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

An embedded system 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. 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. LCD (16x4)

4. Rotary Encoder

5. SD Card module

6. DF Player Module

7. Speaker

8. SG90 Micro servo motors

9. SD cards
10. 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 is completed.
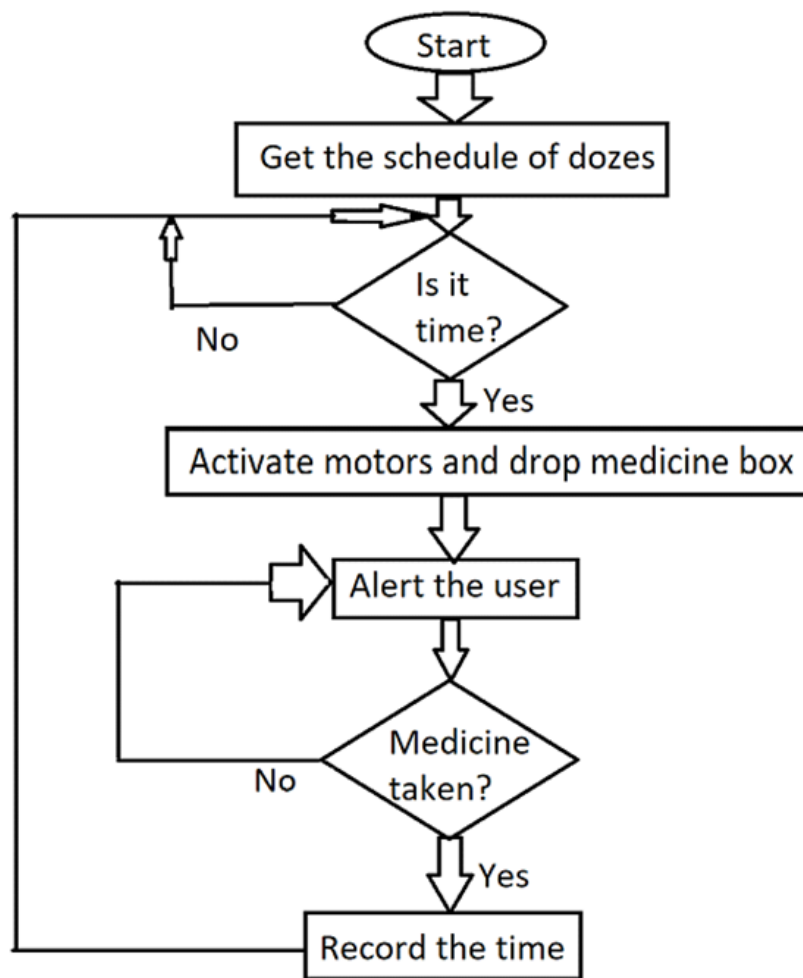
5 Flowchart

Figure 1: Method of implementation

6 References

[1] P. Ray.Home Health Hub Internet of Things (H
3 IoT): An architectural framework for monitoring
health of elderly people.Sci. Eng. Manag. Res.
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