

SKILL MAESTRO - GRE E-PREPARATION ANDROID BASED SYSTEM

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Abstract— *The primary purpose of the project is to build an android application for an organization named Skill Maestro. Skill Maestro is a prominent institute which prepares students for competitive exams like GRE, GMAT, SAT, TOEFL and IELTS. The application is going to be uploaded on Google play store by the organization so that all the students preparing for these exams would be benefitted. Initially the application would encompass only GRE but other exams shall be included later by the Skill Maestro. Thus, the application is going to be used in real time. The application would consist of all the question patterns of verbal section like the critical reasoning, text completion, sentence equivalence, reading comprehension along with the very useful vocabulary list. The android application is also going to be embedded on the official website of the skill maestro. Thus this project is an honest effort to craft an all-in-one application for the GRE test takers.*

Keywords— *Graduate Record Examinations (GRE), Educational Testing Services (ETS), JavaScript Object Notation (JSON), Analytical Writing Assessment (AWA), Vocabulary, Quantitative analysis.*

I. INTRODUCTION

The Graduate Record Examinations (GRE) is a standardised test that is an admissions requirement for most graduate schools in the United States. The exam aims to measure verbal reasoning, quantitative reasoning, analytical writing, and critical thinking skills that have been acquired over a long period of time and that are not related to any specific field of study [1][2][3]. The GRE General Test is offered as a computer-based exam administered by the Educational Testing Services (ETS).

GRE test preparation options including GRE Private tutoring and GRE small group tutoring, GRE online course and classroom courses. Here the general guideline is, the more time you prepare, the better. The structure of the computer-based GRE revised General Test consists of six sections. The first section is always the analytical writing section involving separately timed issue and argument tasks. The next five sections consist of two verbal reasoning sections, two quantitative reasoning sections, and either an experimental or research section. There are indeed a number of resources available on the internet for this purpose but the choice of a

suitable application with appropriate skills, or at least the willingness to acquire these, is essential to successful learning.

This research is based on an android application which helps students to prepare for the GRE exam with an intelligent approach. As most students today are equipped with an android based smartphone, such an application can cater to needs of thousands of students smartly [4][5][6].

II. LITERATURE SURVEY

For the purpose of research, we installed and used some similar applications so that we could analyze them in order to find out about their limitations and also how we can overcome them in our application. All the applications mentioned below were downloaded and installed via Google Play Store which is available on all gadgets operating on Android Operating System [7].

2.1 Magoosh GRE Flashcard

This is one of the top applications used by the students with around 4,680 downloads. This app is dedicated only for flashcards. We believe that flashcards are only useful when used in hard print and kept on the study table instead some smartphone application. We also experienced a lack of response by the developers of this application whenever we encountered some problem. With magoosh developers, this problem could be due to the plethora of users but still it is a point that we would like to avoid in our application.

2.2 Painless GRE

Though not among the most popular, it's still among leading applications with around 3600 downloads. It contains a vocabulary list with nearly 4000 words. We noticed that there were plenty of words in this wordlist which were not of adequate importance by the GRE point of view. There were lesser words which frequently appear on the GRE or are of substantial importance. Another observation led us to the point that all these words are not verified by some expert or institution.

2.3 Barron's Essential GRE Words

This application is developed by the publishers of a very popular book series on GRE i.e. the Barron's. Unlike the book, it offers a very limited number of words in form of flashcards until we pay \$5 USD. After paying the amount, new flash cards do unveil themselves but response from the developer team remains to be morbid as before.

2.4 Vocab Crown

It is a relatively newer application that has been introduced with a different concept. It contains a visual mnemonic for each word so that learning becomes simplified to a great extent. The problem exists in the limited quantity of words which are only around three hundred. Similar to painless GRE, this application too does not contain the content which has originated from a trusted source.

2.5 Applications for the Quantitative Aptitude Section

There are a few applications available on the Google Play Store which are dedicated for the Quantitative Aptitude section. These apps are few in number when compared to the applications which focus on verbal section. Some of the examples are Pocket GRE Math, GRE Quantitative Ability Quiz, Magoosh GRE. We found out that our analysis for all these applications was nearly the same. The content on these applications is not changed on a frequent basis. As mathematics is all about practice and lots of problems, such a flaw makes the application useless after those questions are attempted once. For using the application again, the user has to wait for the developer to upload new problems.

