

Speaking System For Mute, Blind And Dumb People

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Abstract

Now a days communication has become so easy due to there Is lots of technologies are developed but the blind, mute and Dumb people find difficult to use this technologies because Of people are not able to speak. they are not convey their message to the normal people. In order to overcome their problem of the mute,blind and dumb people. This project is very useful because of that they able to speak and convey their message to the normal people. According to the world health organization the 5% people are suffer from hearing problem and in our India around 1.3% people are unable to hear.

Index Terms— Arduino, Speaker, keypad, Bluetooth module.

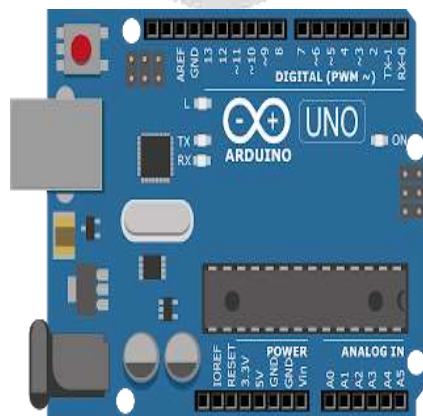
I. Introduction

In this modern world technology lots of development are done but the communication between the normal people and the mute and dumb people are very difficult without translator and their own sign language they do not understood the message of normal people. In order to overcome this problem designing the human machine interface has drawn a great attention towards its field of research.

In this project the arduino Uno and Mini plays the major role of this project to give their language by pressing the keys on the keypad it process the signals and perform digital to analog signal further the process data is send to the wireless manner to the receiver section and analog is receive the message in the form of sound through the speaker. Thus with the help of this project the problem faced by mute people is communicating with the society can be reduced the great extend.

1.ARDUINO

Arduino boards consists of micro controller which can be programmed using software called arduino IDE(Integrated Development Environment)



Components Of Arduino

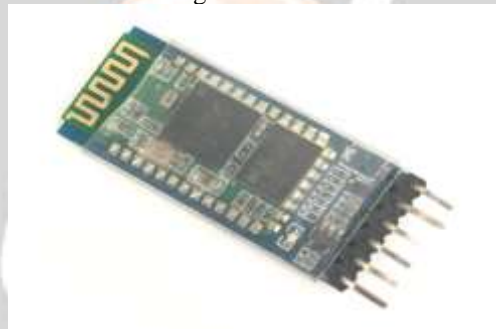
- Microcontroller
- Pins
- Power supply and USB
- Reset button
- Power LED indicator
- RX and TX LED
- Voltage regulator

1.2 KEYPAD

we are using total 12 digital keys on keypad which has a particular message are set on particular key. This messages are general message like where is ticket counter, where is washroom , etc. When mute person press any key on keypad this signal is digital signal they convert in analog signal in form of voice and hearing the output through the speaker.

1.3 BLUETOOTH

Hc-05 Bluetooth module is two way wireless communication device. This module communicate between microcontroller like arduino and phone. Bluetooth are taking an input arduino ,then it is acts as slave unit and they give the output in speaker or phone then it is acting as master unit.

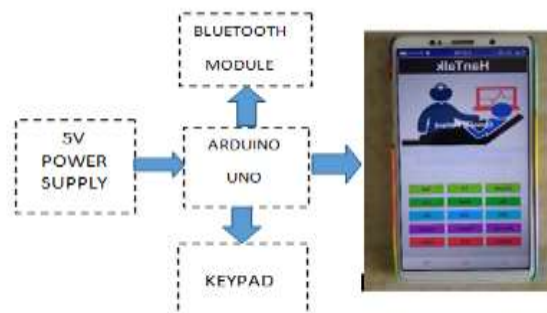


II. CONFIGURATION OF THE SYSTEM

The below diagram describes the arrangement of the proposed system .Here Raspberry Pi has been chosen to be the processing unit of the system because of its features and benefits. The usage of python code is due to its simplicity as compared to the other programming languages.

Here we have used raspberry pi 3 model since wireless or internet or Bluetooth connectivity is required

III. BLOCK DIAGRAM



IV. WORKING

The voice signal will be inputted into the mobile application device through its Audio Jack. This voice signal will be converted into text by using cloud search API and python programming

language. The text then goes to Mobile Application on the other end through or Bluetooth as per the suitable situation.

Our system also includes python code which will convert each word of the text coming from deaf person's mobile to speech which will be outputted through audio jack.

V. LITERATURE GAP

The mute and dumb make use of sign language to communicate which is difficult to interpret by the individuals who are not Well-aware of it. Thus, there is a need of building up a device that can interpret the gestures into text and speech. This will be a great step to make the communication possible between the mute and dumb individuals and the general public

VI. APPLICATION

It can solve the daily difficulties suffered by the people, who are cannot speak (dumb) or one who has recently undergone an accident and is not in a condition to speak about this health to the doctor or express his feeling to his family.

It can also be used by elderly people, who find difficulty in talking due to their bad heath conditions.

This can also be integrated in the field of automation where one can automate things without getting in direct contact of the machines/appliances that are to be automated or controlled.

It has wide application in defence sector and war equipment, where soldier will not put their life in danger and can control the artillery or explosive without coming in direct contact of it from a safe distant zone.

So, this system can easily communicate by just tapping the buttons on the system by their figures that results in different commands in text and audio format on any android Smartphone via an app.

But, its application possibilities are more in different fields.

VII.OUTPUT



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