COLLEGE CONNECT CHAT APPLICATION

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Abstract - Time and technology improvements have necessitated faster information dissemination. Unified, customized, and intelligent information applications will become more crucial in the future. Their professional as well as personal lives. Two-way communication devices, pagers, personal organizers, screen phones, and other similar devices are examples of such gadgets. College Connect application is an application that enables you to enroll in college. Students, in particular, have a strong grasp of proper organization. Login is provided if necessary. Anyone can utilize this application. Students make use of smartphones. Students will be able to keep track of their class assignments, examination schedules, and attendance using the present system. Students will be able to keep track of their college events such as workshops, conferences, and paper presentations in the planned system. An android-based college campus was designed to transmit the information. Updates will be provided by the application for college campus performance.

Index Terms – **Android studio, Mobile application, College campus, Two-way communication, College connect**

I INTRODUCTION

As we all are suffering due to the ongoing Coronavirus pandemic situation, it affects everyone in the cities. Mainly, it is very difficult for students to learn and gain knowledge. It is very hard to stay in contact with faculties and professors. Earlier, if students have any queries, they go to college and contact staff to get their problems solved. But due to this pandemic situation, it is difficult for students to get their queries to get solved. It takes time to clarify the doubts and communication between staff and students isn't that much efficient. Pandemic becomes the halt to this approach. Even college management suffers difficulties to convey important notices or important messages to all students as all the college faculty member and staff does not use the same messaging application. So alternative method is created to overcome this difficult situation for students and staff. Hence, this android-based College Connect Chat Application is where all the students and faculties in the college can stay connected together on a single platform. So, it helps students be in touch with the faculties and makes it possible to get their problems solved instantly. Also, this android-based application makes the student stay in contact with fellow mates and professors without being present in physical mode. So, the "College Connect Chat App" has been developed to overcome the problem which arises between students and staff. So, we create a mobile app collaboration teaching management app, even for laboratory classes. So, it can provide an easy platform for interaction between students and staff. It feels like a virtual mode of a classroom with every facility. Besides being present in the physical mode, it provides everything which we want in the face-to-face classroom. It is easy for the management to convey every message to all staff and students efficiently. Communication done in this app is more efficient than communication done in the physical classroom. This virtual system is a kind of forum where students and staff come and share their views in this. There are three main sections in this virtual app. They are Admin: Admin is responsible for organizing the application. They are also responsible for creating profiles for students and staff in the college. Admin manages the application and solves future problems. Admin posts every event, workshop, conference, webinars, paper, presentation, time table in this app for the Student and Staff. Student: Student can check their attendance as well as mark list in their profile Staff: Staff can upload the attendance of students. They also share their file which can be used by students.

II RELATED WORKS

Ritika Dhiman et al. [1] have presented an Android application for the College Management System that provides a simple platform for staff and students to communicate. This work includes a unique and valuable function called raising inquiries, which allows students to publish their questions and have anyone respond to them. A report option is also provided to keep a watch on the wrong posts and notify the administrator of the posts and possible actions. It also provides customers with a support option to help them locate information on labs, lecturers, and lecture halls. Breeze also gives a platform for users to check their attendance schedule and agenda on a daily basis. Because Breeze software is built on the Firebase online database technology, it operates smoothly. It offers both safe and Facebook and Google login options. The database that is used in the Breeze app is one of the techniques that are employed in the project. Google's Firebase is an online database system and a platform for developing mobile and web applications. It started out as an independent corporation in 2011. Apart from the communication between college teachers and students, the authors of [2] recommend that college lectures, workshops, and webinars can be updated in the app. So that it will be easy to keep track of all of the College's events. According to the model in [3,] mobile device technology and use have

risen at an unprecedented rate in the last decade. As a result of the increased consumption, new services have emerged. According to several studies, students use modern technologies to learn and achieve a variety of tasks. Social networking is one of these services. That shifted our perspective on mobile devices. Students routinely communicate with one another via social media. The project investigates how university students use social media and proposes a mobile-based intra-campus student social network that incorporates social media into the classroom. Senthil Kumar [5] has suggested that E-learning is a method of learning that combines formalised education with the use of electronic resources. While education can take place in or outside of the classroom, E-learning relies heavily on computers and the Internet. E-learning is a network-enabled transfer of skills and knowledge in which a large number of people receive education at the same time or at various times.