III. WORKING

The application consists of three sections. The verbal section, quantitative aptitude section and the sample test section. All the sections have different sub-sections and topics. In the verbal section, flash cards have been included for the purpose of vocabulary. In these, a list of English words are included with an option named Show/Hide. It is similar to studying with actual flash cards as the answer is not given directly with the word. The user can guess the answer and then choose to show the answer to determine his correctness.

Similarly, when a user takes a test, text files are loaded via JavaScript Object Notation (JSON). These files contain questions and answers in a similar pattern to that of GRE. Each question is provided with four choices. As the user makes a choice, the counter value increases or decreases depending upon the answer. If the answer is correct, then the counter is increased by 1 or decreased if it's wrong. Counter value remains unchanged in case no option is selected. The user can keep attempting questions by pressing the next key. After a user presses the finish button to end the test, he is given three options namely review, retake and quit.

The review option highlights the correct answers in all the questions. If a question is not attempted then the correct option is highlighted in the color green. If the question is attempted correctly then nothing changes with the correct answer being emphasized in green. But in case the user's choice is wrong, then it is highlighted in red while the correct answer is highlighted in green. The retake option provides an opportunity to take the entire test from beginning. If a user chooses to quit, the sample test section is closed and the user is taken to the main page.

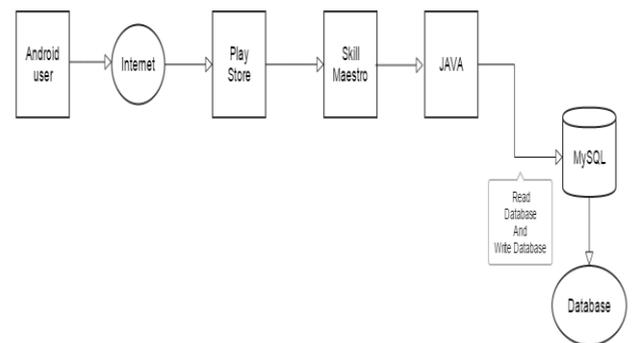


Fig 1: Block Diagram

IV. SNAPSHOTS OF APPLICATIONS



Fig 2 : Flash Screen



Fig 3 : Main Page

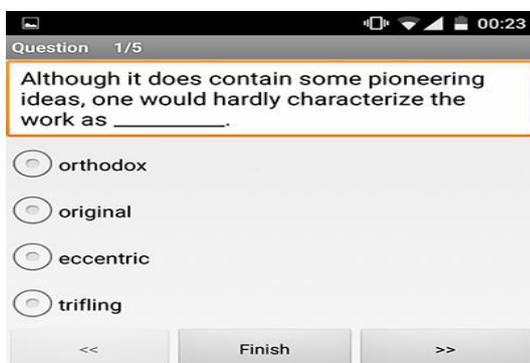


Fig 4 : GRE questions

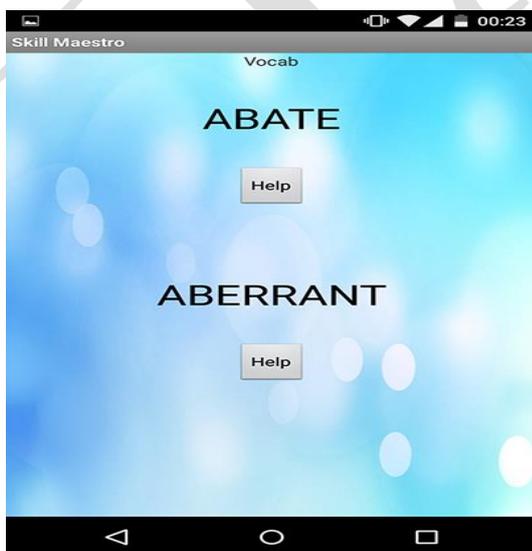


Fig 5 : Flash Cards

V. CONCLUSION

The usage of study aids such as android applications is another contemporary trend towards personalization and individualization of learning that is supported by advancements in information technology. However, it imposes great demands on its creators who must necessarily comply with new requirements if they want their development to be a success. On the other hand, it makes students responsible for their own work. Thus, it is challenging both for its creators and students. The first conclusion we are able to draw from this research project is that there is more than one way of understanding the role of developer in this process. It can be termed as “dynamic” and has various aspects related to his responsibilities. The realm for scope of advancement of such teaching and learning aids is extremely wide and is expected to expand exponentially in the coming time. Thus, it's better if the developers of such application lay adequate emphasis on their responsibility part. It's not just about mere responsibilities towards the society but it's about being a part of shaping careers of thousands of students.

References

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