Application of GUI Interface using Android Studio

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ABSTRACT

This is an android application project. This project is basically an online quiz application. It consists of frontend as well as backend. The frontend is basically consisting of a GUI or a graphical user interface that enables the user to interact with the application. In other words, acts as a user friendly interface between the user and the developed application.

On the other hand, the backend consists of SQLite Database which consists of user's scores as well as the other details pertaining to the user once the user undertakes the test in the online quiz application. It also enables users to receive notifications on the spot or immediately.[1] The main advantage is it saves time as it is more user friendly and consumes less time as the calculation of quiz scores will be calculated digitally rather than manual calculation which usually consumes time.

The concept of quizzes is currently very popular among educated circles as well as in entertainment shows. Though the quiz can be conducted manually it also needs elaborate preparations, quizzes contribute to the growth of knowledge of an individual and they are a popular source of entertainment[3]. This program in Java focuses on creating interactive quizzes with a considerably large databases of questions. The program utilizes most of important concept in Java and applet design to get the final output is envision to knowledge and get entertainment with value addition.

The system reduces paperwork and all the information will be stored safely in the data base. This app mainly stores questions in the database from which a set of questions will be displayed. It is designed to replace existing paperwork and manual correction.[2, 3] This system uses java as front end and SQLite as a back end for the database. The implementation of the system in the organization will considerably reduce time and also provide readily calculated marks.

KEYWORDS: Android, General knowledge, Result, and Mobile

INTRODUCTION

Today, it may see that many people want to test their memory and general knowledge power. We help them doing so with the help of our small android app which allows them to check their overall IQ.[2] The test contains all type of questions that proves to be helpful to a person who keeps a very keen interest of what is going on around the world.[1,10] The tests prepared via electronic exam systems, now, have been an alternative for those who prepare for their exams by using their personal computers or mobile devices. Connecting such services requires a computer and an internet access.

In other words it is necessary that students must be in an environment which provides above mentioned conditions in order to access such electronic exam systems.[4] Mobiles are an integral part of daily life. With time, customers are expecting best and very versatile applications in less time. It is big challenge to develop high performance mobile applications in this competitive market that would meet the expectation of customers.

The advancement in mobile technology has improved everyone's life. Nowadays various mobile technologies as well as mobile phones compete in the market. The users use various applications in their day to day life to reduce the burden of work in some way or the other. One of the uses of mobile devices is "mobile learning", which can be defined as "all kinds of learning that do not take place in certain predetermined fixed places"[5].

This app is mainly for graduate students. This will help them do the revision at the important times like placement and semester exams. If they use this app they won't need extra load of study materials and faculty to do the rest of the learning. Nowadays applications which we can use without internet access are popular. Paper based. Also there are many mobile applications available that provide mock tests. Our app follow the same path as well[7].

Regarding this project, the following features are being enabled. It has various features such as GUI and other responsive features. It is going to fetch user details as well as their scores and store it in database. The audio file will be played only within the specified interval, set by the timer. So, when we choose correct or wrong answer within the time limit it will be played or else the time limit as existed the audio file does not play.

Motivation and Scope

We use smart phones in every day in our lives. The main motive of this project is to use those smart phones for making the availability of the notes and videos of the lectures and conduct quiz using your smart phone[6].

Online examination system can be used in private institutes as well as educational institution. As it is user friendly web base application it can be used anywhere and anytime. Every software may have some cases of bugs, errors, security related problems or system faults[8].

Literature Review

The Quiz App is rated in the top 5 applications in android market developed by Sindu Rajan and designed by Yalini Kumaraguru.[5] People with an inclination towards testing knowledge can use this app to sharpen their IQ, test their aptitude skills and enrich their knowledge.[4] This application has various fine points and flaws provides good user interface but only for practice. The main motto is to make this app work faster and efficient enough for students to make most out of it. It might also directly or indirectly help you in preparation of admissions tests and other different kind of exams, but the user interface is not interactive, the user has to scroll to view the entire answer. It just has MCQ's for test and score evaluation which reduces paper-work and provides faster notifications to individual users.

The project entitled mobile based quiz app is an alternative method for pen and paper type of test, the mobile application quiz app was designed in a hybrid type of mobile development which means that the project can be installed on both iOS and Android devices.[9] Android Studio is used as the development tool, it is composed of XML, and Java programming languages. This article will provide you with the studies and systems which are closely related to this project.

Existing System

Existing system is a manual one in which users are maintaining books to store the information like Student details, Schedule Details and feedbacks about students who attempted exam as per schedule. It is very difficult to maintain data.

And also there are other online quiz application, but they have only normal features as timing option, buttons options and total scores.

Proposed system

This application will perform correction, display the result immediately and also store it in database as well as users details. In addition of proposed system we adding an audio file to the back ground sound to an options for a given question.

