Project tittle : video conference app

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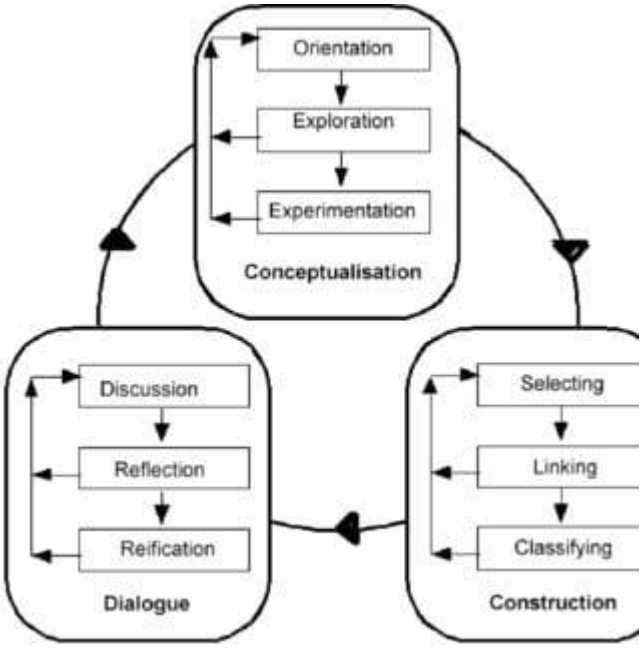
Abstract: The purpose of making a video conferencing application is to provide better understanding of the views and ideas between two and more people. Long distance communication with audio and video is very easy for understanding the views and ideas. This video conferencing application will provide all the necessary features which are required to have better communication and exchange of ideas like screen recording, sharing a YouTube video, unlimited private room, inviting some third person, live chat room, mute audio and disable video all features are provided only in one application. Users can simply log in or Users can create an account on this application and get started with video calling and conferencing. In this application users will get a private meeting password for each time. This application can only accessed through android smartphones not for ios and any other devices. The required hardware and software are available and easy to work with. This Application can used During this time of social isolation and remote learning, these video conferencing applications are lifesavers. Many companies, schools and colleges make use of this application for meetings, work from home, teaching sharing documents like taking online sessions etc to maintain a connection with their students and guide their learning from a distance. The aim for this video conferencing application is to provide a user friendly platform where users can communicate with each other and have better communication and also schools and colleges can guide their students from a long distance. Index Terms - Screen Recording , Chat Room, Video, Audio, Social isolation, Remote learning, Online secession I. INTRODUCTION The technology for video conferencing has come a long way since the days of jerky video feeds and static audio. A high□quality online video meeting provides an environment that will feel like you are actually sitting down across from other participants in the same room and gives you that face-to-face contact needed to build trust and relationships. In the current scenario, where everything has gone online and people are working from home, and also students are learning via online classes conducted by the institutes, faculties with the help of this video conferencing platform.Video conferencing has recently become increasingly popular and disperse in the wake of faster and cheaper internet connections and better technologies.The concept behind video calls is simple: It’s as simple as making a phone call, but provides both video and audio. The right video conferencing tool allows you to set up a virtual “room” and provides a number or clickable link users can use to “enter” the room. Once they are in the meeting, you can see them with your screen and webcam, and they can see you. A conference video call is helpful for a meeting because it makes it easier to keep track of who is speaking. video conferencing technologies can be used to share documents and display information on whiteboards. This project provides the video conferencing platform in which users can communicate with each other with their own private room, companies can use it for project discussion or interviews, schools and colleges can use it for online teaching by sharing virtual whiteboards and also manage records of student all of this can be done in this project with the help of key features such as screen recording,

sharing a YouTube video, unlimited private room, inviting some third person, live chat room, mute audio and disable vidos




