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Scribe-Free Way for the Specially Abled to Write Exams

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Abstract
The specially-abled face a lot of issues when it comes to taking up exams. They require specific assistance for taking up their exams known as a scribe. However in today's world finding a scribe is of great difficulty. Even if the scribe is found there are a lot of other practical difficulties while using a scribe to write exams. One such practical difficulty in using a scribe to write exams is that the scribe may not be aware of the technical terms used by the candidate. This causes loss of marks for the candidate if the scribe makes an error. The scribe should also have a legible handwriting which again is a problem. Our project aims at eliminating the need for a scribe and allowing the candidate itself to take up their exams by leveraging the latest technologies such as speech recognition and synthesis. This is achieved with the help of an android application, using which the questions can be stored in a database using administrator login. A separate candidate login is given. The question will be read out to the candidate and the answer will be taken as a voice response.

Key-words: Speech Recognition, Speech Synthesis, Android, Android Studio.

1. Introduction

The growth of the Internet, especially the Web, has already had an impact on how science is taught and will no doubt do much of that in the future. In the educational environment it provides a powerful and responsive site for students. Web based Examination programs can also perform online tests as a general course if the Test can be taken using the Android Application, Here Questions and Selections pass by voice our project is delivered in real time. Marking of the test is done automatically and quickly; Wisdom is comforted by this, time-consuming tasks. Different types of the

same question can be made for different students. Tests can be taken at any time. Tests can be taken anywhere. specially-abled you can sign up for the test using their app. Feedback will be received from the user by voice. Results are also delivered by voice. Marks are automatically collected, analyzed, and distributed for the same purpose as assessing the learning and teaching process. In this world, people with special disabilities can access information through a variety of devices. As one standard method for people with special disabilities that was intended to be used for voice recognition. For example on the Android Phone there is a structure that allows people with special disabilities to share that App as a normal person. When they touch any button or display option on the phone it is designed to respond quickly by providing a voice output. So the visor person can use all the apps provided on that Android phone (they can access all the options as a normal man).

2. Scope of the Paper

Many developing countries continue to provide educational services to highly skilled students in "special" schools. And all students, regardless of their personal circumstances, have the right to enter and participate in the education system, to the best of their ability and ability. However, with the rapidly growing population, the need for technology in the education sector is imminent. With the existing competitive assessment system, students, especially students with special disabilities, face problems while working with the program, conflicts arising from a personal mediator or author and the ability to deal with other students. Our project, through speaking technology, seeks to provide solutions to some of these problems by building a collaborative program. Therefore, the app will help to create an environment that provides equal opportunities for all students in taking competitive exams. This will greatly enhance the current education system for all by giving everyone a fair chance.

3. Existing System

People with special disabilities who want to do tests need an author. The writer writes the answers that the writer will specifically tell them. The traditional way of doing tests for people with special disabilities requires a writer. These students face difficulties in using test writers. It is difficult for them to report responses to writers. The writers may not be able to comprehend certain technical terms that the baptism candidate may use in order to provide the answer. This leads to misinterpretation of the term or writing the wrong term which eventually leads to marks being

reduced for the candidate, in spite of the candidate saying the correct answer. The examination system for specially-abled allows volunteers to write exams on behalf of specially-abled candidates. Finding a responsible person to do the writing for them in the examination hall is no less a source of tension for specially-abled students than any other problem. Lack of scribes is particularly a hindrance for specially-abled students studying for advanced degrees in universities. Also, nowadays, it is very difficult to find a volunteer to act as a scribe for the specially-challenged.

The major disadvantages are summarized as below:

1. There is some amount of time lost between the candidate dictating answers and the scribe writing.
2. The scribe may not always be accurate while writing the answers. The scribe may not understand the technical terms said by the candidate.
3. Manual process of the candidate reciting the answer and the scribe writing it down has to be monitored to prevent any malpractice.
4. The specially-abled students cannot act independently during their examination.
5. They have to seek the assistance of another person
6. The problem of finding a responsible scribe nowadays is difficult
7. The handwriting of the scribe should be legible, otherwise it's going to cost the candidate his/her marks.

4. Proposed System

Our project proposes a system, wherein the specially-abled do not require third-party assistance to take up their exams. In other words, it can be put forward as a specially-abled candidate can take up their exams without being dependent on another person. Our project uses a mobile application to interact with the user. The application can be used to set questions and attend the exam. Set questions facility can be used by the administrator to set the questions that are supposed to appear in the examination. The administrator has a separate login. The candidate will be given a separate login using which the candidate can take up their exams. Once the candidate starts the exam, the questions will be read out to the candidate. The candidate can touch anywhere on the screen for the app to start listening via the google speech recognition. The candidate has to clearly specify the option he/she wants to give as answer. If the option is not recognized, the app will repeat the question once again. Otherwise, the app will store the voice response. Once all the questions are answered, the

exam will be submitted. Our project, the Android system through speech technology, seeks to provide solutions to some of the issues facing the disabled specifically by creating a collaborative program. Therefore, the app will help to create an environment that provides equal opportunities for all students in taking competitive exams. On android phones there is a structure that allows people with special disabilities to interact with the app as a normal touch. When they touch any button or display option on the phone it is designed to respond quickly by providing a voice output. So people with special disabilities can use all the facilities provided on that Android phone (they can access all the options as a normal man).