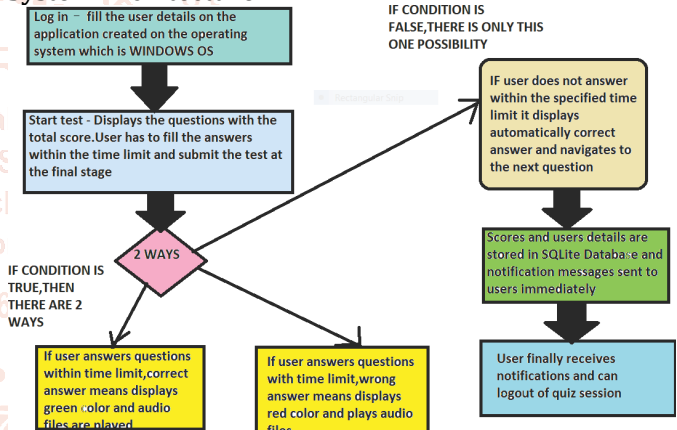The audio file will display when clicking the options but it will display till the timer ends.

When the timer ends the answer will be displayed automatically and audio file doesn't play.
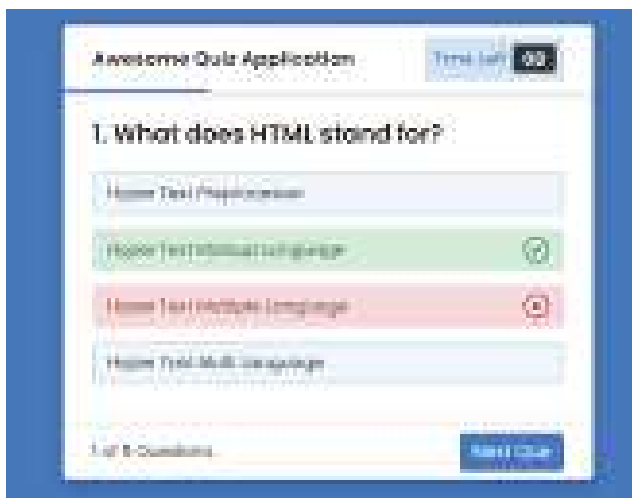

System Architecture

MODULES DESCRIPTION:-

➢ The first **data entry module** consists of user entering the login details and entering the details and once all are entered they start the test.

➢ The next **quiz module** consists of answering the questions when the test begins. A timer is provided in this test. If user answers the question within the specified time limit, it has two possibilities. Green colour will be shown if correct answer else red colour is displayed and the corresponding audio files will be played. If user does not respond within the time limit, then the correct answer will be automatically displayed and will navigate to the next question.

➢ The next **results module** consists of displaying the total score scored by the user in online quiz application.

➢ The final **data retrieval module** consists of the user details and scores in SQLite database which forms the backend. After storing, the notifications or messages will be displayed to the user atthe end. The main advantage is that it is possible to retrieve information whenever necessary or in case of need.

DATA ENTRY MODULE

QUIZ MODULE

RESULTS MODULE

DATA RETEIVAL MODULE

IMPLEMENTATION

On starting the offline android application, the main screen is loaded with the header that provides navigation to the Score Board of the appeared test, questions that are marked. Example general knowledge, math, computer knowledge.[10] The test with a random set of questions will be started by selecting any of the sub sections. Simultaneously a timer will be started. The question contain multiple choice questions. [3]After that, a score board will be displayed indicating the individual score. As the given app is online app. We have the advantage of accuracy and speed both as results are computer-generated in nature.

Conclusion and future work

This research paper discusses about the fine points and flaws of top android quiz applications. By considering the need of the students for placements and other entrance exams, this application has been developed in the most preferred mobile operating system i.e. Android[2].

This application has been developed to overcome the flaws in the existing system like maintaining score board along with a user friendly and attractive and easy to use user interface.

It has been designed to ask both type of questions like multiple choice ones. This abilities of this app helps to take the assessment of the user more easily.

It is designed as a preparation tool for job aspirants and various aptitude tests and as it is more of a general quiz enhances individual's general knowledge in a way too[3].

Easier to compute scores of multiple users using this technique in a short time period.

Time-efficient processing takes place.

No manual computation of data, automatically done in digital manner.

Answers are pre-defined in the database which validates the answers automatically[1].

Easier to process system and time-complexity is also very less hence it is time-saving.

To conclude, this is a simple Online MCQ Quiz application which enables a developer to punch MCQ question to system which will be stored in SQLite Server database and able the student to attempt any test for once[1,2,3].

The marks of each individual user will be calculated according to questions they attempt and will be displayed by the system to them in the form of immediate notifications even in their mobile phones or other devices.

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