VOICE CONTROL CAR USING IOT

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Abstract:-

Bluetooth controlled vehicle is an Arduino based venture created to control a vehicle through cell phone. Here we present a telephone controlled vehicle that can be controlled through an Android application on your portable. The control directions are sent through Bluetooth. And furthermore utilizing some sort of sensors like to change the way when it recognizes the impediment in the moving way .we are associating every one of the modules through Arduino. The work depends on Arduino is an open source prototyping stage dependent on simple to utilize equipment and programming. Arduino utilizes ATmega328 microcontroller. The vehicle which is associated with our gadget can be observed with voice directions, for example, left, ideal, forward and in reverse and so forth. It has fourteen computerized input/yield pins, 16MHz, quartz precious stone, a USB connection.it contains everything expected to help the microcontroller. We associate the Bluetooth module with the versatile application. When done the directions which we give through the versatile get sent to the Arduino by means of module. It acknowledges character by character from the sequential cushion sent by the application and consolidate them to shape a string. It at that point thinks about to the direction on the off chance that it coordinates the order is completed.

List terms: Bluetooth module, vehicle, Arduino board, l293D and so on.

Introduction

Smart phones are the most popular gadgets these days. PDAs are the most prominent devices nowadays. We will discover different applications on the Internet that abuses inbuilt equipment in cell phones, as Bluetooth and Wi-Fi, to control different gadgets. The venture is tied in with controlling a vehicle through voice directions. Bluetooth module is utilized to associate with the vehicle. Arduino utilizes ATmega328 microcontroller and some stockpiling cushions. Arduino be having inbuilt programming which is utilized to perform different activities. We are living in an innovation advancement period car industry has likewise been changing like some other current advances. Wise vehicle is additionally called the unmanned vehicle, it is a gathering of condition observation, arranging, basic leadership and multi-scale helper driving and different capacities. Present day remote advancements empower us to upgrade wellbeing, security, effectiveness and convenince. In the current framework the procedure is to associate the Bluetooth of a gadget to vehicle unit and do some essential activities. The gadget will be one of a kind for the specific vehicle it can't use in some other vehicle. A few autos are working with radio controller with the assistance of radio waves. In the current framework the vehicle associates with the Bluetooth and we can give basic directions, for example, making calls, playing music and perusing messages and so on however we can't work the elements of the vehicle.

RELATED WORK

The proposed framework primarily relies upon the ARDUINO chip, L293D and some different instruments. The ARDUINO board is utilized to contrast the direction and the string in the event that it matches, at that point the arduino control the activity of the engine ARDUINO is an open source framework. It utilizes ATmega328 microcontroller. Bluetooth module is utilized to transmit the directions from gadget to the arduino. The equipment structure of the framework contains different modules and the product configuration contains program which summoned in the arduino

programming. For the extra reason for directions we have to do controls in the program of the product.The arduino board contains the arrangement of advanced and simple info/yield (I/O) sticks that might be interfaced to different extension sheets or bread sheets.
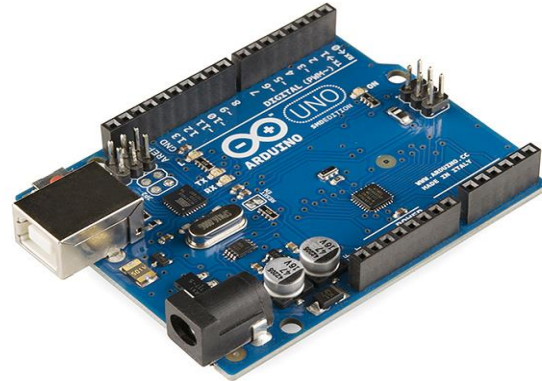

Fig 1: ARDUINO board

The sheets highlight sequential interchanges interfaces, including Universal Serial Bus (USB) on certain models, which are likewise utilized for stacking programs from the gadgets. The microcontrollers are commonly customized utilizing a lingo of highlights from the programming dialects C and C++. ATmega328 is a solitary chip miniaturized scale controller through which we can transfer a program and the microcontroller works different capacity in the framework. A Bread board is a development base for the prototyping of gadgets. The framework requires two engines and the 2 or 4 wheels. The framework needs fitting size of the body. All wheels are associated with the undercarriage and it is the casing work of the vehicle. 7805 is a voltage controller incorporated circuit. It is an individual from 78xx arrangement of fixed direct voltage controller ICs. The voltage source in a circuit may have vacillations and would not give the fixed voltage yield. The voltage controller IC keeps up the yield voltage at a consistent esteem. The xx in 78xx demonstrates the fixed yield voltage it is intended to give. 7805 gives +5V directed power supply. Capacitors of reasonable qualities can be associated at info and yield pins relying on the separate voltage levels.

The voltage controller contains three sticks those are input it takes the info voltage from 5v to 18v and second stick is ground i.e 0v and the last stick is yield the capacity of this stick is directing the yield. The framework utilizes a 12v battery this is the power wellspring of the framework.
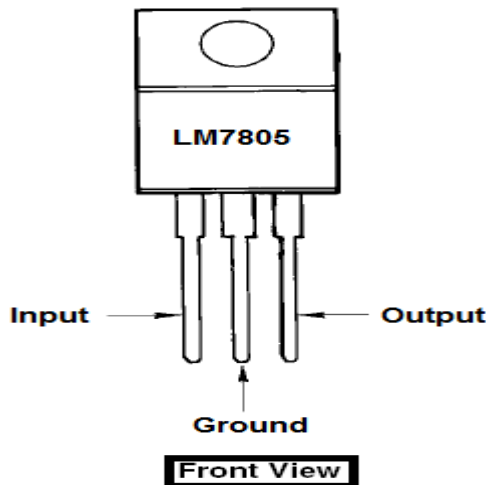

Fig 2: voltage regulator

A jumper wire is an electrical wire the gathering of jumper wires is called link. These jumper wires are associated with the bread leading group of the Arduino. A jumper wire contains two finishes are of connector or stick. The two engines of the framework are associated with the L293D it works the elements of the two engines.