The advantages are summarized as follows:

- The candidate can easily give the answer by voice without any confusion.
- It reduced candidates' depression. The proposed system is user Friendly.
- There is no need to give the input as manually.
- People with special disabilities can also do tests as a normal person.
- Tests can be taken using an android application, Here Questions are read out using voice output and the answer choices are given through voice input.
- The specially-abled can login the exam using their Application.
- The answer will be obtained from the user through voice and stored in the database.
- The candidate need not be worried about finding a scribe.
- The candidate can write their exams independently without relying on third-party assistance.
- The specially-abled are given a fair chance to write their exams on their own.

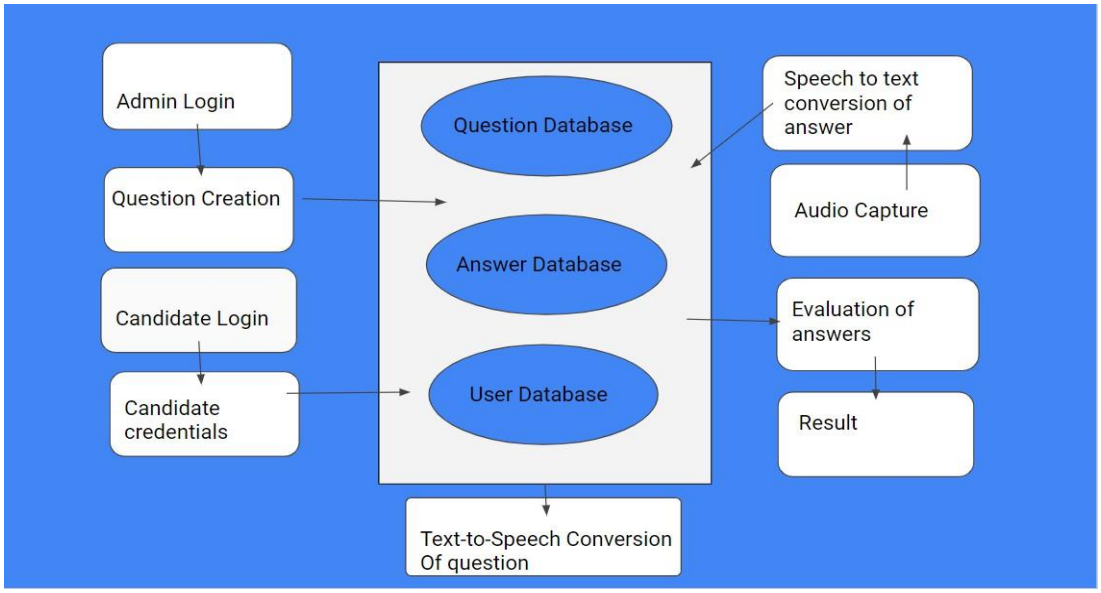
5. Novelty of the Idea

- Each candidate will be given a login ID and password for the entering into the exam.
- The candidate will be verified to check if they are the genuine candidate.
- The candidate will be proctored through camera incase of taking the exam from home. Otherwise there is no need for camera access.
- Once the candidate is verified, each question will be read out to the candidate.
- The candidate has to listen the question and give their answer through voice.
- The important keywords to be used by the candidate for their convenience are:
    - Next.

- Previous.
- Repeat.
- Respective Question Number.
- Yes
- No
- Submit.

6. Architecture of the System

The System structure as indicated below:



7. Methods Used

Our main objective is to do speech synthesis and recognition, i.e basically text-to-speech and speech to text conversion. Since our project has an android frontend, we have used android packages to do speech synthesis and recognition.

A. Speech Synthesis

Speech integration is simply a way out when a computer or other device reads aloud the words of an actual or imitated voice played through a loudspeaker; technology is often referred to as

text-to-speech (TTS). There are three areas involved in this process, namely text-to-speech, phonemes, and phonemem sounds. The big problem is that the text is not clear: the same text can mean more than one thing and you usually have to understand the meaning or make a guess what you read in order to read it correctly. So the first phase of speech compilation, often called pre-processing or general practice, is about reducing ambiguity: it is about reducing the many different ways in which you can read a piece of text to the most appropriate one. Progressing involves entering text and cleaning it so that the computer can make a few mistakes when reading words aloud. Things like numbers, dates, times, abbreviations, acronyms, and special characters (symbols, etc.) need to be answered - and that's harder than it sounds. Progress should also deal with homographs, words are pronounced differently depending on what they mean. After finding the words that need to be said, the speech synthesizer should now produce the sounds of speech that make up those words. Theoretically, this is a simple problem: all that a computer needs is a huge list of words and details on how to pronounce each word. For each word, we will need a list of phonemes that make their sound. Okay, so now we have turned our text (our written word order) into a word list (sound sequence that needs to be spoken). But where do we get the basic phonographs that are read aloud when they translate text into speech? There are three different ways. One is to use phonograph recordings, the other is for the computer to produce the phonemes themselves by creating basic sound waves (such as a music synthesizer), and a third way to mimic the human voice. Since our project uses Android studio and Java, all of the above steps are managed by the Android packages themselves.

