

EDMEET – An Android Application for Teaching and Learning

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Abstract— *There was an outbreak of Corona virus in 2020. World Health Organization announced Covid-19 outbreak as worldwide pandemic on 11 March, 2020. The pandemic led to lockdown in the whole world. The schools, colleges, courts, restaurants, stadiums, parks and all other places were closed. The education of the students was at halt. Hence there arose the need for continuing the classes in order to avoid the loss that was incurred by students. At present time, the use of smartphones has increased rapidly and it has provided a way of being in touch with everyone online. Various schools, colleges and universities adopted the online mode of teaching. “EdMeet” is an android application that allows teachers to take share resources online in a structured manner within the folders provided in the application.*

Index Terms— *Covid-19 pandemic, Education, Lockdown, Online Class.*

I. INTRODUCTION

The Corona virus outbreak began in Wuhan, China in December, 2019. This infectious disease had its spread in more than 180 countries. The novel Corona virus is officially named as Covid-19 pandemic by the WHO. Covid-19 spreads mainly by droplets produced as a result of coughing or sneezing of a Covid-19 infected person. This can happen in two ways: Direct contact or indirect contact. Owing to this situation, “Social Distancing” was a preventive measure taken by the government to avoid the spread of Covid-19. Social distancing means to avoid gatherings, maintain safe distance, stay at home, avoid physical contact and avoid touching surfaces. To avoid the spread of Covid-19, the governments across the world declared lockdown. People were insisted to stay at home and avoid gathering in public places. This situation affected the economy of the country and financial

conditions of the people. Hence companies adopted the policy of „Work from home“ which allowed its employees to work at ease by staying at home. In this phase, the education of the students was also at hold. There was a need of continuing the classes of students to avoid the loss of time in their career. So schools and colleges embraced the online mode of teaching. By the time, there were multiple applications that provided the feature to share resources and links in some or other way. In order to overcome the disadvantages of other applications and provide an all-in one solution for teachers to share resources and essential links in a structured way, we have designed “EdMeet”. It allows teachers to share the resources like notes, quiz links, experiments, lecture links and the notification is sent to the students of that particular class. When the teacher posts the link for the lecture the students are notified to attend the lecture. Whenever the teacher posts any document in any of the folder, the notification is sent to the students of that class regarding the same.

II. RELATED WORK

There are many video conferencing and file sharing applications that are used by teachers for the purpose of sharing notes. Few applications are mentioned below

A. Google Classroom

Google Classroom is a free web service developed by Google and is mainly used by teachers for sharing files, videos, links to quizzes, recorded lectures, etc. A teacher can create a class and share the code with the students so that they can join the class and access the resources.

B. Edmodo

Edmodo is an application that enables teachers to share files, assignments, links to videos, quizzes and also communicate with students and parents.

C. Google Meet

Google Meet is developed by Google. It allows users to join pre-scheduled meetings. It integrates with G suite versions of Google calendar and Gmail. A user can join the meeting using the link or phone number shared by the person who creates the meeting link. One can join a meeting using „join“ button and can also turn on or off the microphone and camera as and when needed.

III. PROPOSED SYSTEM

The primary aim of “EdMeet” is to integrate and overcome the disadvantages of all the applications and provide an all-in-one solution to the teachers. The disadvantages of above apps while sharing files are mentioned below.

A. Google Classroom

It allows all teachers within a class to share notes or any other documents. The documents in such a class are not structured according to different subjects or type of documents.

B. Edmodo

It also has the same disadvantage as that of Google Classroom.

C. Google Meet

Google Meet allows a teacher to conduct the lecture but the teacher has to post the link explicitly on another app where the students can access the link and join the lecture.

In EdMeet, on installing the application, the user needs to register himself as a teacher or a student. A teacher can create class and set the class code. A class when created has multiple folders, namely Notes, Experiments, Quiz, and Lectures. The teacher can upload documents, share quiz links and lecture links within the respective folders and notification will be sent to the students present in that class.

A student can join the class using the class code provided by the teacher and access the links and download the files present in that class.

IV. IMPLEMENTATION

A. Software

This app is developed using Android Studio 4.1.

B. Design

We follow three steps for designing the user interface of the app.

Select the Views: In this step, we need to select the views that are appropriate for a particular user interface. Different views can be ImageView, TextView and button.

Position the Views: For obtaining the desired user interface, we need to position the views appropriately using different layouts like LinearLayout, RelativeLayout and ConstraintLayout.

Style the Views: To make the user interface user friendly and attractive to eye sight, we provide padding, margin and colors to the view.

C. Coding in Android Studio

We develop the app in Android Studio and write codes for .XML file, .java file and define various activities that are essential for proper functioning of the app.

D. Firebase

Firebase is a platform provided by Google for creating mobile and web applications. In this project, we use firebase for authentication of a user and as a database for storage of various files uploaded by the teacher. For accessing Firebase in our Android project, it is necessary to connect to firebase using a menu option in Android Studio. After connecting to Firebase, we can use firebase for authentication purpose and storing files. We can access the firebase using the firebase console. For security purposes, we need to update the rules for authentication and storage in the firebase console.

E. Testing and deploying the app
Before deploying the app on PlayStore, we would test the app on various smartphones and finally would deploy it on PlayStore.