PROPOSED SYSTEM

The venture is to control a vehicle through voice directions. In this framework the different voice directions will be given to the ARDUINO of the vehicle with the assistance of the Bluetooth module. To give directions first we need to interface the Bluetooth module to the Application. When associated we can give directions, for example, turn left, turn right ,push ahead and go in reverse and so forth. Every one of these directions send to the ARDUINO. It acknowledges character by character by sequential cradle sent by the application and consolidate them to frame a string. It at that point looks at to the given direction on the off chance that it coordinates the order will be completed. HC Bluetooth module contains of two modules one is Bluetooth sequential interface module and second

one is Bluetooth connector the sequential interface is utilized to change over the sequential port to Bluetooth.

Bluetooth module having two modes, for example, ace mode and slave mode. The vehicle unit is a slave mode module so we can associate numerous mobiles to the pack. The directions of modes are

Fig 3: Commands of Bluetooth

Interface HC-05 with ARDUINO board. Associate the stick 11 and stick 13 of small scale controller to L293D and afterward to engine. Transfer the program in the ATMEGA328 microcontroller. The program contains the all directions in type of strings. On the off chance that we need we can add different directions like go to carport close-by and so forth. ARDUNIO programming is an open source framework we can make changes at whatever point the client needs. Subsequent to transferring the program the method is: Open the ARDUINO programming. Go to open, at that point firm information, at that point standard firm information. Open the standard firm information, press ctrl+F to supplant 57600 with 9600.This is the baud rate, at this speed versatile and atmega328 will trade information.

Transfer the program in the small scale controller. While transferring the program expel the RX and TX from the small scale controller. After associations open the arduino authority which interfaces with the HC-05. Through this we can give directions like turn left, turn right , push ahead and go in reverse on the off chance that we need we can tweak the specific directions such turn left as L and turn directly as R and likewise push ahead as F and in reverse as B and so forth. These will be send to the ARDUINO chip and it thinks about to the string on the off chance that matches, at that point the activity will be done. Arduino Based HC-05 Bluetooth Sensor Module which chiefly comprises

of a Tx (Transmit), Rx (Receive), Power Supply (VCC) and a ground (GND) stick. The Tx and Rx Pins of HC-05 are cross associated with the Tx and Rx Pins of the Arduino Uno Board. Subsequent to offering capacity to the L289N module and the module self discipline the Arduino by means of Vin terminal. At whatever point the ARDUINO recognizes the order then it controls the Motor revolution with a Motor Driver Board (L298N Motor Driver Module)
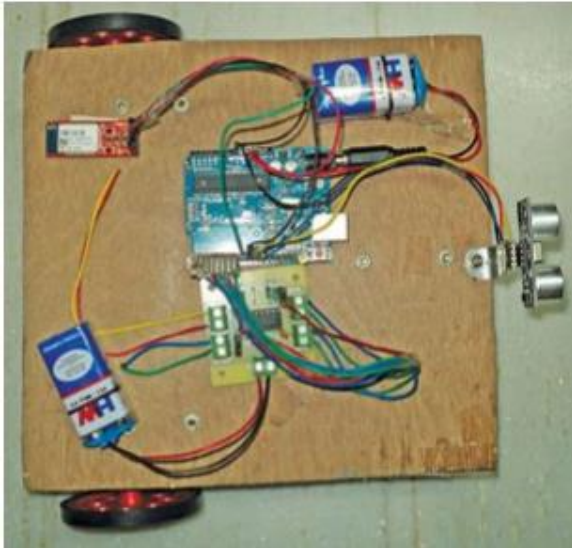

Fig 4: prototype of system

This procedure has two sub-forms, which are voice acknowledgment and sending sign to parallel port. The voice acknowledgment sub-process perceives Thai voice directions and changes over a sound flag into a computerized flag. In the event that the framework can't perceive any direction, the framework will dole out to the shut order. The sending of flag to parallel port sub-process is to transmit advanced flag to a parallel port by utilizing the accompanying hexadecimal numbers.

"Stop" order alloted to number "Gracious" "Right" direction doled out to number "IH" "Left" direction allocated to number "2H"

"Turn around" order doled out to number"4H"

"Forward" order alloted to number "8H" 3

CONCLUSION

With the assistance of this venture we can straightforwardly control the vehicle by our cell phone utilizing voice directions .It is extremely productive in light of the fact that the Bluetooth transmitter precisely send the signs to the Bluetooth

module. This venture presents a remote control vehicle framework utilizing ARDUINO ATmega328 chip. The Bluetooth module and cell phone can conveyed one another, so the vehicle has capacity of controlling vehicle in short separations. Through Bluetooth module we can give different required directions. The framework requires two plan parts equipment part and programming part. ARDUINO contains fabricated programming and it is open programming we can make changes as well and the equipment structure needs the circuit graph and different modules required to perform activity.

FUTURE SCOPE

We can conjure other innovation, for example, Artificial Intelligence to make correspondence with ARDUINO ends up simpler. So we can speak with ARDUINO from miles. We can summon programmed stopping by setting the ideal estimations of the specific area. We can add extra sensors and cameras to think about the ideal development of the vehicle. By utilizing laser radar sensor we can accomplish greater versatility of vehicle in complex condition. Transform the Bluetooth control into WIFI remote control on the grounds that the remote control can understand longer separation control.

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