III MATERIALS AND METHODS

The college connect chat app has a variety of features that the college administration, faculty, and students can utilise to increase their contact. It simplifies the administration of attendance percentages, class schedules, and doubt-clearing sessions.

Materials Used

Android Studio:

Built on JetBrains' IntelliJ IDEA software and designed exclusively for Android development, Android Studio is the official integrated development environment (IDE) for Google's Android operating system. In 2020, it will be offered for download or as a subscription-based service on Windows, macOS, and Linux-based operating systems. It takes the position of the Eclipse Android Development Tools (E-ADT) as the primary IDE for developing native Android apps. Android Studio is a unified development environment that allows you to create apps for Android phones, tablets, Android Wear, Android TV, and Android Auto. You can break down your project into functional components that you can design, test, and debug independently using structured code modules.

Devices:

A laptop, often known as a laptop computer or notebook computer, is a small, portable computer featuring a screen and an alphanumeric keypad. Although 2-in-1 PCs with a detachable keyboard are sometimes marketed as laptops or as having a laptop mode, laptops traditionally feature a clamshell form factor with the screen mounted on the inside of the higher lid and the keyboard mounted on the inside of the lower lid. Laptops are suited for mobile use because they can be folded shut for travelling. Its name comes from the fact that it was designed to be used on a person's lap in the first place. Laptops are now employed in a wide range of situations, including work, school, gaming, web browsing, personal multimedia, and ordinary home computer use.

Gradle build tool:

Gradle is a software development tool that is noted for its versatility. The construction of applications is automated using a build automation tool. Compiling, linking, and packaging the code are all part of the construction process. With the help of build automation tools, the process becomes more uniform. It's well-known for its ability to create automation in Java, Scala, Android, C/C++, and Groovy. Over XML, the programme supports the groovy-based Domain Specific Language. Gradle is a tool that lets you create, test, and distribute applications across several platforms. The programme is widely used to create software and major projects. Gradle combines Ant and Maven's advantages while minimizing their disadvantages.

Java:

Java is a general-purpose, object-oriented programming language based on classes that is supposed to have fewer implementation requirements. It is a computer platform for application development. As a result, Java is quick, secure, and dependable. It is widely used in laptops, data centres, game consoles, scientific supercomputers, cell phones, and other devices to construct Java applications. The Java Platform is a set of technologies that help programmers create and execute Java programming applications more effectively. It includes an execution engine, a compiler, and a library collection. It is a collection of computer software and specifications. It is a collection of software and specs for computers. Sun Microsystems developed the Java platform, which was eventually acquired by Oracle Corporation.

Firebase:

Backend-as-a-Service provider Firebase (Baas). It offers a variety of tools and services to assist developers to create high-quality apps, expanding their user base, and making money. It is based on Google's technology. Firebase is a NoSQL database application that saves information in JSON-like documents.

IV.IMPLEMENTATION

For the creation of the college connect app, the requirements consist of a laptop or a computer device that has a fast processor. The RAM must also be higher. The software that needed to be installed in Android Studio. Based on IntelliJ IDEA, Android Studio is the official Integrated Development Environment (IDE) for Android app development. Next, the project template is selected after clicking the Empty Activity and the next button is selected. Then the configuration of the project is done. The name field is changed to College Connect Development. The project's package name is selected "com.college.college connect". The project is saved in the desired location with the save option. Java or Kotlin has to be selected in the Language Drop–down menu. Java is selected for this project. The lower version of Android is selected to support the Minimum SDK field. The library

