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Smart Medician Indicator with Health Monitor

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ABSTRACT: Most of the people at old age forget to take medicines on time. There should be a means to remind such people to take medicines on time. This project presents a Smart Medicine box to users who regularly take drugs or vitamin supplements, or nurses who take care of the older patients. It would also significantly release the nurses and user's burden on frequently preloading pills for patients users. Our medicine kit has individual compartments that can be filled with medicines and designed in a way to fill medicines when the compartments are empty. When it is time for medication the medicine box drops the pills and sounds an alarm with notification until we take the pills. The setup is interfaced with servo motor and a GSM module to provide notification. The goal of the project is to remind users to take pills regularly and to provide this product at affordable cost. There are several aspects we need to be done in the future to meet the user needs. Firstly, the strategies are to be developed and to modify the device based on the user evaluation results. This includes creating a user manual, choosing a larger LCD display, using a metal or plastic box to cover the entire circuitry and using larger pill boxes.

I. INTRODUCTION

In modern society, busy life has made people forget many things in day to day life. The elderly people and the people victims of chronicle diseases who need to take the medicines timely without missing are suffering from dementia, which is forgetting things in their daily routine. Considering this situation study has been done in this. Paper reviewing the technologies of home health care which are currently used for improving this situation by reminding the scheduled of medicine, remote monitoring and update new medicine Consumption data of patients, which can be done by prescriber through IOT. Key Words: Smart medicine box, old age patients, permanent diseases, setting up time table, bright light, notification, sound, sensing capability

II. LITERATURE SURVEY

According to World Health Organization, over 80% of the people above the age of 60 years are prescribed medicines that are to be administered 2 - 4 times a day. The cheapest one was the traditional pillbox, which contained seven boxes for seven different days of a week. Such pillbox normally cost around 200 INR. However, user had to load the pills to the boxes every week. At the time of loading pills in the box, people many time mix their pills with other pills in the same box would increase the risk of making mistakes. Another type of pillbox in the market is also available, which had the sound reminder, and was able to remind the user to take medicine at user specified time but it only remind the user at once a day. The costs of this type of pillbox were so high about 1000 INR, Therefore, we think it was necessary to build a cheap and functional smart Medicine box that could bring more convenience for the user

III. EXISTING SYSTEM

With the tremendous growth in medical technology, there is cure for many dreadful diseases through the intake of several new medicines. The number of medicines to be taken by each person has increased. It has become hard for us to remind ourselves to take the medicines at particular time. This Smart Medicine Box helps us in reminding us of the medicine that we should take at that particular time.

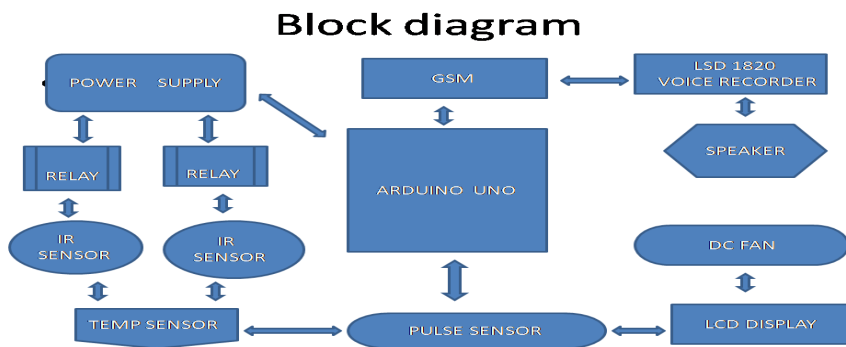


IV. PROPOSED SYSTEM

In day together life, People have trouble to remember the pills they need to take from the bag of medicine. Multiple times the problem is the time required to take medicine is not printed on the box of medicine or they couldn't read English. People have also habit to sometimes forget to take pills. Due to this, some medicines were expired. In order to reduce the responsibility of family members the proposed pill box is of great help.

V. COMPONENTS

Arduino Uno The Arduino Uno is a microcontroller board based on the ATmega328 It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-toDC adapter or battery to get started. The Uno differs from all preceding boards in that it does not use the FTDI USB-to-serial driver chip. Instead, it features the Atmega16U2 (Atmega8U2 up to version R2) programmed as a USB-to-serial converter. The Uno board has a resistor pulling the 8U2 HWB line to ground, making it easier and the board has the following new features: -1.0 pinout: added SDA and SCL pins that are near to the AREF pin and two other new pins placed near to the RESET pin, the IOREF that allow the shields to adapt to the voltage provided from the board. with 3.3V.