B. Speech Recognition

Speech recognition is the function of human input that enables machines to respond to text, voice, or other input. Also known as speech recognition (STT) Speech is a force that brings human size to different electronic devices. In today’s world, cloud-based computers are used by voice-controlled people, providing conversational answers to many types of questions. Speech recognition training allows AI models to understand the unique inputs that are present in recorded audio data. Some speech recognition systems require "training" when each speaker reads a separate text or vocabulary in the system. The system analyzes a person's voice directly and uses it to process that person's speech recognition, which has led to further reinforcement. The software is designed in such a way that it completely covers all the nuances present in a person's speech such as speech length, voice pattern, tone frequency, etc. to properly train a speech recognition system, you need to provide quality information for processing the input out there. These forms of systems are highly

beneficial for people with disabilities. If a person is specially abled then they can make use of automatic speech recognition or advanced voice recognition to make natural voice recognition work. Since our project uses android studio and java, all the above said steps are handled by the android packages itself.

C. Android

Android is a Linux-based operating system for mobile devices such as smartphones and tablet computers. Developed by Google's Open Handset Alliance. Android has a large community of developers who write applications ("apps") that extend the functionality of devices. Developers write mainly in the custom version of Java. Android contains a Linux kernel-based channel, with middleware, libraries and APIs written in -C and an application that works in the application framework that includes Java-based libraries based on Apache Harmony. The Android kernel is based on the Linux kernel and has additional changes to Google building without the usual cycle of upgrading the Linux kernel. Android does not have the traditional X Window System and does not support the full set of standard GNU libraries, and this does it has been difficult to install existing Linux applications or libraries in Android. Android. Speech.tts. Text To Speech. OnInitListener, Android. Speech.tts. Voice, android. Speech.tts. Application for synthesis.

8. System Implementation

Each candidate will be given a login ID and password for the entering into the exam**.**

Register

The first module is a subscription module. In this module a visually impaired person or a person with a special disability can be registered before giving a test. The required information must be completed by a third party or a designated consultant. After all the details have been completed correctly the registration ID will be given to the candidate. The inspector can use this registration id to sign in and perform the test.

Exam Administration

Admin can feed different types of questions on a variety of subjects into the centralized database and also with a number of options for each question. These questions will be fetched one by one in random order. Only the admin has the rights to store and modify the question bank to the centralized database. These rights can be given to admin by providing secure login. The candidate will be verified to check if they are the genuine candidate.

Voice Input

Once the candidate is verified, each question will be read out to the candidate. Choosing the answer for objective type questions by specially abled students is done via voice comments using Android App.

Auto Grading

The system compares students' responses to appropriate responses, submitted by teachers. The registration id will be provided to the candidate. The inspector can use this registration id to sign in and be tested.

Result

The Android app quickly displays results that show the performance of the baptism candidate once the test is over.

9. Advantages of the System

The advantages are summarized as follows:

- The candidate can easily give the answer by voice without any confusion.
- It reduced candidates' depression. The proposed system is user Friendly.
- There is no need to give the input as manually.

- People with special disabilities can also do tests as a normal person.
- Tests can be taken using an android application, Here Questions are read out using voice output and the answer choices are given through voice input.
- The specially-abled can login the exam using their Application.
- The answer will be obtained from the user through voice and stored in the database.
- The candidate need not be worried about finding a scribe.
- The candidate can write their exams independently without relying on third-party assistance.
- The specially-abled are given a fair chance to write their exams on their own.

10. Applications of the System

- The system is mainly used to facilitate the specially-abled to take up their exams without being dependent on a scribe.
- The system can also be used to conduct examinations for different types of specially abled people other than hearing and speech impaired.
- Our system gives everyone a fair chance.

11. Conclusion

This project can be very helpful for anyone with a special disability to easily admire their talent with the Quiz app like other people. In our project we will be bringing the whole abled program specifically that can provide a visual interface. Tests can easily write a test by providing simple voice commands. Therefore, people with special disabilities can easily write the test as a normal man without much difficulty. The need to conceive in particular is therefore not dependent on the authors in writing. With this they will be able to attend more tests in the future and we will try to improve in the future with feedback collection.

12. Result

The mail aim of the project is to enable the specially abled to take up their exams independently without the help of another person or scribe. We believe that this will give them also

fair chance and will encourage them to pursue their path of interest. We believe that our mobile app will help them for it. Thus we have implemented our idea as a mobile application.

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