android.support.libraries are selected for the legacy library support. The other options are the same as they are. Then Finish is clicked for the creation of the project window. After the processing time, the main window of the Android Studio will appear. The main files that have to be written are MainActivity, this is the most important activity. It's your app's starting point. The system launches an instance of this Activity and loads its layout when you develop and run your app. The next file is activity_main.xml, this XML file specifies the user interface layout for the activity (UI). AndroidManifest.xml is the next file that is configured, the manifest file defines each of the app's components and identifies the app's basic characteristics. The Gradle scripts have to be configured, there are two files with this name: "Project: College Connect Development" for the project and "Module: College Connect Development.app" for the app module. Each module has its build.gradle file, but there is only one module in this project. To manage how the Gradle plugin creates the project, use the build.gradle file for each module. See Configure in build for further information on this file.
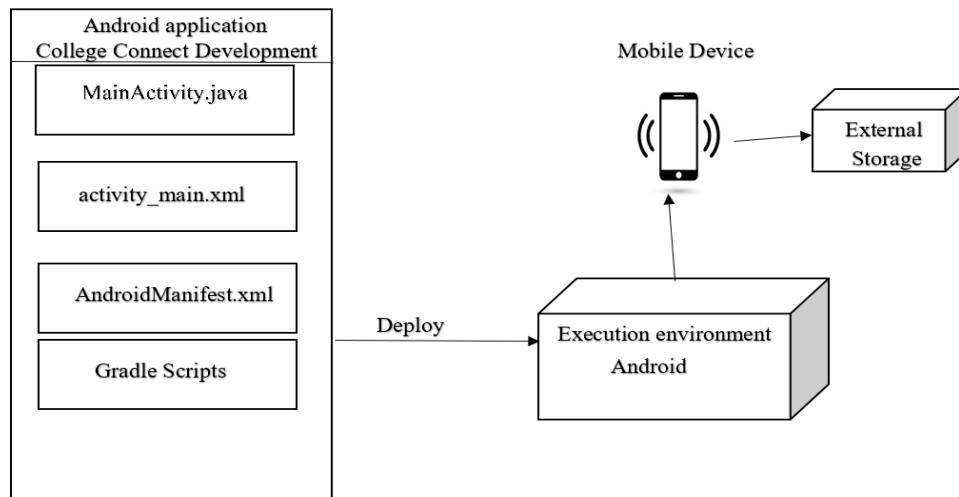

