Android Application for Smart Learning

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Abstract: Generally, various tests and exams are conducted in the class rooms in the given time on hard copy pages under the supervision of teachers. The number of questions and their format is generally kept same as to maintain the comfort in checking of papers manually and in an efficient way. Also, the study material and class assignments are distributed over students in a printed form. This traditional way might at times result in inefficiency when any student or teacher is unable to be present physically at the school/college. A considerable amount of time is consumed in the distribution of question/answer papers, marking the MCQ answers by pen, submission and correction of assignments, etc. Moreover, in many cases there is very less communication between students and teachers, and, at the time of unavailability of either of them, they may face the lack of resources. Due to the advancement of mobile and communication technology, the trend is more towards the automation of most of the activities which in turn involves very less human intervention. In this project, we are proposing a multipurpose android application for automation in allotting random questions in aptitude test, sharing class assignments, Google editable forms, and the student placement information in the form of static graphs. These graphs would give the information of number of students placed in that respected year. The proposed system enhances the availability of study materials in the form of pdf files which can be accessed by the students. This unique way of information and knowledge sharing would improve the accessibility of students and thus help them prepare for their various tests in a better way. Students can choose from the various choices of tests given to them. The tests might be related to logic, verbal reasoning, etc.
Keywords: Android App, E-Learning, Java, Json, Aptitude test.

I. INTRODUCTION

The smart interactive android application is integrated together to provide interactive learning and teaching for students and teachers. Now a days the use of android based mobile systems has increased tremendously. Considering this, the application gives notifications on new things uploaded by teachers to all students having this application installed. This helps us for e-smart mobile learning and knowledge testing on the basis of quiz formatted tests. The results get displayed in the form of marks based on correct answers. The model solutions and the correct answers list key can be uploaded by teachers. This android application is accessible at anytime and anywhere, as it runs on mobiles and smart phones. The required relevant data can be found and used for the problem solving perspective. The data is separated like, specific subject wise and according to the study material belonging to specific tests. The video links regarding specific data are shared as, visualization is the best way of learning and can be understood easily. Every day the learning methodology will be enhanced, and the perspective of students towards learning will get wider and sharper day by day and it will make learning fun. In our proposed model, various devices get connected to one server which is handled by admin. Then, the users (teachers/students) become a part of this application and extract the needed information regarding various aspects.

II. GOALS AND OBJECTIVES

A. The main objective of this application is to make learning more simple and interesting.
B. This application will help to reduce the communication gap between teachers and students and keep either of them updated about the academic on goings.
C. The application can conduct quizzes in the form of MCQs and generate immediate reports based on the answer inputs.
D. Making the question-answer session more interactive and increasing students' participation.
E. The ultimate goal is to enhance the learning experience and give a clear idea about each subject to each student in the easiest possible way, i.e., the through smart phones.

III. MOTIVATION

A. Creating an unusual application to conduct classes and quizzes at the same period.
B. Improve the availability of notes, video lectures, daily updates.
C. Make use of smart phones in learning thus by creating it more interesting.

IV. LITERATURE REVIEW

Paul POCATILU stated that the evolution of today's mobile devices increases the number of mobile applications developed, and among them the mobile learning applications. Mobile hardware and software plat-forms allow running of faster and richer applications. This paper presents the main steps in development of a distributed mobile learning application for Android. The client application communicates with the server using Web services. The prototype developed includes the testing module[1].

Oky Dwi Nurhayati, Kurniawan Teguh M: This application will be implemented in three types of user: admin that will use the web-based application on the desktop and lecturers and college students that will use android mobile tool based application. In this case, the function that will be given is by processing the materials that will be uploaded by lecturers and can be downloaded by the college students, task and quizzes given by the lecturers to the college students and the function to show the score from the college students[2].

Kurniawan Teguh Martono, Oky Dwi Nurhayati: This research uses the Development and Research method a research to build and develop m-learning that can be used as a flexible learning media. Meanwhile, for the design of software, this research uses waterfall method[3].

Sary Paturusi, Yoshifumi Chisaki, Tsuyoshi Usagawa: Study presents the development and evaluation of online quizzes and investigates whether they could be useful tools to assist students' learning in university. Moreover this research examines students' achievement in e-learning courses at Faculty of Engineering, Sam Ratulangi University (UNSRAT), Manado, Indonesia, especially through online quizzes, which are available in learning management system. In addition, when developing quizzes, there are necessary features in order to maximize it potential as a powerful learning tool, which will be discussed in this paper[4].

Prof. (Dr.) Praveen Gupta, Mr. Mukesh Kumar and Ms. Megha Sharma: This paper deals with the prototype development of an Mobile quiz system, comprehensive evaluation system for the remote students or in a classroom. On further enhancement this app can be used for the recruitment process of software companies which will be able to save time and efforts to illuminate unwanted candidates to appear for personal interview by travelling a long distance[5].

B. Lakshmi, V. Sai Durga and K. Anji Reddy :The Mobile Quiz is an android application that provides a new technique of Playing Quiz using mobile phones. This application is especially developed for People who like to play challenging Quiz. The project provides an effective challenge to the player. Generating random questions for the user who participate on the quiz .Whenever Wi-Fi is connected in android mobile, the user can play quiz .Users can have their own interest in particular area to participate. Whenever the server updates the game immediately mobile get alert saying that they can update the app[6].

Joshi Kaustubh A., Kasar Yogita H., Mahajan Mayuri V., Nikam Pooja G.: This application will have two sides of Interface: admin that will using the web-based application on the desktop and students that will use android application. In this application, test and tutorials based on various subjects and topics are given by the admin to the students and the result of the individual student is displayed[7].

V. PROBLEM STATEMENT

This application is founded on the prototyped software in edict to increase the interactive participation of students in learning and also increase the engagement of students in specific subject content.

VI. MATHEMATICAL MODEL

Let S be Closed System defined as,

S = {S, E, I, O, F, Success, Failure}

S=Start state of system

E=End state of system

I=Set if inputs

F=set of functions

Success- Desired output is generated.

Failure- Desired output is not generated.

I=I1, I2

here I1- username and password (number, symbols, alphabets)

  I2-Selects the option.

F1=LoginPage() where , username/password is authenticated login page.

Success=If username/password is correct go to F3.

Failure=If username/password is correct go to F1 (again login portal). F4= 1,2

read pdfs for the topic.

give quiz test on the topic.

F5= searching the uploaded assignments.

F6=1,2 1. search google editable form.

fill the form 3. submit.

Success= If all options filled , it can submit.

Failure= If any option kept blank, it could not submit. F7= Static placement information graph.

VII.   SCOPE OF PROJECT

The system is purely focused on smart learning using smart phone supporting android applications. It need to be specific location and time oriented as mobile devices can be used at any place at any time. It is necessary to implement such kind architecture in order to improve the co-ordination and communication between teachers and students, and, also to make students aware of the upcoming exams and courses.

VIII.   CONCLUSION

The main impartial of this application is to make learning more simple and interesting. This application will help to reduce the communication gap between student and teacher and keep either of them updated about the academic on goings. The application can conduct quizzes in the form of MCQs and generate immediate reports based on the answer inputs, making the question-answer session more interactive and increasing students' participation.

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