

# **PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF RELIANT**

## **PROPOSED SOLUTION:**

### **NOVELTY OF PROJECT:**

“Medicine Box” which helped the patients in medication remainder and storing the patient's medicine intake details. In accordance to current technology this project endeavour to make a “Smart Medicine Box” for medication with multiple compartments to assist the patient to take medicine at right time through alarm reminder. This compartmented box maintains temperature by means of adaptive cooling method. We propose this system with additionally added features to medicine box such as high security, emergency alert through SMS and automatic opening and closing of lid of the box. The vital parameters are recorded, uploaded to cloud and reviewed by the clinicians using IoT system. This helps the clinicians to gain knowledge about their patient’s health condition for further treatment analysis.

### **SOCIAL IMPACT:**

Setting alarm clocks is a tedious task which patients are too lazy to set again and again. If asked about what time people have to take their medicines, many forget to answer the correct times or remember whether they have already taken the medicine in the day already. Elderly people specially face this problem because of their degrading memory and in severe cases, forget that they have already taken their prescription and retake the same medicine 2 or 3 times in the same duration. This may not be harmful for lighter medicines, but for some strong and concentrated medicines, it can have further harmful effects to the body. This is exactly where our medicine reminder system can help. Our system takes up the prescription details from the user such as the duration of the prescription, the names of the medicines, the times they are to be taken and the amount of each medicine which is to be taken. After all this data has been entered, our system will remind the user at the prescribed time of which medicine is to be taken in form of a mobile notification and a physical reminder.

### **SCALABILITY OF SOLUTIONS:**

1. Reprogram the pillbox with the new pill schedule.
2. Activate the refilling sequence, for which each of the compartments of the pillbox will become accessible while the program will indicate which pill type corresponds in each compartment so that the caregiver/nurse replenishes it.
3. Many patients especially old people, do not take their medicines in the correct quantity. They either take overdose of medicines thinking it will help them heal faster, or they fear the doctor has prescribed a larger quantity than required and take under dosage of medicines. The former leads to several unsuccessful health implications while the latter delays the treatment of the patient and in some cases, allows the illness to spread further requiring further treatment.

## **BUSINESS MODEL:**

The proposed architecture enables to embody other types of devices such as wearable, electronic devices, home appliances, among others, offering infinite possibilities of applications and functions. This system can be improved, providing a more flexible way to schedule medicines consumption alarms such as twice a week, three times a week, every other day, among others.

## **FEASIBILITY OF PROJECT:**

Along with medicine reminding at each session with correct dosage, The medical details which we collect from iot devices like temperature sensor, heartbeat sensors.etc.. which can be predicted at each session and providing the correct medicine to patients that can be updated to doctors. The feature of uploading the patient details and medical records avoids the difficulties of carrying the prescription and medical records and hence patient can live independently.

## **CODE:**

```
import random
while(True):
    temp=random.randint(10,99)
    humid=random.randint(10,99)
    print("current temperature:",temp)
    print("current humidity:",humid,"%")
    temp_ref=37
    humid_ref=35
    if temp>temp_ref and humid<humid_ref:
        print("Sound Alarm")
    else:
        print("Sound off")
    break
```