Fig.1 Block diagram of the implementation of the college connect application

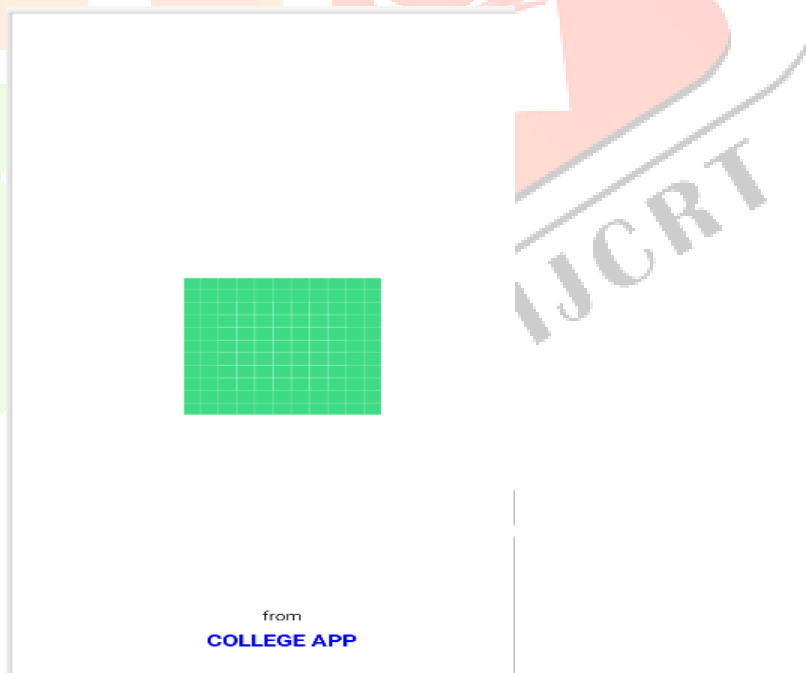## V RESULTS AND DISCUSSION

Fig 2 The splash screen of the college connect application
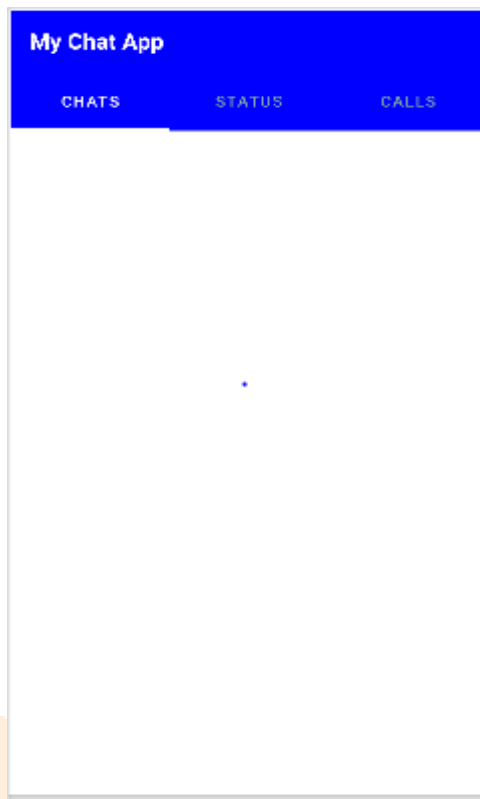
Fig 3. The chat screen of the college connect application
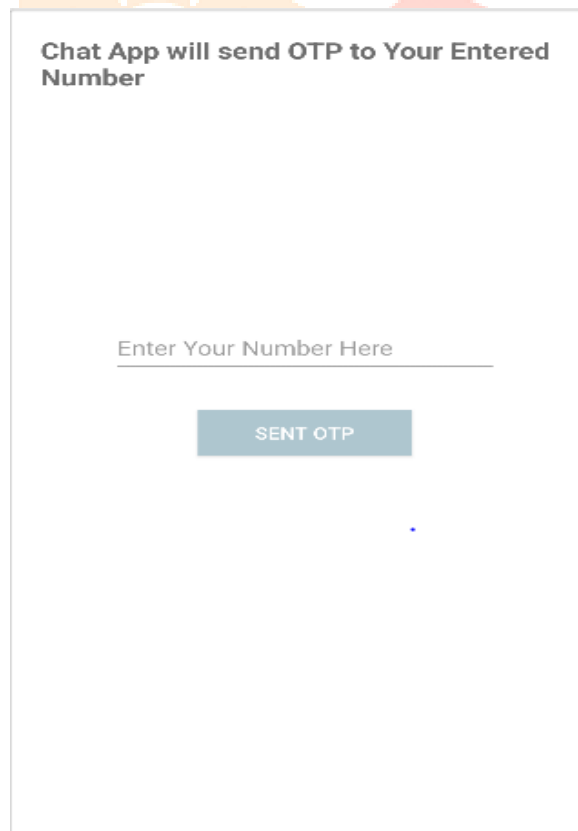

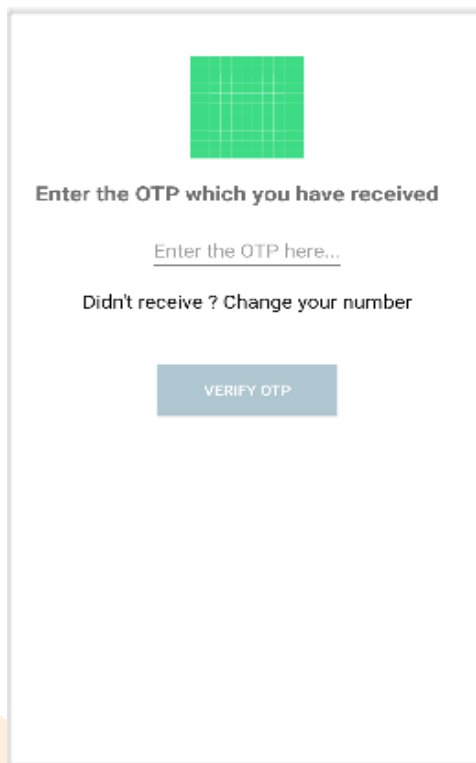Fig. 4 The authentication screen of the college connect application

Fig 5 The OTP Validation screen of the college connect application

The college connect chat application provides features like the login of admin, teachers, and students. It allows students to attend the classes and other events like webinars, seminars, and conferences. This project allows to attend competitions and attend online virtual laboratories. It allows chatting with the faculties and other students. It also allows the creation of groups. It has the feature of sharing the class notes or a file to all the students by the faculty. It checks for the proper authentication of the login of the student and staff. So that there can be no unauthorized person entering the app. These are the features of the College Connect App

VI CONCLUSION

The idea is only a modest attempt to meet the educational system's requirements. There has also been a variety of user-friendly coding added. This application proves that it satisfies all of the criteria. For paper-based chores, the College Connect app provides a self-contained solution. This is under the direction and supervision of the administrator. Manpower is reduced as a result of this initiative. It provides up-to-date information to instructors and students whenever they need it. The information stored on the university database server can assist college administrators in making educated judgments. As a result, a college administration system based on Android, is ideal. The required information will be available to all administrators, authorities, teachers, students, and guardians.

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