests, attempt quizzes, and break dubieties. Tutees can join different subjects according to their semester, ask doubts, solve quizzes, share resources, etc. The main thing of this undertaking is to ensure that all of the services or features that scholars and preceptors anticipate are available on one platform.

Keywords: Interactive, virtual classroom, educators.

I.   INTRODUCTION

As the change in generation, it is increasing the dependence of scholars on web sources, it is becoming important to ground them to base knowledge required to progress further in the curriculum. A platform is needed to provide them with this "must" required knowledge and also take into consideration the problems they face while moving up the ladder. During the epidemic, platforms similar to Google Meet, Zoom Meetings, and others were tried by preceptors and scholars to use different features for classroom conduction and resource sharing. However, these notable platforms lacked some features that were accessible on other platforms. Educators had to use zoom meetings for video conferencing, google classroom for assignment grading, google forms for quizzes, and Whatsapp/ Telegram for doubt solving and there was no integrated solution for validating attendance. This leads to keeping track of different accounts on several platforms each with a specific use case by educators. Students faced a similar issue of keeping track of different tasks that were to be completed on different platforms making it unintuitive and hassle. a virtual classroom platform is a unique platform that can be utilized by educators and students all around the globe for getting all the different features of different platforms on a single platform. Interactive Classroom is an online platform that permits educators and students to attempt hornenxim-related undertakings. Students can enroll their participation carefully relying on the course, bringing a paperless environment it. The platform consists of two modules as far as the user is concerned, Educator and Student. Educators can make a virtual classroom for a particular subject and share the homeroom class code with students to add them to that study. They can provide addresses utilizing google Meet and add the meet code to the site for students. They can likewise add tasks, tests, and surveys for students, and educators can evaluate and grade the tasks. Educators can also download excel files including statistics on student assignments and attendance. Educators can also answer the inquiries that are presented by students in the chat section of that study room. Students can join classrooms utilizing different class codes that their educators had given them. Students can utilize QR scanners to mark their attendance during particular hours of class. Interactive Classroom allows students to submit tasks, tests, and quizzes. Students will just ask their doubts in a chatbox and can create their chat rooms, which would be utilized by different students to share resources and knowledge.

II.   LITERATURE REVIEW

Brightspace[1] – Large numbers of educators and learners across the world rely on the Brightspace learning management system(LMS) to deliver worry-free technology that allows them to prioritize the requirements of their students. Educators and instructors can create interactive training courses and assignments using Brightspace's learning Environment. Content developers can utilize photographs, recordings, sound documents, and other computerized content in their courses thanks to mis solution's multimedia environment. Its analytics tool makes it easier to track performance.

Blackboard Learn [2] - Blackboard Learn is a Web-based learning platform with a course that provides a versatile plan that works with reconciliation with the students, data frameworks, and confirmation components, as well as an adaptable open design. It may very well be introduced privately, facilitated by Blackboard ASP Solutions, or conveyed through Amazon Web Services as SaaS(Software as a Service). *Its primary goals are to include online aspects into face-to-face courses and to create entirely virtual courses with few or no personal interactions. The problem which is faced while using Blackboard Learning is that many educators had struggled while deleting a manually added course.

GoToMeeting [3] - GoToMeeting is a website that communicates a host PC's work area view to a gathering of PCs associated with the host through the web. High-security encryption and discretionary passwords are utilized to safeguard information transmit n. Transmission can be passed using exceptionally prohibitive firewalls by joining a web-facilitated membership administration with programming introduced on my host PC. The per-customer fee is unreasonable in GoToMeetings which is one of its major drawbacks.

Zoom [4] - Zoom is a cloud-based peer-to-peer video conferencing programming stage that conveys video communication and online visit administrations for remotely coordinating, working from home, distance instruction, and social contacts. Students/teachers can use Zoom meetings to present/share notes or presentations with the class, and teachers can use the host controller to control the activity of a specific meeting. The most important drawback concerning Zoom is that it does not work on all phones, and this limits our employees with low-end devices that can not access the meetings based on that they tend to remain uninformed about some key joints that stipulate during the execution of the same.