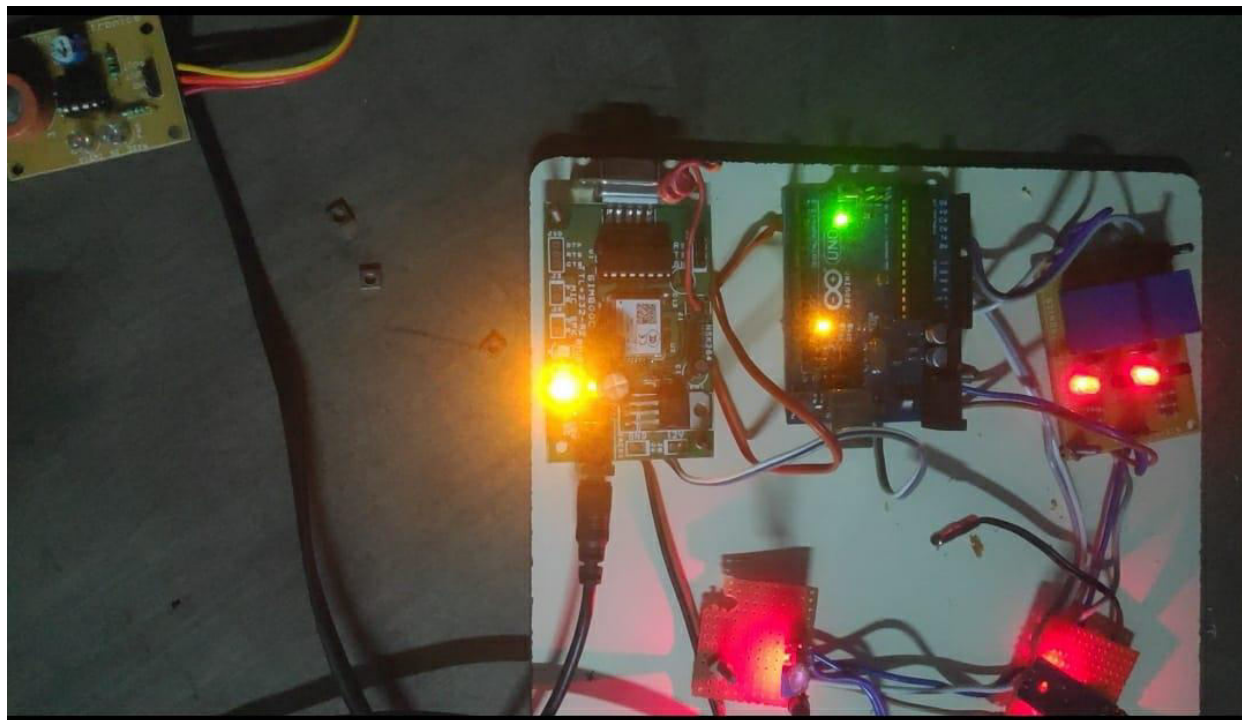
GSM Module

The GSM makes use of narrowband Time Division Multiple Access (TDMA) technique for transmitting signals. The GSM was developed using digital technology. It has an ability to carry 64 kbps to 120 Mbps of data rates. A GSM digitizes and compresses data, then sends it down through a channel with two other streams of user data, each in its own time slot. It operates at either the 900 MHz or 1,800 MHz frequency band. The GSM network authenticates the identity of the subscriber through the use of a challenge-response mechanism. A 128-bit random number (RAND) is sent to the MS.

ISD 1820 Voice Recorder Module

The ISD1820 Voice Recorder Module is based on the ISD1820 IC, which is a single chip Voice recorder IC for single message record and playback. I am not sure about the availability of only the IC but it is frequently found in the module with all the necessary components and circuitry. A major feature of the ISD1820 Voice Recorder Module is that it can store the messages in its non-volatile memory. As you can see, there are a lot of components on the board that help the ISD1820 IC in recording and playback. Another main feature of this module is that it has internal audio amplifier that can drive a 0.5W 8Ω Speaker directly without the need for any external amplifier circuit. But if you want to drive more powerful speakers, you can connect the output of this module to an external amplifier IC like LM386.

VI. RESULT



VII. CONCLUSION

There is a great need for timely intake of medicines which is often skipped by many people. This Smart Pill Box helps to remind us to take medicines regularly and also which on time. Thus this implementation, though small and simple, will be a very great and useful step in the field of medicine. This paper has focused on the problems faced by senior citizens concerning adherence to their prescribed medication. It not only aids the elderly who live independently but also the caretakers of the elderly by reminding right amount of medicine at the right time. The smart medicine box has been experimentally proven to work satisfactorily. This medicine box which is a sort of semi-automatic is not only useful for geriatrics but instead it is can prove useful and a user friendly tool for all of us. It provides a greater efficiency to our paper. It helps it to be cost efficient also. The other advantage of this box is that it is very easy to use and the complexity is less.

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