QUIZZA APP – A flutter application

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Abstract:

As per the data shared by the HRD ministry, every year on an average of 1.5 million students get their degree in engineering, but due to the lack of skills required to perform technical jobs, less than 20 per cent get employment in their core domain. Companies are making the recruiting process so hard so that they get the best out of students. So, going through these processes is not an easy thing for a student. Therefore he/she should have that many skills to crack into these jobs. The main problem faced by the students is that they are not getting enough practice in general aptitude, technical aptitude and communication skills. As a student, he/she should practice these skills from the starting years itself. But the students are not getting enough time for practicing these skills due to some reasons. One of the main reasons is the overuse of mobile phones. According to the surveys, about 60% of students are wasting their time playing mobile games and using social media. So, converting these gadgets into useful things is better than forcing the students to stop using them. For that, this mobile app will help students to utilize their free time to learn and practice these skills without wasting their time using mobile phones. And prepare them to face the placements with confidence and crack those rounds with ease. Also helps to share questions that intrigue them, and create a wave of preparedness in your friends-circle.

Keywords: Students, Gadgets, Mobile App, Technical skills, Placements.

1. Introduction

1.1 About the Project

In this project, we are making a mobile application using flutter. Flutter is an open-source mobile SDK that helps to build native-looking Android and iOS applications from the same code base. The programming language used is dart. Dart is a client-optimized programming language for apps on multiple platforms. It is developed by Google and is used to build mobile, desktop, server, and web applications.

1.2 Objectives of the Project

The main objective of this mobile application is to prepare students to crack each round in the recruiting process with confidence and ease. Recruiting processes of companies include three main rounds. Namely, general aptitude round, technical round and interview round. The difficulty levels will vary from company

to company. As students approach their campus placements, students start getting tensed. The main reason is that they are not prepared enough for facing these rounds. They have no idea where to start. For all these problems, this app will be a great solution.

1.3 Scope of the Project

The project helps students to prepare themselves to face their placements. This app provides the most important topics that need to master to strengthen a student's aptitude and reasoning skills for the technical interviews. And also packed with just enough questions to race through during intense preparatory days from various disciplines of study, categorized neatly into relevant sections to facilitate self-paced and to practice various type of questions.

1.4 Advantages

1. The project helps students to prepare themselves for any subject.

2. This app provides the most important topics that need to master to strengthen skills for particular subject and also packed with just enough questions to race through during intense preparatory days from various disciplines of study, categorized neatly into relevant sections to facilitate self-paced step-by-step learning.

1.5 Disadvantages

1. Quiz cannot be stopped once it has started.

2. The app might increase the screen time of the student if not used wisely.

3. Record of the questions is not maintained for future reference.

1.6 Applications

The application is developed for educational purposes, allowing the users to prepare the multiple choice questions for different examinations conducted by companies for hiring.

1.7 Hardware and Software Requirements

- Visual Studio Code

- Android Studio

- Flutter

- Dart

- Windows 10 OS

2. Literature Survey

2.1 Existing System

The main problem faced by the students is that they are not getting enough practice in general aptitude, technical aptitude and communication skills. As a student, he/she should practice these skills from the starting years itself. But the students are not getting enough time for practicing these skills due to some reasons. One of the main reasons is the overuse of mobile phones. According to the surveys, about 60% of students are wasting their time playing mobile games and using social media. So, converting these gadgets into useful things is better than forcing the students to stop using them.

2.2 Proposed System

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3.Proposed Architecture

3.1 Functional Requirement

Login and signup authentication

A home activity which navigates to different categories.

Another activity which navigates to each topic.

An activity that provides to answer different questions and to display the final score.

Payment option to accept the donations from the users.

3.2 Non - Functional Requirements

• Each Activity must load within 1 second.

• App size should be below 30MB.

• Should be compatible with both ios and android.

• User experience should be the best.