III. LIMITATIONS OF EXISTING SYSTEM

1. No admin control, you can either be an educator or a tutee.
2. There is a lack of in-person interaction.
3. Digital Literacy poses a problem for beginners.
4. Lack of motivation among students in reading learning

IV. PROPOSED SYSTEM

Interactive Classroom is a virtual classroom platform. When a stoner first visits the platform, he or she must register on the website for the part (Educator/ Student) that they will play. The interactive classroom ensures that each stoner has their unique identification. Still, they will be presented with a platform designed just for scholars, which allows them to join multiple subjects if a stoner is a pupil. As shown in fig.4.1. if preceptors log in, they would be suitable to produce classrooms/ converse terms, assess and grade pupil assignments, take pupil attendance in the classroom, conduct quizzes, and last but not least, answer dubieties posed by scholars in converse apartments. Interactive Classroom's main end is to make preceptors' and scholars' jobs easier and more accessible. Interactive Classroom has several functions, including assignment and quiz creation and submission; the manual-based attendance marking which gives it a distinct identity, keeping a record of classes, assignments, and grades as well as communicating immediate feedback. Scholars can keep track of the preceptor's accouterments and classroom assignments.
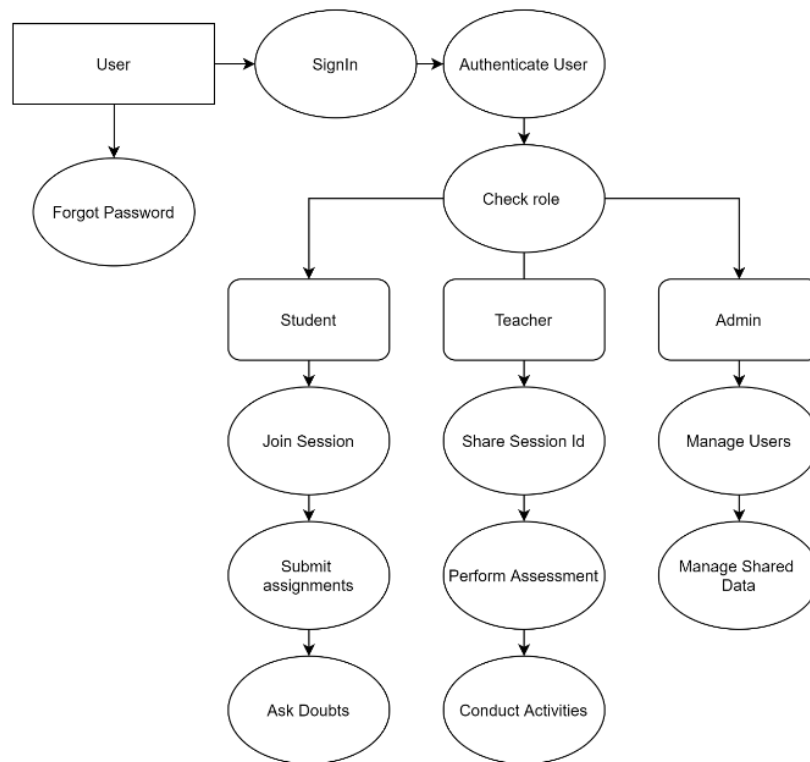
Fig.-4.1: System Flow Diagram

