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Voice Enabled Medicine Vending Machine

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Abstract *The Medicine Vending Machine is the machine that will dispense the required medicine as per the user's choice. The biggest advantage is that people have access to this AMVM in 24x7 accessible public areas. The project provides basic medical services available to those who have not yet benefited because of their surroundings and affects people with physical disabilities and the elderly. He is very focused on treating minor health problems and giving fever a priority. It could also reduce the current cost of open drug boxes or pills. By having a counter-in-the-job sales rep at work sites, work sites other than clinics or pharmacies can benefit from increased efficiency and avoid working under sick workers. In addition, Medicines play an important role in human health in all cases. Introduced an automated medical system to reduce one's time and energy. The same is true with the ATM where we get the required cash at any time and at any location. The project presents a machine designed to provide such health care in areas where medical marijuana is likely to occur Allows the user to select a drug and to pay the required amount taken and distribute the drug. Provides practical relief for minor health problems. By minimizing the minor symptoms at work, it can completely and permanently remove the workplace. It can also reduce the current cost of open drug tablets.*

Keywords— Medicine, automatic vending machine.

I. INTRODUCTION

Many people in India die as a result of early detection and without timely treatment. Problems arise when the need for a particular drug is urgent and pharmacies are not open or the drug is not available in stock, especially at night. In rural areas and areas where public benefit is low, access to medicines within a patient's reach is a critical issue. These are some of the important public .problems that are facing the public in this current situation. The voice-enabled sales machine will help solve these problems by providing the 24x7 medication. The aim of the company is to add consumers to increase the speed of customer service. Access to primary health care is an important pillar of development in building a healthy future. This paper has a mechanism designed to provide such health care in areas where it is unlikely to have a medical store .Allows the user to select a drug, pay the required amount after which confirms the value received and submits the drug. With the availability of the item after the price of the item is compared with the coins included, the system will evaluate the availability of the Product. If no fee is received the refund will be returned. In Currency Return mode when no wizard is selected and PB2 is pressed, the system goes to Currency Return mode.

II. MATERIAL AND METHOD

2.1 Raspberry Pi

Raspberry Pi is a pioneering product. The number of users and fan base support that the device has good in future. The device can definitely help to everyone who really interested to learn electronics and computer technology. Increasing the processing power can help the product in the future. Also supplying a kit and a proper instruction manual will improve the product and the current operating systems are not compatible due to the ARM processor. If the processor is upgraded to run Windows directly on the Raspberry Pi, then it would be a good step for the Pi controller .The Raspberry Pi is a very small machine due to the combination of high quality images of the average personal computer and software installed. Supporting PC operating systems like Linux and providing basic information lines. the GPIO influences it to be ready to control anything. Configuring GPIO is much simpler and more natural compared to a standard FPGA board. It can work as a personal computer but it can't replace the

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original computer because the raspberry pi size and the port limit are the input result. These organizations sell the Raspberry Pi on various websites. The sense of belonging creates an opportunity for transfers to China and Taiwan, which can be recognized from other Pi's due to their red shading and absence of FCC identity marks. The equipment is one of a kind of all-in-one output of 256 megabytes of RAM, later Model B and Model B +) to 512 MB. Gadgets are available in Python as a programming language, with the help of BBC BASIC C, Java layer Raspberry Pi has a Broadcom BCM2835 assembly on the chip, which also includes an ARM1176JZF-S 700 MHz processor. The figure below shows the hardware implementation of the PIBOT program and the exchange of modules with raspberry pi is shown in the schematic way. In this paper, we build Multi-Environmental robots use a raspberry pi which, in turn, is used to enable real-time monitoring of the local network. Live streaming is accomplished using the MJPEG streamer. The method used in this paper is to get a full overview of the many environment here Raspberry pi using the camera is used for surveillance and captured data is transmitted to users with the help of Wi-Fi and many other wireless systems that can be viewed by a personal computer or laptop.

2.2 Microphone

A microphone is a sound device that converts sound waves into electrical signals .This signal can be amplified as an analog signal or can be converted into a digital signal, which can be processed by computers or other digital audio devices.

