

# NALAIYA THIRAN

**USER CASE: PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT**

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## **LITERATURE SURVEY:**

### **Medicine Reminder and Monitoring System for Secure Health Using IOT**

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 data of patients, which can be done by prescriber through web.

### **Smart Medicine Reminder Box**

This project's main aim is to make a Smart medicine box for those users who regularly take medicines and the prescription of their medicine is very long as it is hard to remember to patients and also for their care giver. Also, Old age patients suffering from problems of forget to take pills on proper time which causes certain health issues for patients having Permanent diseases like diabetes, blood pressure, breathing problem, heart problems, cancer diseases etc. These are a kind of problems in hospitals & people around us who have such kind of diseases and thus based on these two problems smart medicine box which solve these problems by Setting up time table of prescribed medicines through push buttons as given in prescription. Present time will be saved in RTC module and notification time will be saved in EEPROM. Therefore, at the time of taking medicine system generate Notification sound and display the Bright light in certain pill boxes. So, patient can know the specific number of boxes from which he has to take out medicines.

### **Smart Pill Box With Reminder To Consume And Auto-Filling Process Using IOT**

Many countries are affected by population growth issues, as a result of the low birth rate elderly age, people are increasing day by day. They need more attention from the family side to take care of them. So for this issue a well-equipped automatic reminder to consume pills at right time, for this introduced smart pillbox which considerably reduce family responsibilities. Over on this peak of technology, this smart pill is prepared by using GSM interfaces with Arduino and also implemented IOT through Blynk app receive notifications. The major responsibility of making people to consuming pills is resolved by using this smart pill setup. The main working principle of this box is remainder to

consume pills at right time and also give remainder if the pills are going to finish. Sensors are arranged in the setup to identify the room temperature and humidity and all the information is can view through the Blynk app from anywhere.

### **Intelligent and Safe Medication Box In Health IoT Platform for Medication Monitoring System with Timely Reminders**

The progress in IoT health care is considered to be a massive contribution to the elderly people. The elderly people and people who are suffering from chronic diseases need to intake tablets regularly on timely basis. Care takers with their busy daily routine may forget the instructions and time about pills which are prescribed for patient. Also care takers who are dealing increased number of patients may feel hectic to sort the medicine list for corresponding patients at proper time. Earlier many researches have been carried in this area and different pill boxes have been proposed already. The intelligent medication box proposed in this work have specialized features including six sub boxes which helps to organize six different pills, provides timely reminders for the patient or caretaker in an android application like hand-held devices like smartphone. This intelligent medication box contains bio-sensor for monitoring of temperature and heartbeat. Overdosage and improper intake of medicines may lead to serious issues in health of elderly people to avoid mis usage of medicines a simple authentication process either by the care taker or the patient himself is performed. The proposed medication is much safer as it clearly intimates about time, dosage, stock of medicine and sorts out different pills in correct sub boxes during the next fill by caretaker.

### **IoT based smart medicine kit**

This paper presents an optimal solution, the smart medicine kit for regular patients using an IoT based sensors which provides diagnostic feature. The intake of medicine by the patients are prepared as a data and stored in drive or cloud. The medication kit acts as a remainder to take medicines with timer circuit. The heart rate of humans, glucose level in blood can also be monitored with the kit, with IR temperature check and mini CPR patch sensors. Health based IoT ease the medical diagnosis.

### **Design & Implementation of an Automated Reminder Medicine Box for Old People and Hospital**

The main objective of this research is to develop a smart medicine box to remind the old people or patient in the hospital to take the appropriate dose of medicine in the time suggested by the doctor. The device has twenty-one airtight compartments to keep the medicine. The attendant of a patient or nurse can make a weekly plan of medicine remainder by keeping medicine in twenty-one compartments for taking medicine three times per day. The attendant can manually set the time of taking medicine or load a text file in an SD card mentioning the time for taking medicine of every compartment. The device has a real-time clock to read the time. When time is matched with the set time, the device plays a sound in the speaker to share the information of medicine quantity and blinks the LED of the specific compartment where medicine is kept for that time. The device also informs the patient whether the medicine should take before a meal or after a meal. The device can ensure the medication safety, appropriate medicine dose, and prevention of drug abuse of elderly people.