
MEDICINE SCHEDULER USING IOT

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ABSTRACT

In this work it highlights the common problem of medication non-adherence, particularly among elderly patients, due to factors such as memory loss, busy lifestyles, and complex prescription regimens. It emphasizes how modern lifestyles and technological advancements have contributed to irregular medication intake, leading to ineffective treatment outcomes. IOT based smart medicine box designed to address the medication adherence challenge. This device allows patients to set precise medication timings. It describes the key features of the smart medicine box, including an integrated reminder system with an alarming buzzer to alert patients when it's time to take their medicine. LED lights above compartments in the smart medicine box serve as visual cues, helping patients select the correct medication at the scheduled time, thereby enhancing treatment efficacy.

I. INTRODUCTION

The idea of digital world where different types of sensors and local processing connected to share information is used in many industries nowadays. There are various products which are developed based on these ideas. Healthcare industry is one where lot of improvements is taking place. Medicines play important role for prevention and cure for most of the diseases. Many Harmful and risky diseases can be cured through proper medication. The proposed system consists of an medication reminder system and it gives timely alerts for the patients about their medication time. It alerts the patient to take medicines at proper time by providing buzzer alert. The system helps to monitor whether patient has taken the medicine and it's healthcare data.

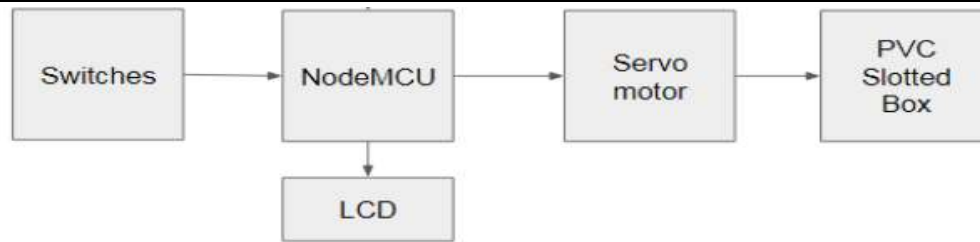
In today's life, everyone has to take medicines due to several health issues. In olden days this problem was less compared to now. Well, everyone does forget to take their medicines on time at some point in their life and it is very important to take all the medicines properly and on time. Similarly, taking medicine at wrong intervals may lead to some severe side effects. Some diseases are temporary so the person need not take medicine every day but there are many everlasting life-threatening diseases. These life- threatening diseases are very dangerous to the health, so that kind of people has to take their medicine daily without fail. Blind people and adult cannot always remember to take the medicine regularly which creates the several problem and health issues. We need to have in the counsel of Doctor who tells us to take desired pills in a desired way so that patients face problems like forgetting pills to take at right time. Since the target audience of the device is Geriatric, it is user-friendly, handy, safe to use and light in weight. It is a portable device and it is a handheld system. Blind people, uneducated people can also use this system. There is no age limit to use this device.

II. METHODOLOGY

We can set the timings between the schedule of medicine taking by using buttons LCD will display to set the timings Servo motor will rotate the box of medicine as per the schedule .

When the slot open for the medicine and if the medicine is taken out from the box the signal is send to cloud server to update the database that the medicine is taken out w.r.t date and time and vice versa.

NodeMCU is programmed using Arduino software and to communicate with the cloud server.



III. LITERATURE SURVEY

Smart Medicine Reminder with Smart Watch Using Arduino Nano [1], This paper proposes a system that will help not only elderly people for medication reminder but also person who is suffering from Alzheimer disease. Proposed system is combination of Smart watch and pillbox which will help user to manage complex medication regimes. Patients need not remember their medicine dosage timings as they can set an alarm on their medicine dosage timings. A led is placed in pillbox which blinks at particular time to take medicine. The alarm can be set for multiple medicines including time and medicine description.

A Novel Approach of Microcontroller based Automatic Medication Reminder (AMR) System for Patients[2] This paper proposes a novel idea to provide the information automatically to patients to take their right dosages at appropriate time. Now a day, most of the patients may forget to take their medicines as per the prescription due to mental stress. Hence, it may cause prolong period to recover from the diseases. Sometimes, the aged patients are gulping tablets and their dosage level incorrectly causing a severe problem. Henceforth, it is necessary to the patient to take proper medicines at precise quantity and time. To overcome these problems, a novel Automatic Medication Reminder (AMR) system is proposed. This system uses a normal 4x4 matrix keypad, Microcontroller (Master IC & Slave IC), LCD display and Real Time Clock (RTC) module and an alarm system used to intimate the patients to take proper dosage at right time.

Auto Pill Dispenser [3] In this paper, an efficient and portable dispensing is designed with low-cost and simple electronics. The medicines are filled once in a month. The outcome of our project is that buzzer notifies the person by alarm to intake the pills or capsules on time. It reminds the patient and indicates what session it is. Hence the corresponding tablet will come out into the tray. In future this project can be implemented by using GSM module. Even if they are indicated by alarm to take their respective pills, the user may forget to take their pill. Through GSM module, the message will send to corresponding caretaker about the medicine which the users have not taken at scheduled time.

Arduino Mega Based Pill Reminder[4] This paper proposes the design of Arduino mega based pill reminder which will help the patients to take their prescribed medicine in correct quantity and at appropriate time. Assistive Technology (AT) maintains and improves the individual's functioning and independence, thereby promoting their well-being. But today only 5 from each 50 people in need have access to AT due to high costs and a lack of awareness, availability, personal training, policy and financing. By 2050, more than 2.5 billion people will need at least 1 assistive product with many elderly needing 2 or more. It is a frequent observation that people give more preference to their work and other material things than taking care of their health. This system aims to reduce this problem by reminding patients about their medications and showing them the correct amount of medication to take. It is a combination of physical and digital reminder that will be helpful for people of any age, but is especially helpful to old people who forget taking their medications.

IV. CONCLUSION

This system prevents wrong dosage of the patient and also safe to the patient. It will reduce the effort of patient as well as the caretaker of the patient in remembering medicine and patient will get alert of medication along with medicine name at appropriate time and we can monitor the medicine taken timings on cloud server.

V. REFERENCES

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