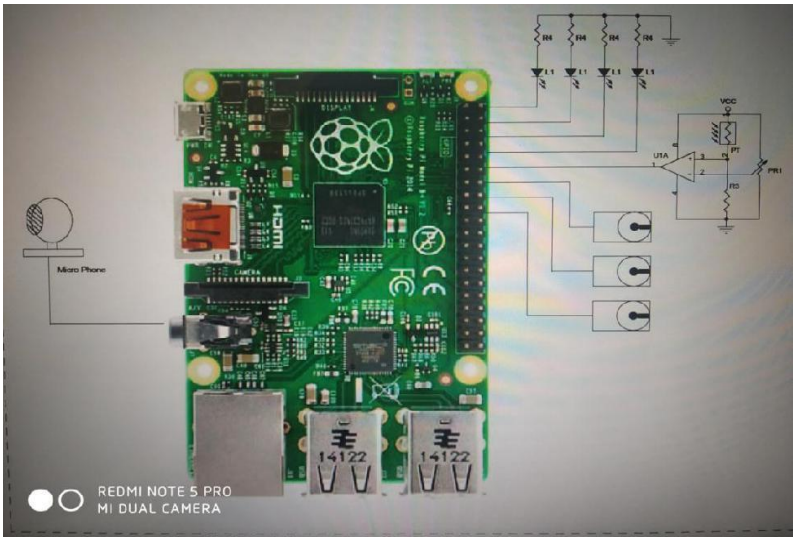

FIGURE 1: circuit diagram

Starting with Initialize system after initialize, detect the coin through coin detection circuit. Give the input as voice through microphone then voice recognition is done by raspberry pi, if voice will not recognize it will blink error (red) LED. When the voice recognition is take place perfectly then blinking of green LED is take place after that medicine came out through dispenser container.

2.3Give voice as input

In this we give input of voice through microphone, user will easily speak on the microphone about the particular medicine system will take as input and it will Recognize the voice and dispense the medicine through dispenser container.

2.4 Recognition of voice

After taken voice from user it will recognize the voice .If it is recognize above 75% then system will glow green LED and further process is take place If it is not recognize above 75% then system will glow red LED and user will know the voice recognition is not done perfectly.

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2.5 Dispenser container

If voice Recognition is done perfectly then it will ask for money as coin. (coin detection is added to detect the coin) After coin detection system will ready to dispense the medicine through dispenser container.

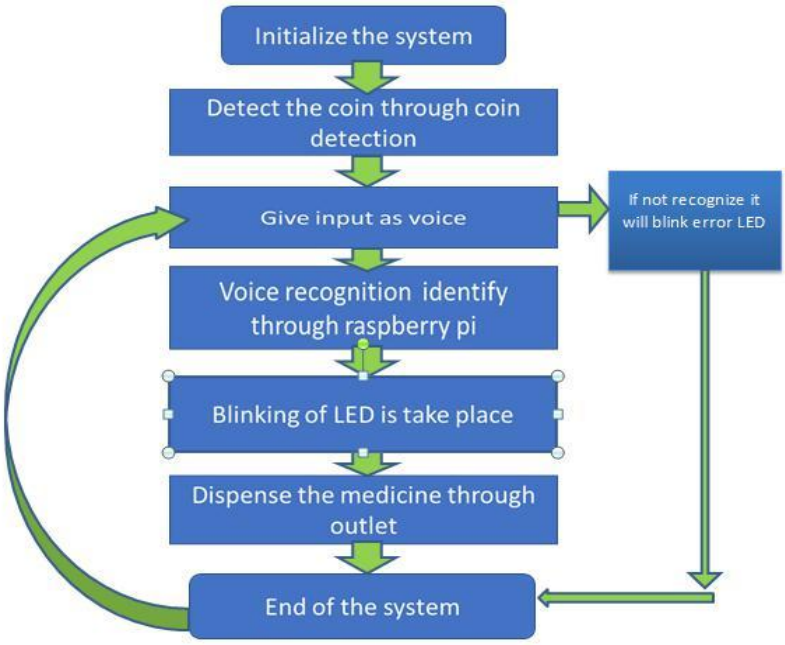

FIGURE 2: Flow chart

TABLE 1
COMPARISON BETWEEN MAIN METHOD

Sr. No.	Paper Name	Advantages	Disadvantages
01.	Design and Implementation of Speech to Text Conversion on Raspberry Pi	The Voice Command System works on the idea and the logic it was designed Our system. Using the raspberry pi to take a command. Each of the commands given to it is matched with pre-existing sample.	Takes a lot of time to voice recognition for speech text conversion using the raspberry pi.
02.	Voice Based Home Automation System Using Raspberry Pi	The main technology is used Raspberry Pi it is a credit sized computer in which main Programming is done by using python overall.	It does the home automation by voice recognition, input is given by microphone.
03.	The Autonomous Pill Dispenser: Mechanizing the Delivery of Tablet Medication	In voice enabled medicine vending machine we use raspberry pi so it will give alert system to user before dispenser container is empty.	Autonomous Pill Dispenser shows promise and consistent ability to trap and release medication ,but there must be possibility if dispenser container is empty.

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III. CONCLUSION

Medicine vending machine give specified medicine and amount of medicine as per instruction by the user with voice controlled. The medicine dispensing machine offers a flexible, simple and rugged solution for basic healthcare to all places, at a very moderate cost. The machine can be customized to suit any type of terrain or climate with minimal changes to the hardware and software. This machine will be extended to add an intelligent medicine unit, which send s a refill notification message to the administrator when the number of medicine strips decrease below a certain level.

IV. EXPECTED RESULT

FIGURE 3: Dispenser container

We represents the complete hardware and software entity of the application with the motors and raspberry pi setup packed inside. The medicine dispensing got accomplishment based on the requirement of the user. The results with respect to the health care improvement were fascinating after installing this device in a village, city malls, railway stations etc.

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