

# Medicine Reminder

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## 1 Introduction

Medicines are one of the greatest achievements in human history. But they work only if they're taken properly on time. Many patients, especially old people need someone to remind them to take their medication. They also need someone to sort out different medicines according to the prescription and thus, in hospitals nurses do this job.

We aim to create a machine in which care-taker of the patient can store the time and medicine in small boxes which will drop out according the time entered. The patient will be alerted through a speaker and a notification on his/her smartphone(optional) and will take the medicine. The care-takers can also check if the patient has taken the medicine on time. Patient can then keep the empty box in the space provided in the machine which can be later filled by the care-taker for further use.

## 2 Market Research

Integration of IoT is instrumental in solving any problems related to humans, thus Health Care departments are constantly working on methods to improve the quality of health services provided.

Good Health is important for a good life and it is quite necessary to give priority to health related issues which can be solved by digitization using a variety of devices and concept of IoT. Currently

there isn't a fully functional embedded system in the market that provides the options to fill the medicine and the reminder (doze) times.

Some products that did various tasks of our proposed system independently are:

1. Memory aids
2. Drug containers
3. Smartphone apps
4. Pill organizers

Hardware requirements:

1. Real Time clock module(DS3231)
2. Arduino Mega
3. ESP-01 ESP8266
4. LCD (20x4)
5. Rotary Encoder
6. SD Card module
7. DF Player Module
8. Speaker
9. Stepper Motors and motor drivers
10. SD cards
11. IR sensors

Software requirements:

1. Arduino IDE
2. MIT App Inventor
3. EasyEDA

### 3 Implementation

The user of the machine will initialize all the necessary things. During first boot, the user will be asked for the time for the medications for each day of the week. A total of 28 dozes can be stored. The user will also be asked if he/she wants to be notified through an app notification and if he/she wants to store the history into an sd card. Once the first boot up is completed, the machine is ready to use.

### 4 Feasibility

With this system, the chances of missing medicine are reduced. The doctors can easily monitor and thus interpret the results of tests of the patient according to the record of patient.

The care-takers can easily store dozes of an entire week on a sunday and they will be properly addressed. Old patients can access the medicine on a rack in the machine when a notification pops up on their smartphone or when they're alerted through a speaker. Progress till now:

Implementation of the Minimum Viable Product is done.

Input for Medicine Reminders can be given.

Time display has been compiled with the Reminders.  
Storage of Reminder data can be stored in an external  
SD card  
Development for mobile app has been started.

## 5 Flowchart

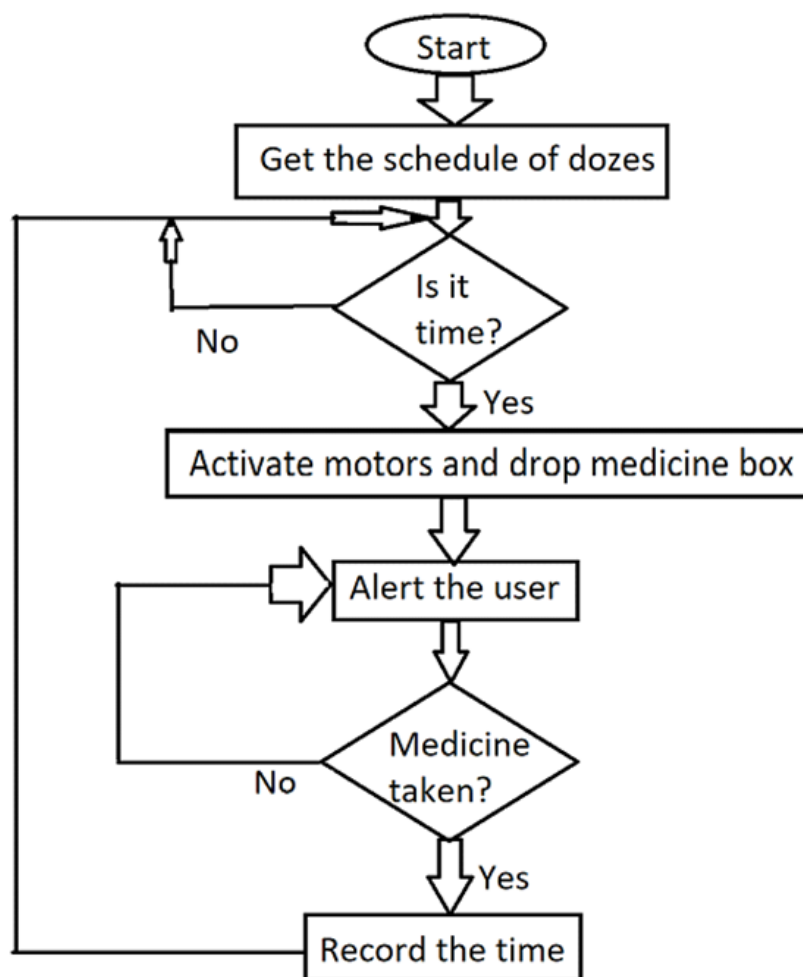


Figure 1: Method of implementation

## 6 References

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