International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 06 Issue: 04 | April - 2022 Impact Factor: 7.185 ISSN: 2582-3930

AUTOMATIC MEDICINE ANNOUNCEMENT SYSTEM

Dr P Sukumar, Abarna K, Kaviya T , Ramya R

Dr P Sukumar Professor, Department of BioMedical Engineering

Nandha Engineering College, Erode.

Abarna K Department of BioMedical Engineering & Nandha Engineering College, Erode.

Kaviya T Department of BioMedical Engineering & Nandha Engineering College, Erode.

Ramya R Department of BioMedical Engineering & Nandha Engineering College, Erode.

ABSTRACT: Automatic Medicine Announcement System is a model that is useful for medication reminder and monitoring. This system is useful for the physically challenged people, patients and deaf, dump people. It consists of 16F877A PIC Microcontroller in which program is dumped for overall process, and also IOT Module, Relay setup, LCD, 7805 regulators, sensor like heartbeat, glucose and temperature sensor not only LCD, but also AMR voice controller is available for reminding patients through loud speaker, IR sensor is used for detection of medicine taken by patient. During these days, due to mental stress people forget to take medicine at right time. So, to overcome these problems, the automatic medicine system has been designed at lower cost.

KEYWORDS: PIC 16F877A; IOT Module; 7805 Regulator; LCD Display; AMR Voice controller

1. INTRODUCTION

Large numbers of people are suffering from various kinds of diseases and disabilities. Most of the people suffer a lot in taking medicine at right time. Before, they are cared and monitored by doctors and care takers. Taking care of patients is a challenging one now a day. Payments should be provided to those who take cares the patients. So, these seem to be a disadvantage one. Problems that occur such as 1) Intake of irregular medicine due to busy schedule. 2) Complications in taking large number of medicines at a time. 3) Lack of knowledge about proper use of medicines. 4) Adverse drug effects of taking wrong medicines. The above problems occur to everyone due to no adherence of people. Then it is essential to take correct medicine for good health. As there are some in- home devices to care the patients, the older people face some difficulties. In order to avoid these situations, Automatic Medicine Announcement system has been designed to avoid patient taking over dosage of medicines. The most advantage of AMAS is 1) available at affordable cost. 2) Easy usage for elder peoples.

LITERATURE SURVEY

1. " Automatic Medicine Dispensing System " S.R. Bhagya Shree, P. Chandra Shekar, A. Arjun, G.R. Manoj and R.S. Raj. In olden days, the family of the patient will take care them . During these days, people like to live in nuclear families where there are no one present to take care of aged people and patients due to their busy working schedule.

2. "AI-IoT based Smart Pill Expert System" J.E. Pedi Reddy and A. Chavan ,The paper discusses the implementation of a proposed Smart Pill Expert System (SPES) which is based on Artificial Intelligence IoT technology that dispenses the pills automatically that is effective to users.

3. "Health Alert and Medicine Remainder using Internet of Things" P. Ranjana and E.Alexander, in today's life, human beings face difficulty to keep in mind the medicines they required to take. This system proposes a model of automatic medicine reminder and apothecary system.

4. " Design of a command-and-control system for an automatic pill dispenser", M.Vasile Moise, D.M. Pavel and N. Elisei, the main purpose of this paper is to present a system designed to make the distribution of medicine to the people who are in need and also the job of medical workers is reduced.

5. " Design and Implementation of Automatic Medicine Dispensing System" M. Penna, D.V.G Owda , J.J. Jijesh and Shivakumar, Medicine distribution for the people in tribal areas is a tedious process. So, by using this system we can help the government.

2. METHODOLOGY :

Humans living in the modern world may or may not be suffered by diseases. The patient needs to take medicines at the prescribed time otherwise will lead to some other problems. Due to depression, patients forget to take medicine at the right time. To overcome these kinds of problems, medicine reminder system is needed. Though some types of devices are available, they are not complementary to the people in terms of portability, cost of product, handling etc. To make user friendly, AMA System is used. Fig.1 describes the block diagram of the automatic medicine announcement system. This proposed system comprises of PIC 16F877A Micro controller, RTC (Real Time Clock), LCD Display, IOT Module, AMR Voice Controller, Glucose sensor, Pressure Sensor, Heart beat sensor.

