

QuizBox Android Quiz App

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Abstract— Modern hand held devices such as smart phones have become increasingly powerful in recent years. However, there are some applications that allow users to flexibly execute tasks which are done by personal computer (PC), laptop etc. As mobile devices are becoming more like PCs, at sometime they will come to replace objects to accomplish necessary tasks. If any mobile applications has developed to mitigate administrative work as well as fulfill user (other than administrator) requirement, then task can be complete within the smart phone. QuizBox, which is developed for Android based platform falls into this category. The primary objective of “QuizBox” is to take quiz for any individuals through internet. Multiple choice questions (MCQ) will arrive for any student with certain time limit for each quiz. All questions, answers and timer must be configure by an administrator and these administrative tasks including user creation can be done from “QuizBox Application”. Besides, report will generate with score where administrator can check for students's result.

Keywords—User Interface, Software Development Kit, Operating System, Android Studio.

I. INTRODUCTION

The main objective of “QuizBox” is to facilitate a user friendly environment for all users and reduces the manual effort. In past days, quiz is conducted manually but in further resolution of the technology we are able to generate the score and execute the queries automatically. The functional requirements include to create users that are going to participate in the quiz, automatic score and report generation and administrative tasks like add, delete, update for admin privilege users. In this application, all the permissions lies with the administrator i.e., specifying the details of the quiz with checking result will show to interviewee or not, addition of questions and answers, marks for these questions, setting timer for each quiz and generate report with score for each quiz.

II. REVIEW OF LITERATURE

A. Existing System

Up to now we take examinations on paper, the idea to take examinations in our device led us to creation of the application. Earlier, correction of the answers is also a big problem to correct manually so our application gets rid of the heavy work of correcting each and every answers in manual way.

Disadvantages:-

- Need more time to take test.
- Difficulty in verifying.
- Manual Record Keeping System.
- More man power
- More paperwork
- Possibility of Human error
- Time consuming
- Needs calculations

B. Problem Statements

This application is developed for educational purposes, allowing the staff to prepare the questions for different examinations conduct at Informatics Institute for Postgraduate Studies (IIPS). Our application has many sub categories. It provides many fields for students and learners about the computer science for the learning purpose. The categories are Data Structure, Web Security, WebLanguages, Software engineering, Database, Multi Media, Web Design and Network. These are most of the subjects that are taught at the Informatics Institute For Postgraduate Studies (IIPS) to the students of higher diploma.

C. Proposed System

The aim of our Proposed System is to manage the details of Students, Examinations, Marks, Courses, Papers. It manages all the information about students, their results, answered papers, students. The system is totally under control of Admin and thus only the admin is given exclusive access to the questions and other database contents. The objective of the of the project is to build an application program to reduce the manual work for managing the examination and aptitude conduction related content. It tracks all the details about the marks scored, courses available, question papers.

The basic algorithm that will be implemented for working of this proposed system is as follows:

1. After login with username and password, Role for that particular user will verify from server database.
2. If user is admin, following options will appear for him:-
 - Quiz
 - Question and Answer
 - Report
 - Users

Above four options can be added, edited and deleted by admin.

3. Score of the students will be available to admin in read only mode.
4. If user is student, all active quiz list will enable for giving test.
5. Quiz will execute within certain time limit. It will end after that limit or once all questions has been answered.

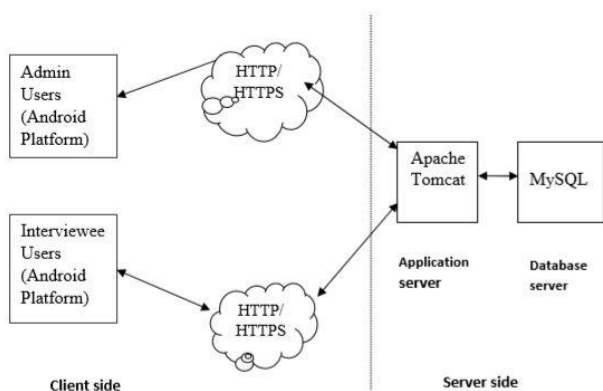
III. METHODOLOGIES

The Proposed system will have the following module:

1. Implementation of Client-Server Architecture
2. Creation of Android Quiz App
3. Synchronization of App's and Web databases

1. Implementation of Client-Server Architecture

The client-server view for 'QuizBox' online application. Administrator and Student user login to the application from any android platform which is define as Client side. On the otherhand, application server or web server and Database server are define as server site. Application server communicates with the database where all the information is stored. Client side and server side communicate between them with Http/Https.



2. Creation of Android Quiz App

Following are some basic components used to develop Android applications :

- activities
- services
- content providers
- components that receive and act on messages sent to all applications
- messages

A particular importance in application development is the resources that allows to separate the interface code. Activities represents the screen associated to an application. An applications can have one or more activities. Services are routines that run in parallel with the main thread. They do not have UI. They allow the execution of actions in the background without blocking the main thread execution and interaction with such application. Content providers are used to share data between applications. This data sharing is done through files, databases or other means. An alternative for content providers is the use of communication between processes. Applications can respond to the occurrence of events in the system by using classes derived from Broadcast Receivers.

3. Synchronization of App's and Web databases

A quiz application can be designed as client server style architecture, multitier architecture or as an standalone application. In case of application design with a client-server architecture, which uses a server to send data continuously to the application system needs bandwidth to run application and load on the server will be directly proportional to the number of applicants using application. One of disadvantage is that we are dependent on network to transfer the questions from server to app and in case of network failure it wont be possible to conduct a quiz. In this application MySQL database is used and all questions and answers are stored in the database. Each time a teacher wants to conduct a quiz, he uploads the questions to server and those questions appear in application.

IV. SYSTEM REQUIREMENT

- Hardware Requirement
 1. Processor: i3 or above
 2. Ram: 4 GB
 3. HDD: 50GB
- Software Requirement
 1. Operating system : Windows, Android
 2. Programming Language : Java, XML
 3. IDE: Android Studio
 4. Emulators: Bluestack
 5. Tools used: Android SDK Tools, Android Platform Tools, Android Developer Tools

V. CONCLUSION

QuizBox is the environment for the comprehensive testing of knowledge of a student/ Learner. This system is currently based on the testing of knowledge using apk. 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. This application has been developed to overcome the flaws in the existing system like properly categorizing the sections, providing section wise questions, random set of questions, maintaining score board along with a user friendly and attractive and easy to use UI.

VI. FUTURE SCOPE

In the future scope of this project, we can use this system and subject wise learning tools also with small modifications, so users can read or learn contents while they are on moving. This app is completely not dependent on network so users can use it while they are on move and network connectivity is also not good or not available. In the future this system can be used for the conduction of a pre-interview rounds to test specific skills in the candidates which will help to eliminate the unnecessary candidates.

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