Design and Implementation of Campus Connect

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Abstract— the current way of teaching and learning process involves asking queries and solving those doubts inside the four walls of the classroom. The students who have any questions at that moment can ask the teachers. Other students and the teacher answers them. But there might come a situation when the student has some sort of query or doubt outside the classroom like at home while revising or studying. Few students might even be shy to ask any doubts in the class. Thus, their doubts might remain unsolved. In this project, we are developing an android based application for the students and teachers, where any student can ask any sort of doubt, question or query. Those questions can be answered by the other students as well as the teachers. Thus, our app would serve as a platform for quality education by providing an interactive Interface for the doubt solving and gaining abundant knowledge. This paper discusses the analysis of student and teachers interaction in an online asynchronous discussion forum.

Key words: Campus Connect, online asynchronous discussion

I. INTRODUCTION

Online discussion, as a component of e-learning, has become a common activity in post-secondary education. It can facilitate collaborative learning. When students are actively engaged in sharing information and their perspectives through interaction with other students, mutual development and analytical growth is guaranteed. Additionally, online discussion has the potential to expose students to a broader range of views than face to face conversation and hence enable them to develop more complex perspectives on any given topic.

Query solving is one of the most integral parts of the learning process yet very time consuming. Teaching and learning process is never completed if any of student's doubts remained unsolved. There might be countable/uncountable reasons for such unsolved doubts like time restriction, the faculty is not present, stage fear etc. Many of these reasons could be handled if there was an application that would act as a platform where students are able to ask questions/doubts which other students and faculty members could provide answers to. In today's world, the internet is being widely used for educational purposes and android phones cover the highest share in the smartphone market. To this academic doubt solving problem, a web-based app is the most effective solution.

Along with general questions-answers forum, features like upvote-downvote, delete inappropriate questions or answers, edit answers could be provided. This feature could be beneficial for the students to obtain the most appropriate answer among all sets of answers provided. The answer with most upvotes or the answer written by a faculty can be safely declared as the most appropriate response for the question.

Students can register on this app by providing basic personal info. like name,roll no.,email id etc.The app would also provide authentication of the students. Faculty accounts have administrative rights and can verify a user account after verifying his authenticity. The user account is not activated and the question-answer database is inaccessible to the user until his account has been verified by the faculty.

Android is an open source Linux-based operating system.It is a software that includes middleware and key application.The android SDK provides the tools and API's required to begin development of application on the android platform using java programming language.It is developed by the open handset alliance led by google.

Developers develop the apps in a customized version of java supported platforms like Android Studio or eclipse. Apps can be downloaded from online stores such as Google Play store which is provided by google itself.

We are developing a web-based Android application named 'Campus Connect' that would serve as a platform to solve student's queries. The main objective of 'Campus Connect' is to digitalize the learning process and provide quality education.

Centralized database of the application would be hosted on the World Wide Web specifically on parse.com. Any student/staff willing to use this application would require an android enabled smartphone with working internet. This app would connect the whole institute by inter-departmental interaction.

Asynchronous discussion present several advantages as compared to the synchronous discussion: students get more opportunities to interact with each other and students have time to reflect, think, and search for extra information before contributing to the discussion.

II. REQUIREMENT ANALYSIS

The existing system requires physical interaction between student and student or student and teacher. This process is very time-consuming and stressful if a particular doubt is asked by multiple students at different instances of time. In today's educational scenario there is no online tool for solving doubts, having discussions or student interaction. The flow of information carried out in this system is purely dependent on the availability of the faculty and student. In the existing system, problems or doubts are solved in college hours only. Besides, rumors and false information once circulated verbally by students is difficult to curb. Also, it is very difficult to notify whole class or college about something as many students may not be present in the classroom. All the messages passed by faculty in the form of oral communication could be easily forgotten by students as well as not every answer is genuine until it's confirmed by faculty.

The proposed system's objective is to develop an application that serves as a platform for students to solve their doubts. There is no restriction on who will provide answers to any question as long as they are relevant to the question asked. Upvote/downvote feature helps students to decide the correct and most genuine answer. Any inappropriate answer, as well as the question, could be discarded by the staff with its administrative privileges.

Our app provides the following advantages:-
– Doubts can be easily solved in both college hours and home using this app.
– Rumors or manipulated information and the culprit can be easily caught andtaken care of by the administrators.
– The correct answer could be upvoted by the teachers and students.
– Most upvoted answer are automatically put on the top so that students don't need to scroll down for the appropriate answer

III. SYSTEM ANALYSIS

The main components of this system are login as a student or staff, verify your account through your provided email id and join our college community to contribute, learn and provide solutions to the problems.

The proposed system provides an android app that will provide the user with an exhaustive database of asked questions and answers related to them. Students could be able to read previous answers as well as give new answers. If a student is satisfied with an answer, he/she can upvote it. Apart from academic topics, the proposed system also allows students to have healthy discussions ranging from sports, cultural events to latest development happening in the technical and scientific fields leading to an overall personality development of students.