SYSTEM ARCHITECTURE In this System user first have to create an account by giving some required information. After sucessfully creating an account user can login in the application with the help of e□mail and password.Then user will directed to secret room code in that user have to put the code so the user can create a virtual room for video conferencing . On the other hand other users have to repeat the same procedure and in 1the secret room code user have to put the same code as the host user did so that they can connect with other also they can send the invitation link other user . After connecting, users can now experience more features like chatting ,recording a video call,screen


sharing ,security password, They can go live on youtube etc. V. FRAME WORK An application that provides you useful and beneficial features during video chat. The system also allows you to record and live stream your video chat. With primary features like mute, pause, camera change it also allows you the features of screen share. During this hard time of COVID-19, you can share or make discussions live on your mobile phone with great security. This app is made using a high security encryption algorithm that no one can breach your video chat room. Only the user with your private room code can join the video chat. You can maintain a record of your entire video chat history .Apart from this it can also allows you to send text/image/voice messages to your friends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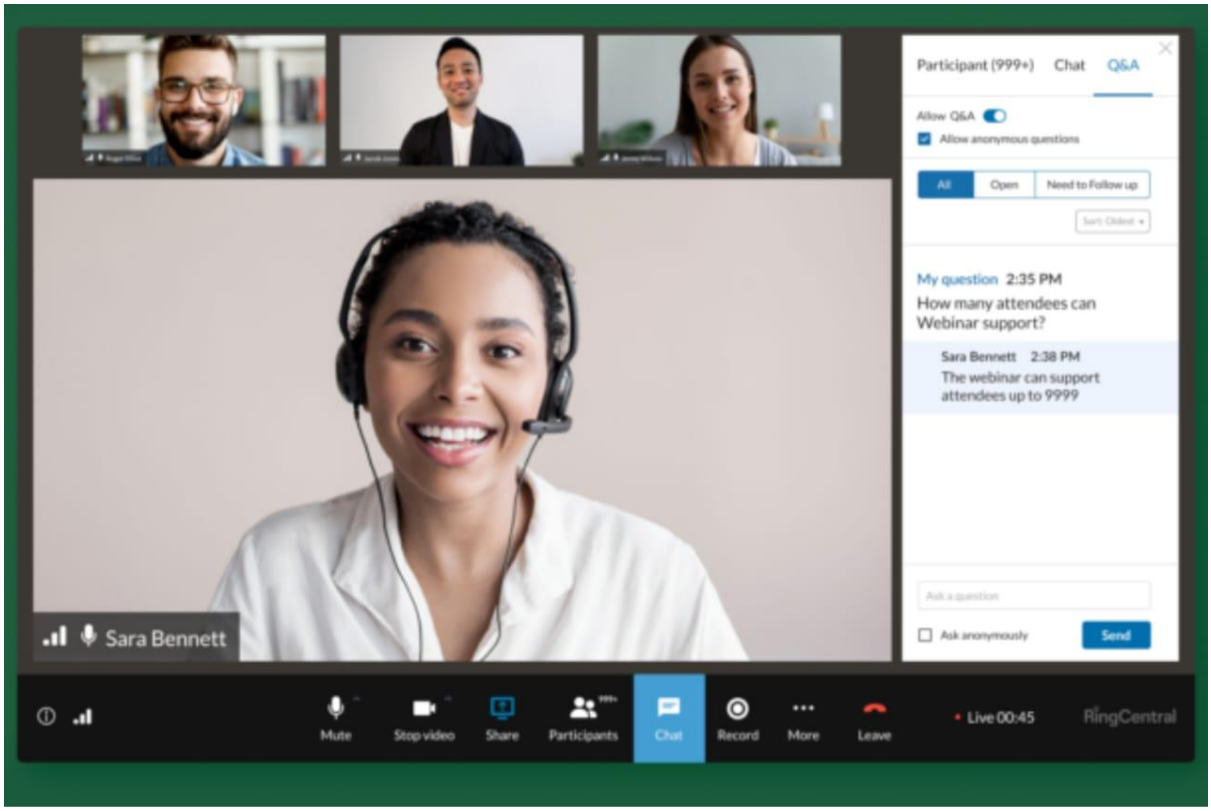
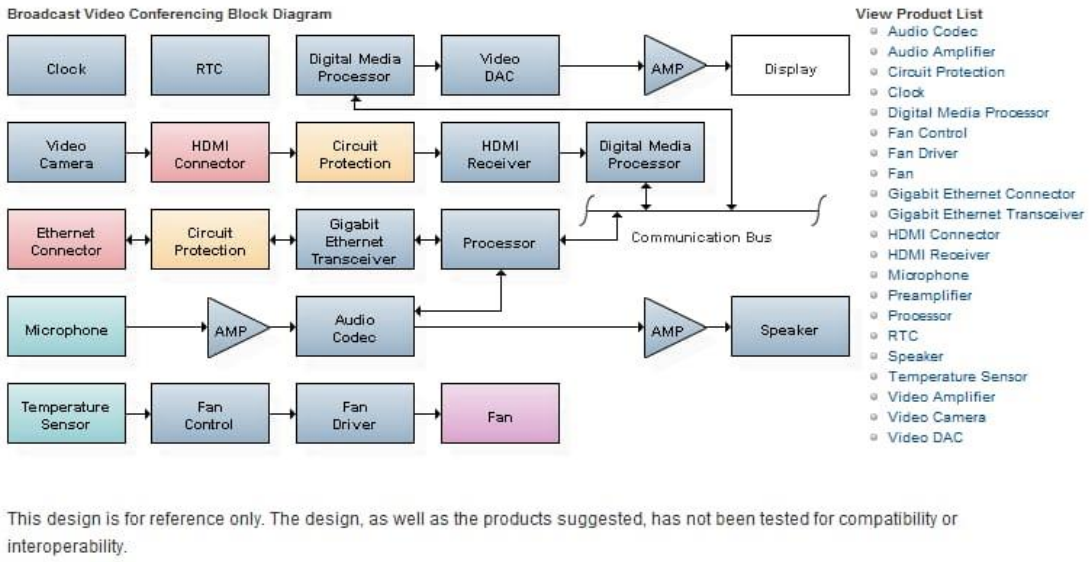