V.   OBJECTIVES OF INTERACTIVE CLASSROOM

Interactive Classroom is a virtual classroom and literacy platform developed for educational institutions that aim for online class conduction, attendance marking, and resource sharing tasks. Manual attendance helps teachers to mark the attendance by surveying the population of students in the class and also helps preceptors that no fake attendance is carried out as the record is paperless. An assignment given by the preceptor comes with a specific description and deadline m that scholars find easy to understand and submit the assigned task in a specified timeline. Preceptors can produce and conduct quizzes as well after joining a subject. A converse room(i.e. subject) for each class is created automatically through which any queries/ dubieties related to the assignment or a subject can be raised by the scholars and preceptors can answer their queries. Preceptors can produce a unique code to match through which scholars can join the online session.
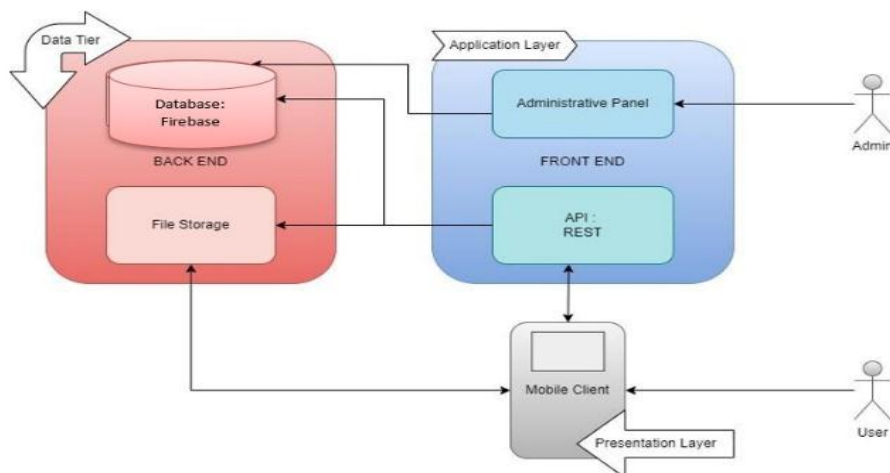
Implementation

Fig. 5.1: System Architecture

The above fig 5.1. illustrates the System Architecture of the "Interactive Classroom" wherein a user signs in as

an admin, preceptor, or tutee. Tutees can join a subject using a unique code and each user can carry on their own unique set of features. The technologies we used are Android Studio, Java, and Flutter.

Android Studio:

It is the official Integrated Development Environment for Google's Operating System built specifically for Android development.

Java:

Java is a high-level, class-based, object-oriented programming language. It is convenient and relatively easy to develop mobile applications in Java.
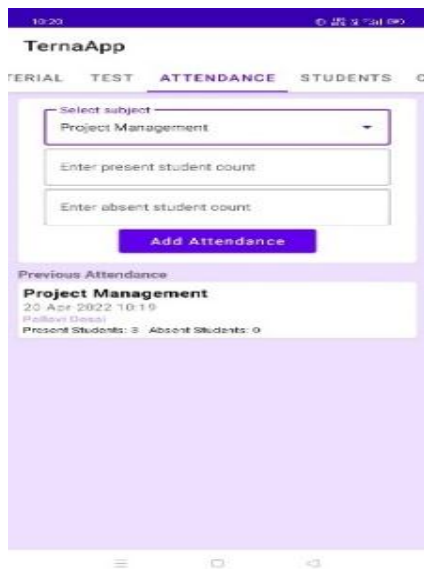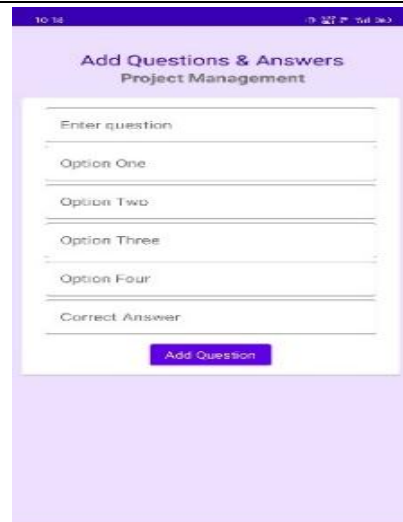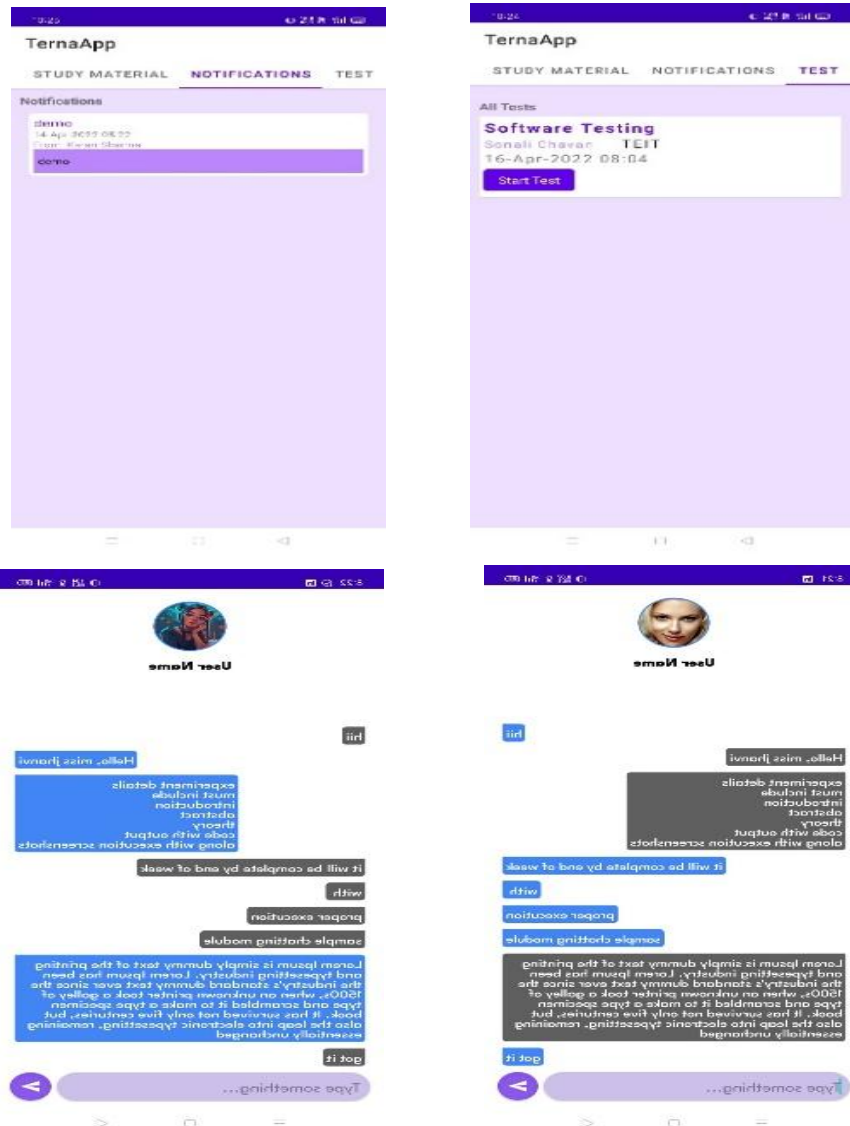
Firebase:

