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Online Examination for Visually Challenged People

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ABSTRACT

The online examinations are in common for all competitive examinations in order to reduce the workload of the faculties as well as the students. Till date blind peoples cannot attend the online examinations due to various factors. To make them to participate in such exams like ordinary individuals an advanced system is proposed which make them to furnish their talents in all aspects of examinations conducted. Here the questions which are available as softcopy are being dictated to the students with the help of voice board, the blind peoples can hear it by using head phone. The applicants can answer it by pressing the keys provided in the keyboard. After answering the reply has been saved in the server by IOT (Internet of Things).

Keywords: Voice board, Keypad, Headphone and IOT

1. INTRODUCTION

The web has the world large influencing within the science way. In our mission the blind individuals finished the online examination making use of the IOT. By way of utilizing the mobile telephone and the PIC Microcontroller the examination are take place. The exams can be taken each time by way of the blind folks the scan can take utilizing the voice board question are mentioned through the voice in head telephone. And the given question are send to the voice board. The voice board convert the textual content into the voice and ship to the head phone. The keypad having best the restrained keys so there won't any confusion arise to the men and women. The keypad interface between human and microcontroller. The answer are display within the liquid crystal display and the reply are retailer in IOT for the long run intent.

For the blind people: The blind people has to want the one other man or woman aid to attend the examination. So on this approach blind folks may attend the net examination without the need of one other man or woman they will attend the examination effortlessly. In future they attend the web examination like a traditional human.

Existing system: In quite a lot of interfaces blind individuals could get the examination. The process have been use for blind men and women with the aid of voice realization that may via voice recording method .The content material had been already recorded in such layout , that recorded question are hear via the blind persons. The blind people interact with the system voice may just given as enter.

These approach used within the various skill examination with the aid of the help of many gadgets. For instance: In wise telephone they'll engage with the gadget as common man. The touches any buttons or display choice are designed to giving voice output so a blind persons can with ease use the telephone(they will access the options like song, chatting, SMS and many others).

Disadvantages: The voice enter is even in a smooth method there could some mismatch occur. The noise suppression also arise for the lengthy word as enter. One of a kind languages rather than English they may not believe at ease with the aid of the blind folks.

2. LITERATURE SURVEY

[1] Sania khan, Sanskriti verma, Shewta Agarwal, prateek krishnatrey, Shivam sharma from this paper the methodology used is voice synthesis. The online examination has been done through the voice recognition and voice synthesis. The online examination with multiple choice question. The system used in the open source technology. Disadvantage in the paper is mismatch may occur while answering the question in the mobile phone. Limited languages only used to answering.

[2] Shunmuga sundari, Essaki Durai.K, Srinivasan.S from this paper the methodology used is voice recognition. The voice recording system has been used to recorded the already in certain format. They has a facility provided to use the mobile phone. The peoples are touches any button are display option in the iphone have been designed to react as soon as by given voice input. Disadvantages in this paper while giving a long word as input there may be noise suppression and also for different language. Other than English language are not feel comfortable.

[3] M.Bernardine Dias, M.Freddie Dias, Sarah Belousov, Mohammed kaleemur Rahman , Saurabh sanghvi in this paper the methodology used for studying purpose by the braille writing tutor.it may also take by the teacher and the student. And mistake are easily identify in this method.it can help to increase braille literacy.it also faster to use. The disadvantage in this method is costly and it is slow learning process. It may be used only in the developing Countries.

[4] Akriti Vats, Apoorv tendon, Deepam varshney, Amit sinha in this paper VOT device controlled by the human voice

framework for the upliftment of blind users. User are provided with the hardware equipment and the login used with the thumb impression. The concept based on the voice recognition. Disadvantages in the paper that voice mismatch may occur and language problem. The uneducated people may get difficult while software handling.

[5] Piotr kardy's, Adam Dabrowski, Marcin Iwanowski, Damian Huderek in this paper the blind people may call send the text messages through mobile. The concept is based on the "phone book" and the additional options. The battery has been monitoring through voice commands and the volume and the lock screen switch ON and OFF the phone by the voice commands. Disadvantages in the paper cannot use the mobile phone frequently and people cannot use the android mobile. The implementation of languages can still be considerable problem.

3. PROPOSED SYSTEM

By means of when you consider that these risks the net examination may just take location through keypad technology. At the same time the textual content given as the enter by means of the cellular mobile the textual content send to microcontroller via utilizing the Bluetooth. The question are randomly given to the candidate. The microcontroller ship the textual content to the voice board that can covert the text to voice. The voice hear by means of the blind people by way of the head cellphone. After listening to the query the answer press by means of the blind men and women using keypad.

The query repeat twice within the headphone. The timing buzzer has been set to indicate the query time for the single query. For single question the indication are given by the timing buzzer. The a couple of option are given to the blind men and women for answering after answering the reply are stored within the server for future motive.