Future scope dThe project design can be upgraded in future by adding more features in the application or can try to make the audio and video quality much better with changes in softwares and technologies. VIII. Conclusion The impact of video conferencing on education is very much on the rise, and it helps save time, money, and energy. It also provides an invaluable tool for students, teachers, and parents to better communicate and collaborate with each other.The video conferencing system using android studio technology was created and approved. In this research we used the firebase authentication ,firebase fire store for database and for video call Sdk integration we use a jitsi Sdk.This app is easy to use and easy to install Sdk. The video conference system is designed as an app based to be used for only android operating systems.The aim of this research is to reduce the effort and difficulty of mobility to communicate and to create a video conference that supports the characteristics of voice calls, video calls, share files, share desktop, record in different format , YouTube live streaming ,unlimited private rooms for users, 75 member can join the meeting at the time without any interruption while whatsapp is provided only 8 members in video calls, front and back camera support, watch movies together, These goals have been achieved

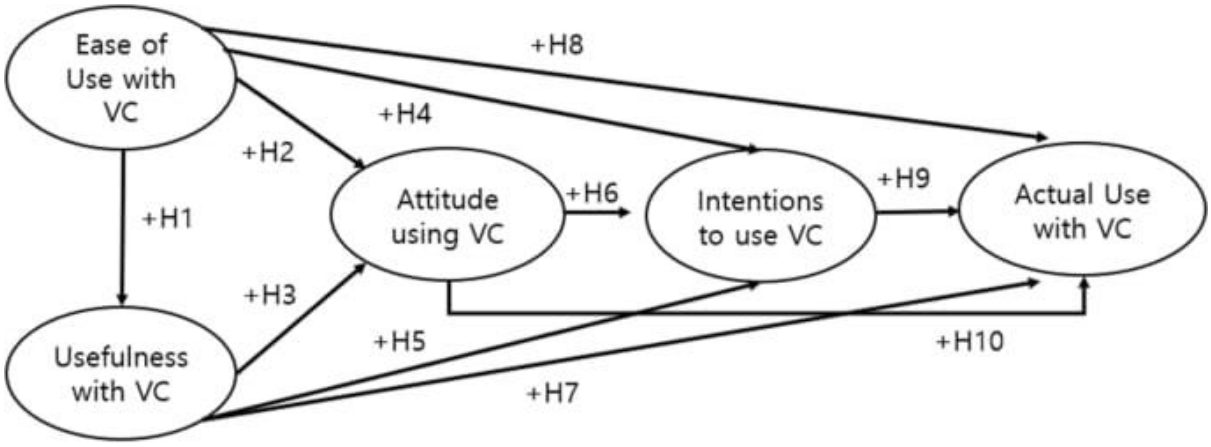
The design of IAF architecture consists of elements or components that are needed at real time communication. The role of the components of IAF architecture is as the protocol component to implement the functions of communication among the users of application service. The protocol functions of real time communication are presented in modules form (object classes) of the internet protocol application layer. The protocol modules will be implemented in pustaka class form or program of interface application that can be run in computer. The components of IAF architecture involve the user interface component, the protocol component of application specific, User Agent server (UAS), User Agent server (UAS), Agent Control Communication (ACC), Location service (LS), and the component of data media (text data, presentation file, audio data and video data). The transmission of audio and video data uses the RTP protocol that is publicized by IETF or the company of Internet Protocol standardization [4]. RTP is the protocol that provides the audio or video data transportation function among end point through internet that is done in real time. The multimedia