Firebase is a Google-backed application development software. It provides a tool for tracking analytics, reporting, and fixing app crashes. There are also certain unique features provided by Firebase like multi-platform authentication, cloud messaging, etc.

VI.   RESULT
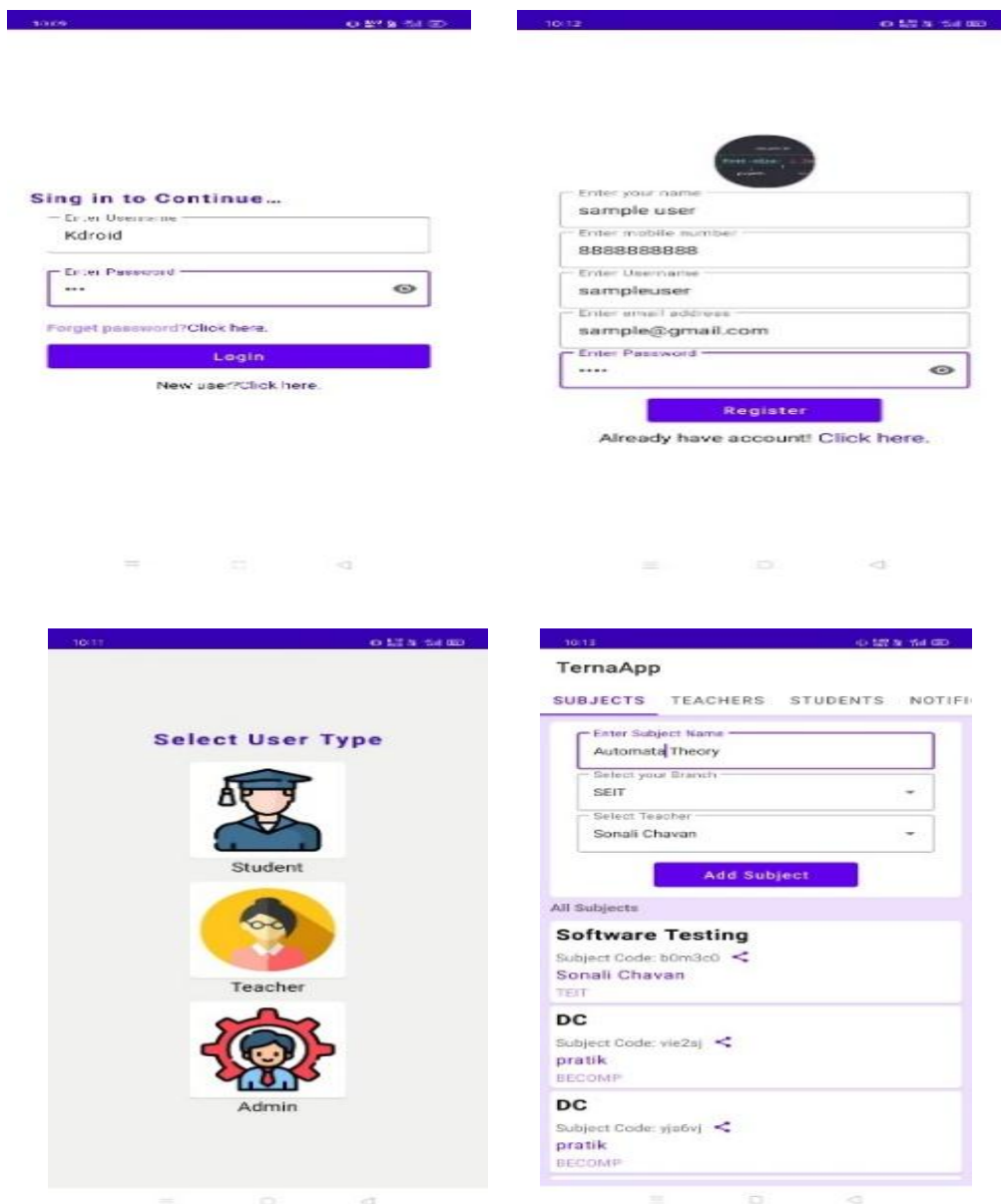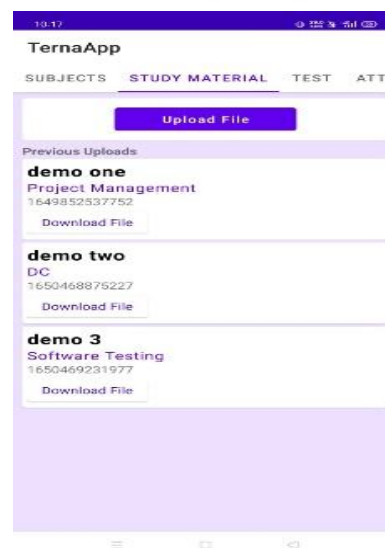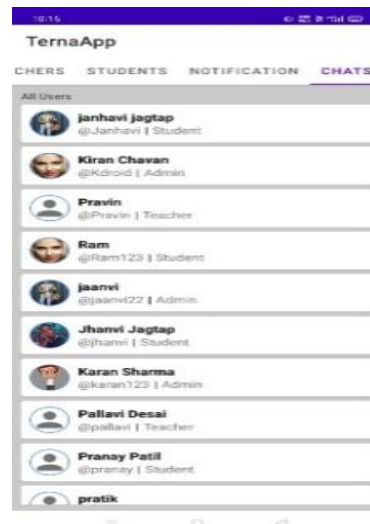
VII. CONCLUSION

In this modern world where information is disseminated quickly via the internet, the virtual system is a fundamental platform for college students as they can not only stay updated with the course work but rather get present alerts relating to their day-to-day tasks. Thus, educators can make right straightforward interactions with students outside of class hours and can quickly brief them about issues concerning their coursework. The Interactive Classroom platform is an effective solution for an integrated and simple virtual classroom and learning management system.

VIII. REFERENCES

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