Advantages: It may curb the blind person melancholy whilst answering the question. They are going to effortlessly answer the query via urgent the key with none confusion and mismatching words

Block diagram

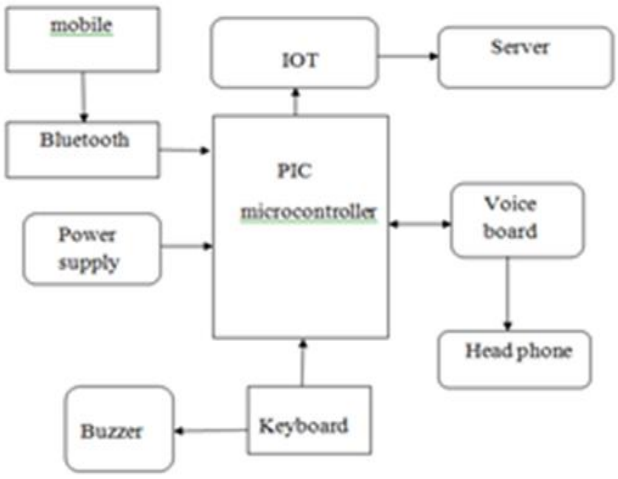
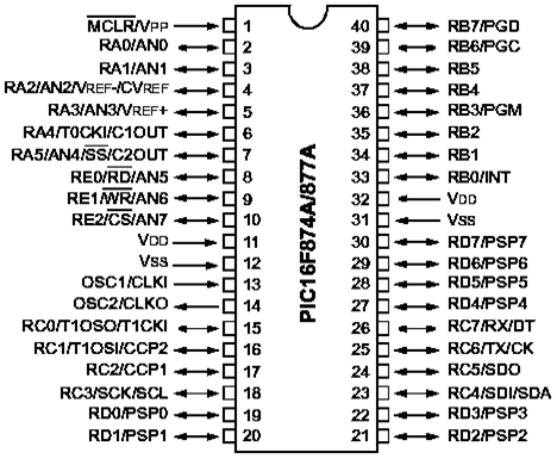


Fig.1. Block diagram

4. HARDWARE ARCHITECTURE

PIC microcontroller: PIC16F877A consists of clock circuit and power on reset circuit the clock circuit built around the crystal oscillator and ceramic capacitor. Frequency stabilize by the crystal oscillator and the capacitor stabilize the amplitude of the clock. The controller connected with LCD display. PIC16F877A has high performance and low power consumption. Speed of the controller is DC-20 MHZ clock input



Pin diagram of PIC16F877A

Bluetooth: Both the microcontroller and the mobile having the Bluetooth to transmit and receive the data. The text transmitted from the mobile to the microcontroller using HC05 Bluetooth. The power supply is 3.3V and the size of the 26.9mm*13mm*2.2mm.

IOT (Internet of Things): LCD is used in the numerical indicators and digital watches. The LCD consists of two glass panels the liquid crystal material sand witched in between them. Inner surface of the glass coated with the transparent electrodes. One polarizer are pasted outside the two glass panels. These polarizer rotate the light rays passing through them in a definite angle in a particular direction. Its power supply +5v and also available in +3v.

Fig.2. IOT

Keypad: The keypad is using as the interface between the human and the computer. The limited keys has been used. Only option keys (A,B,C,D) and other options forward, reverse, skip are used in the keypad.

Future scope: In this task proposes a method a good way to create a revolution in a global of education via providing a simpler way for visually impaired folks to take tests simply as typical scholars do. The system acts as a mediator who converts the responses which might be given orally to the process to appropriate and wanted structure i.e. Text.

When user gives response speech to text converter is invoked and it converts the response to voice. In a similar fashion, different major things like timer and effect can also be heard. Each the things will also be invoked orally by just remembering few instructions. There are extraordinary sections in the process. User can decide on any person option by way of voice command. The whole procedure works on voice command so that every person can use the same approach including visually impaired people.

5. RESULTS

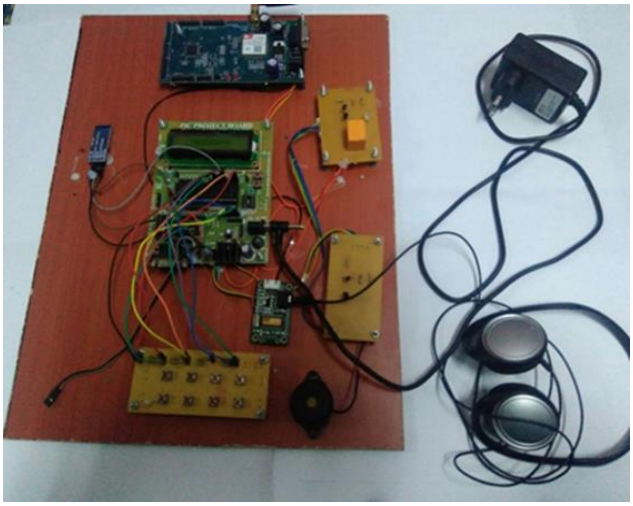


Fig.3. Experimental setup

6. CONCLUSION

This challenge very useful for the blind peoples to admire their talent through doing the online examination like different peoples .Those peoples could try to do the extra growth by doing the web examination with none confusion .In future they may attend the net examination without difficulty through this challenge.

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