To use this app and its features, the students and the staff has to register themselves providing valid personal information. The app won't allow access unless and until the registered email address has been verified. The administrator should be able to filter out only college student's request thereby keeping a check on fake accounts. It is quite similar to administrator privileges on social media like Facebook.
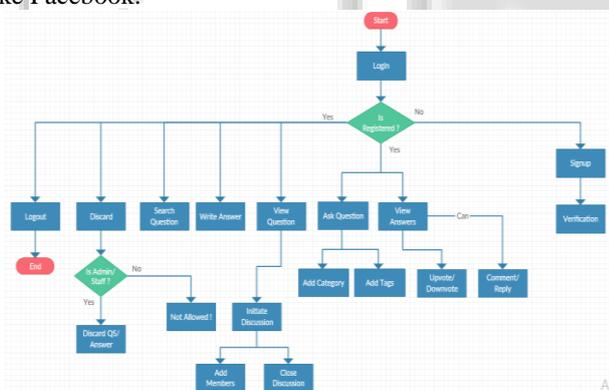

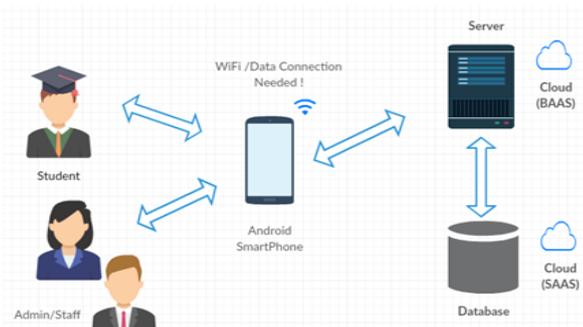Fig. 3.1: System Flow Chart

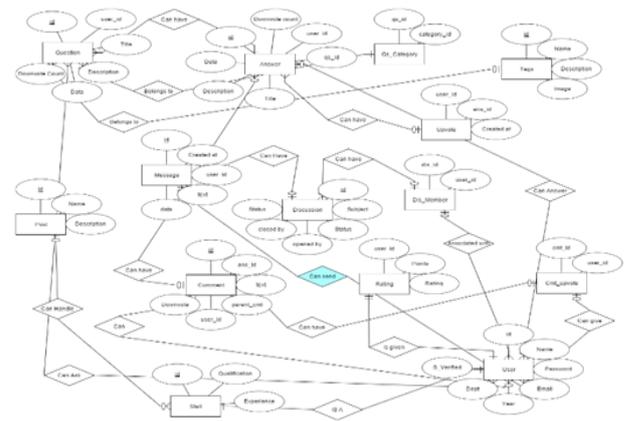## IV. SYSTEM ARCHITECTURE

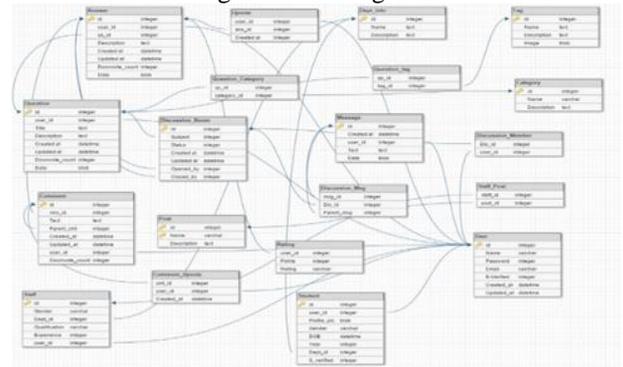Fig. 4.1: System Design

Fig. 4.2: ER Diagram

Fig. 4.3: Database Schema

The technologies used in the development of this project are java, parse & android SDK. Java is a programming language that is object oriented and class-based. It is capable of 'write once, execute anywhere' approach. I.e. after compiling code once, the code doesn't need to recompiled for running on another machine.

Android Studio allows you to build apps in java environment. The files listed in the left navigation pane displays a list of various xml and activity files for your project. Android apps are compiled under Java Run-time Environment and its resource files and methods can be invoked individually.

Parse is an online platform for hosting exhausting database. In this project, we are using parse API for hosting the database. Parse API has some interfaces which can be implemented in the java files. Also, Parse provides 'rest API' and 'cloud code' features.

The android software development kit (SDK) includes a debugger,libraries,a handset emulator based on QEMU, documentation, sample code, and tutorials. SDK tool is a add-on for the android Software Development Kit. It comes bundled with the Android studio and contains debugging and application development tools.

V. ADVANTAGES

– Doubts of the students can be solved by teachers or students at any point of time, evenfrom home.
– Wrong information will be easily identified and even can be discarded byadministrators i.e. Staff Members.
– Students can have direct answers if the query has already been asked earlier by another student.
– Information is in a visual format. Hence, it can be saved or even printed.

- The correct answer can be upvoted by the teachers and students. The inappropriate answers can be downvoted by students and can even discarded by the staff.
- Student can give reply to any queries provided that is it related to that query.
- Different sections will be provided for simplification between the different types of posts e.g. programming, sports, events etc.
- Students also get the notifications via app if any reply is made by any student related to that student created post/forum.

VI. CONCLUSION

Thus, the proposed system 'Campus Connect', provides a platform for sharing knowledge and for solving student's problems. It allows information flow by connecting students by with each other and staff members. It supports inter-departmental communication. The system incorporates a number of techniques to further increase the process of sharing knowledge. By automating the query searching process with the help of search option a lot of precious time could be saved. Using the application, students can ask questions in various categories. Other students and staff can provide answers to them. Also, features like up-vote and down-vote would encourage students to post the best possible answers. The ultimate goal of our project is to provide quality education. The proposed system will thus be much more efficient than he current process and will be of a huge help to all students.

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