V. RESULTS

A. Launcher Activity

Student Login

Email

Password

LOGIN

[New Student? Register here.](#)

[Register as a Teacher](#)

[Login as a Teacher](#)

Fig. Login

B. Navigation Menu

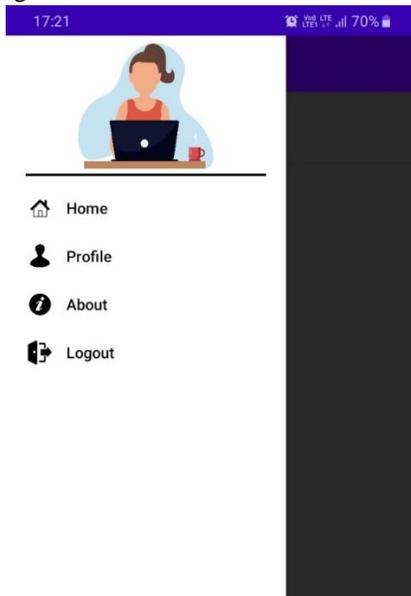


Fig. Navigation Menu

C. Creating a class layout

Add Class

Class Name

Class Description

Class Code

CREATE CLASS

Fig. Create a Class

D. Class created: "BE IT"

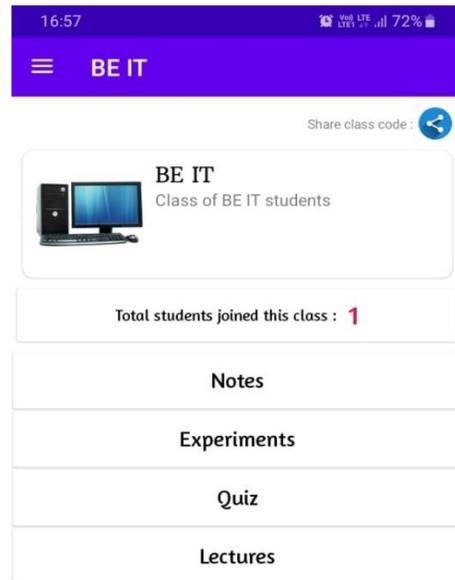
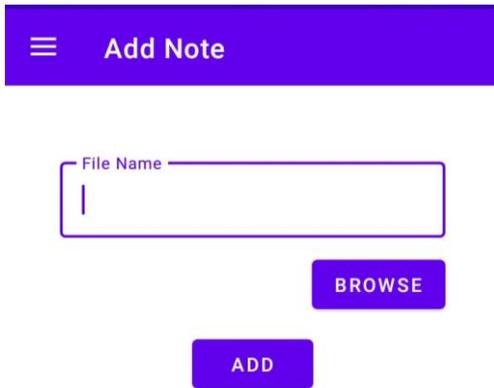


Fig. Class: "BE IT"

E. Adding Notes



G. Adding Quiz Link

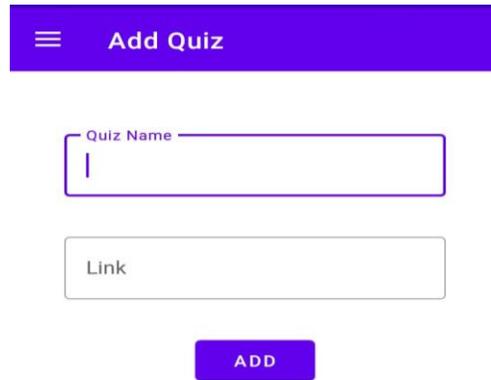


Fig. Layout for adding notes

Fig. Layout for adding a link

F. After adding notes for Module 1



H. After adding a quiz link

https://forms.gle/urgMjiNisWY6MhMQ9'." data-bbox="524 526 833 618"/>

Fig. Layout after adding notes

Fig. Layout after a quiz is added

I. Join a class

Fig. Layout for joining a class

J. Profile

Fig. Profile

Layout for adding an experiment is same as that of adding a note (Fig. E) and layout for adding a lecture link is same as that of adding a quiz link (Fig. G)

CONCLUSION

This paper proposes an android application for teaching and learning. The main aim of this application is to provide a platform for teachers to share the documents essential for students online. This app is unique since it integrates features of other applications and overcomes the disadvantages of those apps. The app will contain an attractive and user-friendly user interface. There can be two types of users of this application; those are teachers and students. We have developed this app owing to situation of Covid-19 pandemic and the need for online learning.

ACKNOWLEDGMENT

The project has been developed under the guidance of our Project Guide, Prof. Mangesh Balpande. We would like to thank him for his constant support and guidance which indeed helped us in completion of project and gain more knowledge through research and study. We would like to thank our Head of Department, Dr. Vinayak A. Bharadi and Project coordinator, Prof. Priyanka Bandagale for coordinating with us throughout the project.

REFERENCES

- [1] Rabbina Ridan Khandoker, Shahreen Khondaker, Fatiha-Tus-Sazia, Fernaz Narin Nur, Shaheena Sultana; LifeCraft: AN android based application for Women's safety. In: International Conference on Sustainable Technologies for Industry 4.0. IEEE, Bangladesh (2019).
- [2] Software Advice Page, <https://www.softwareadvice.com/video-conferencing/google-meetprofile/>
- [3] SiteLicense Page, https://sitelicense.ucr.edu/files/zoom_for_instructors.pdf
- [4] Ministry of Health and Family welfare Page, <https://www.mohfw.gov.in/pdf/PreventionandManagementofCOVID19FLWEnglish.pdf>
- [5] India TV news Page, <https://www.indiatvnews.com/technology/news-covid-19-lockdowntop-5-video-conferencing-apps-for-students-zoom-google-meet-skype-613229>