• UI should be simple, user-friendly and attractive.
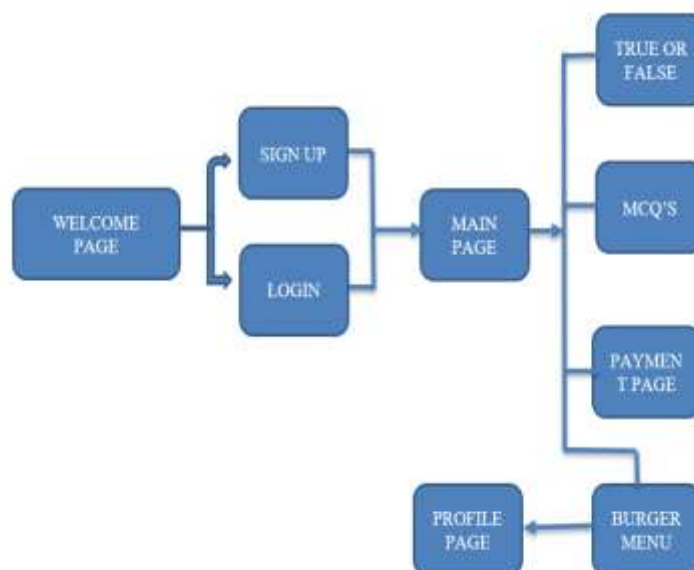
3.3 Architecture of the App

Fig.1. Architecture of app

4.Code Implementation

4.1 Modules

In this chapter, we are going to discuss the implementation of the App. There are 4 modules. Namely

1. Firebase module,

2. Main activity module,

3. Questions module

4. Payment module.

Now we can see more about these modules.

4.2 Module Description

Firebase module

To enter into the app first we need to authenticate with the firebase. If user data present in the data base then the app allows into the app else we need to sign up first. Signup requires user name, phone number, email and need to set password. Then user should login with given mail and password to access into the quiz.

Main activity module

In the system the two different category of questions (mcq's and true or false) are shown one by one to the user, the user can select any one of the categories. The user can also select the menu icon to see the drawer with profile module and logout function. The user can also select the about icon to see a card widget with the app information. With the help of the beautiful graphical user interface, the user can easily understand what to do. This helps to improve the user experience.

Questions module

In this module, different types of questions with choices are shown to the user. User can scroll down to discover more questions. When the user presses one of the questions, it will navigate to the answer module. Also, the user can go back to the topic selector module using the back icon in the top left corner of the screen. And the user also has the option to share the questions by pressing the share icon on the right side of every question.

Payment module

This app encourages the user to donate any amount of their choice in order to develop the app further. To achieve this user need to click a button this redirect to the payment page. In the payment page user need to give their name, phone number, email id, amount to be donated, and reason. Then this payment is integrated with the

third party application called "Razorpay". Then this amount is directly received by the administrator by the razorpay with the deduction of certain amount for their charges.
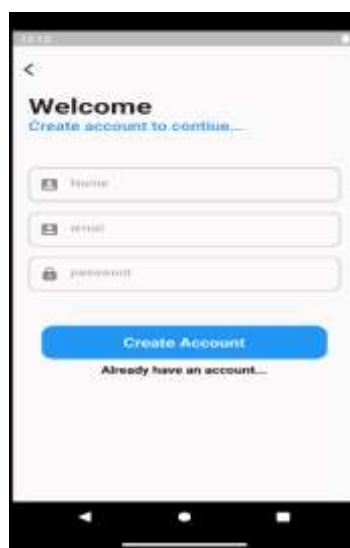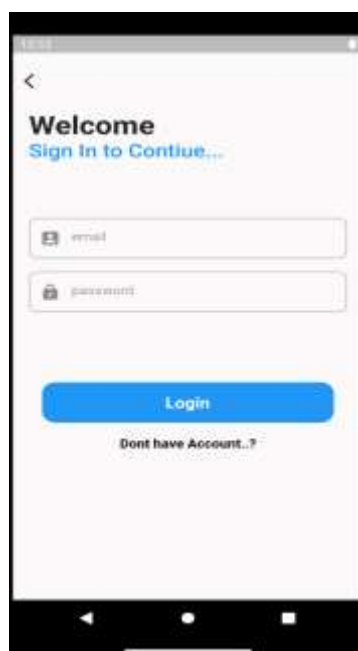
5.Results