Automatic Medicine Announcement is enabled by RTC (Real Time Controller). The timer has been fixed in the controller. This controller will indicate the patient to take medicine by voice (AMR) Controller. The command "MORNINING TABLET, AFTERNOON TABLET, EVENING TABLET" has already been recorded in AMR voice controller. The command is given to the patient through AMR voice controller. The other data goes to the relay gets activated and the tray gets opened .To detect whether the patients has taken the tablet or not, IR sensor is used. Heart beat sensor and Pressure sensor is also used to detect whether the patient has taken the tablet or not.

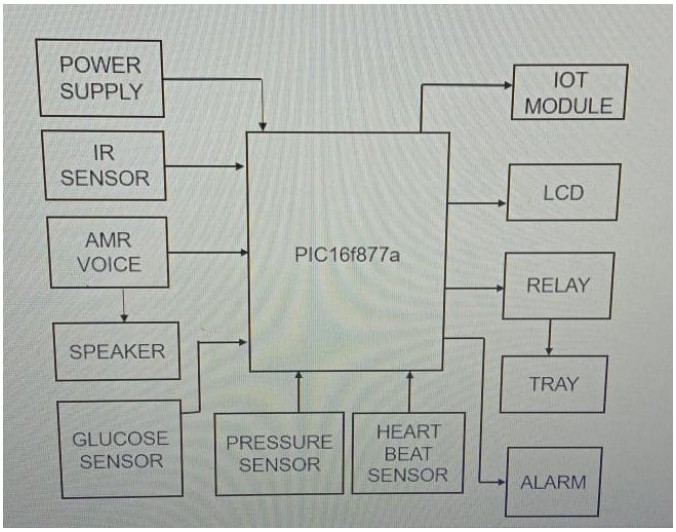


FIG.1 BLOCK DIAGRAM OF AMAS

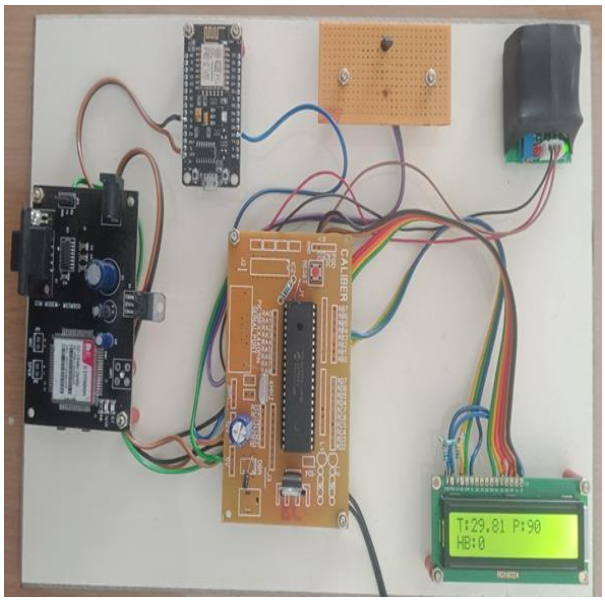
The buzzer is used to indicate the level of tablet of tablet in the tray box. These are dumped the program in the PIC Microcontroller (16F877A).The IOT used to store the history of the patients for future purpose. Then finally power supply is given to separately to the all the components present in the system. Here, we use 7805 Regulator, 2 diodes and capacitors.

SOFTWARE REQUIREMENTS:

The internet of things (IOT) is a concept all the devices to the internet and let them communicate with each other over the internet.

1. Platform : IOT (Internet of Things)
2. Developing language : Embedded C Program
3. Communication medium : GSM Module

OUTPUT:



.

4. CONCLUSIONS

As various numbers of medicine reminder devices available, they seem to have some disadvantages like high expensive, complex system and not reliable one. This model helps the elder and physically challenged people struggling to take medicine at right time. This smart device is compact, reliable, accurate and lower complexity. This project would be good solution to all kind of peoples and care takers.

5. REFERENCES

1. Thies .W, Bleiler. L and Alzheimer's Association. 2013 Alzheimer's disease facts and figures. Alzheimers Dement. 2013; 9: 208-245.

2. Frank Sposaro, Justin Danielson, Gary Tyson. 2009 iWander: An Android Application for Dementia Patients. Department of Computer Science.

3. The 8051 Micro Controller and Embedded Systems by Muhammed Ali Mazidi and Janice GillispieMazidi.

4. 2015 IEEE International Symposium on Medical Measurement and Applications (MeMeA) Proceedings.

5. 2020 IEEE International Conference on E – health Networking, Application & Services (HEALTHCOM)

6. 2020 4th International Conference on Trends in Electronics and Informatics (ICOEI)(48184)

7. 2009 Ninth IEEE International Conference on Bioinformatics and Bio Engineering.