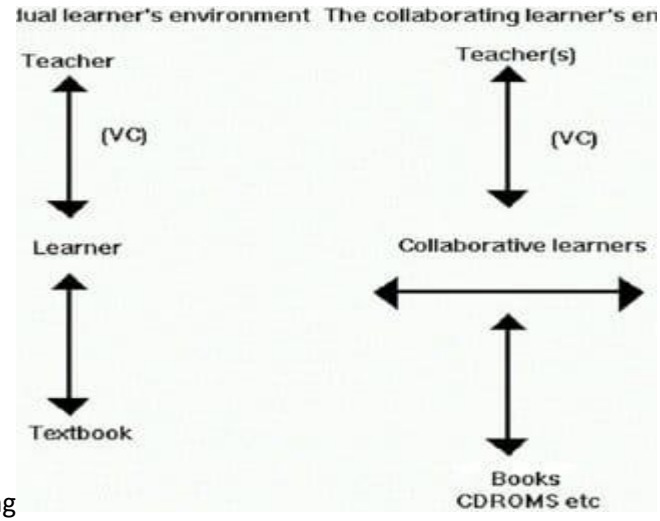

devices as the supporting of real time communication application such as camera, microphone, speaker, and monitor on each end point

METHODOLOGY The research methodology to plan video conferencing application is done through six steps : a. Determining the requirement of long distance of learning system. b. Indentifying the role of actors and the responsibility of each actor in implementing of long distance of learning system. c. Making the communication scenario in implementing of long distance of learning system. d. Arranging the transaction instructions that are needed as identifier of user request in communicating among participants. Making the design of class diagram to each application program. The design of class diagram involve for server application, moderator application, and client application (the application that is used by lecturer and students). The planning of application program long distance of learning system as face-to-face for user. The application program of

distance learning system consists of three parts namely server application program, moderator applications




EXPERIMENTAL RESULT The design of class diagram shows the static structure systematically and collaboration among object classes that is forming the video conference application program to implement the long distance of learning system. The object classes are the publication to objects that present the communication functions and the rules or processes that is needed to communicate




real time among the participants through internet. Each object classes have three main areas namely the name of class, class attribute and class method. The design of class diagram at long distance of learning system consist of three parts namely the design of class diagram for server application, the design of class diagram for moderator and the design of class diagram for client application. Base on the three models of design class diagram, therefore be made video conference application proggram that involve: server application program, moderator application program, and client application program. Each application programs are made in desktop application program form and base on Graphical User Interface. Those application programs are made use platform JDK standard. All of the participants, moderator, lecturer, and students have to do login according to each accsess right of user when the registrate. Login process is useful to validate the user who is allowed to join the long distance of learning process

Proceedings of National Seminar on Applied Technology, Science, and Arts (1 st APTECS), Surabaya, 22 Dec. 2009, ISSN 2086-1931 1196 V.CONCLUSIONS a. The Program Planning of Videoconferencing Application can be the solution of distance and time problems for lecturer and student in implementing learning process. The lecture and student don't need to present at a class together, but they can be at different places for it is connected to internet. b. The Program Planning of Videoconferencing Application for long distance learning consists of three namely server application program, moderator application program, and client application program. c. The importance of video conference communication in implementation of learning process is to create unreal world (Internet) as the replica of communication style in real world because it supports the chat text communication, face-to-face communication, base dialogue communication, and conveying the learning material through presentation files

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