Fig 2. Create account

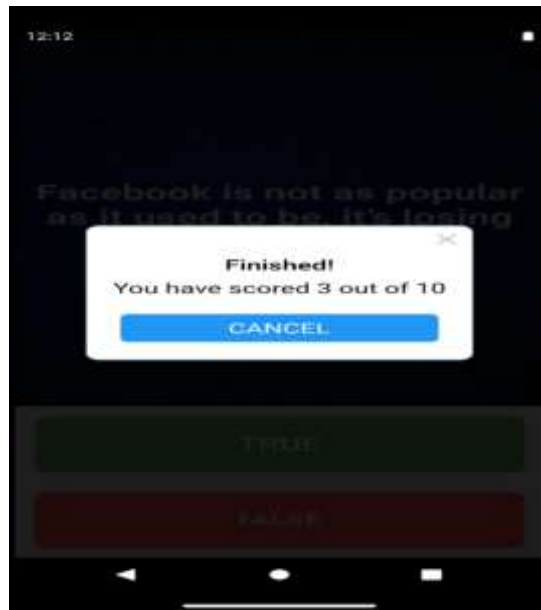**Fig 3.** Sign in

Fig 4. Question example1

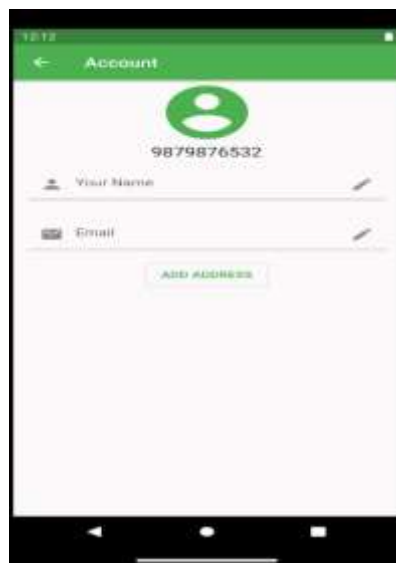**Fig 5.** Question example2

Fig 6. score
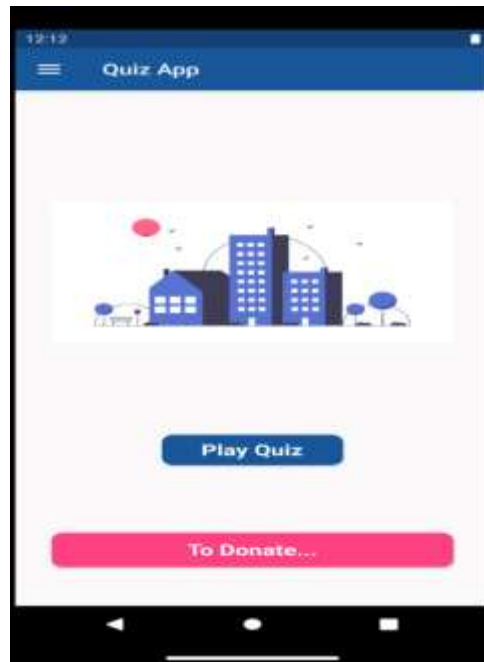

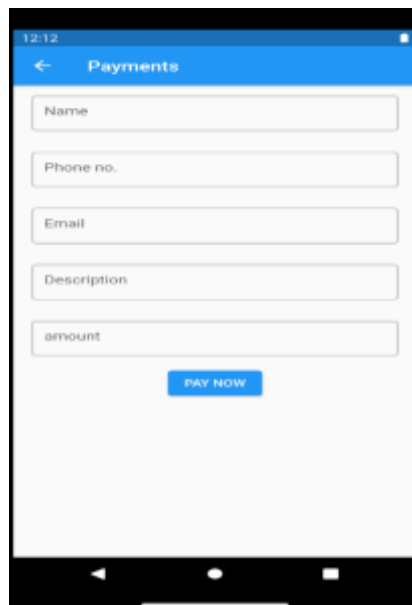
Fig 7. Account

Fig 8. Continue page

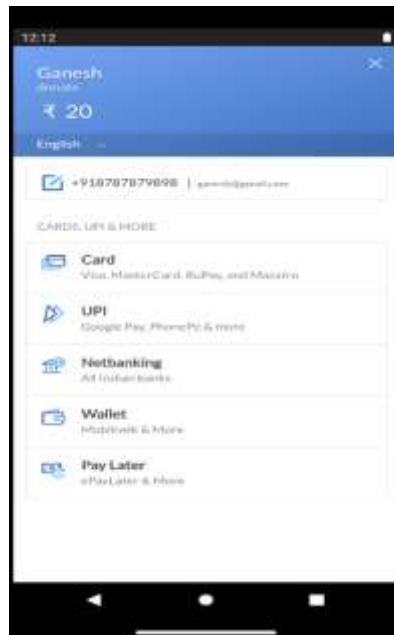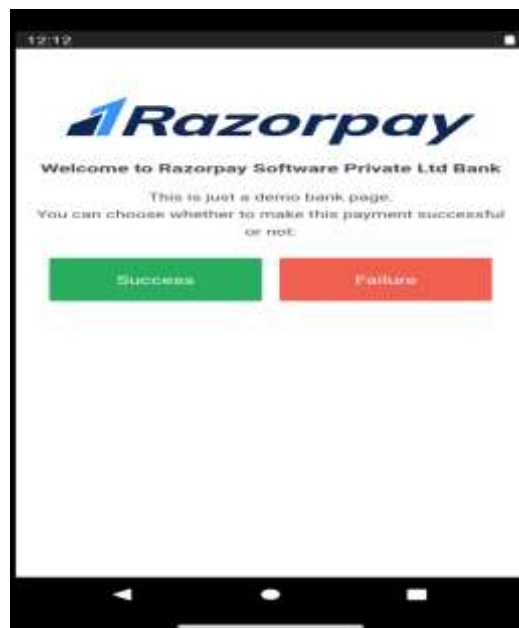**Fig 9**. Payment details

Fig 10. Payment method
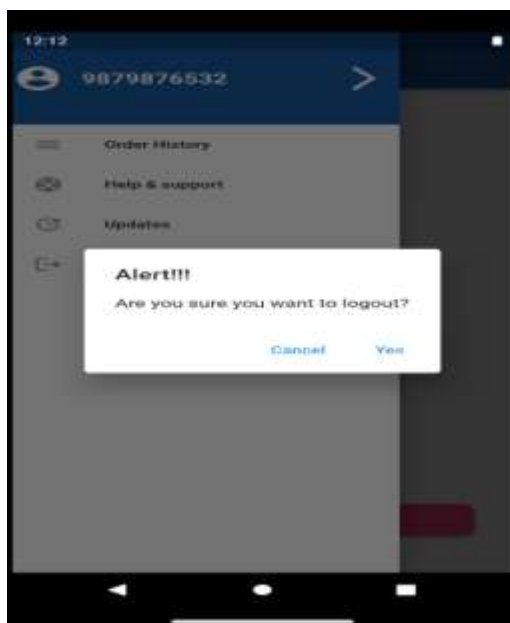

Fig 11. Payment Alert

Fig 12. Logout alert

6.Conclusion and Future Scope

We developed a flutter app called 'Quiz App' which is a very useful mobile application for all engineering students, especially for pre-final and final year students as their placements approach. The app provides all the required knowledge for a student to crack the placement rounds. The students can learn about a specific topic and then practise the questions to strengthen the aptitude and reasoning skills. Also, they can share the questions as well as the answers with their fellow friends. The app is fully Packed with just enough questions to race through during intense preparatory days from various disciplines of study, categorised neatly into relevant sections to facilitate self-paced step-by-step learning, students won't need to go anywhere else to hone their thinking skills. Therefore this app will be a great asset for the students as they approach their placements.

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