# Pill Dispensing Unit for Medication Management

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## ABSTRACT

This paper presents the architecture and implementation of an automatic medication dispenser specifically for users who take medications without close professional supervision.

**Algorithm**

1.Start
2.Doctor will enter the details in the website about the medicines required by the User.
3.The user will get the details about the medicine in the app with unique barcode and id.
4.Now the user need to scan the barcode using the automatic Pill dispenser.
5. Automatic Pill dispenser scan the barcode and drop the pills according to the prescribed dosage.
6. Servo motors are placed along with the PVC pipes.
7. According to the prescription the barcode generates the number of pills to the servo motor.
8. Then the servo motor rotates based on the number of pills.
9. As soon as the servo motor rotates the pill drops.
10. If count = 4
11. return to step 9.
12 else stop

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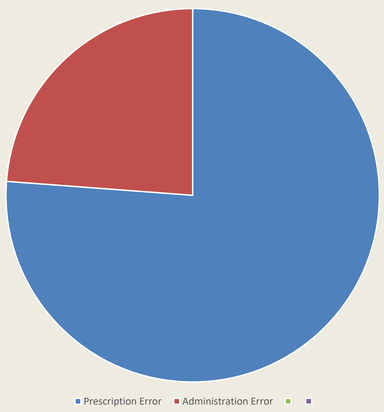
## INTRODUCTION

. Medication errors are known to occur throughout the medication use process of ordering, transcription, dispensing, and administration. They lead to many hundred thousands of serious adverse drug events, thousands of deaths and billions of dollars in hospital cost each year in US alone. These alarming statistics have motivated numerous efforts in research, development and deployment of information technology systems and tools for prevention of medication errors. We now witness increasingly wider use of computerized physician order entry (CPOE) systems in hospitals and clinics for prevention of prescription errors, which account for more than 50% of all errors.




## METHODS AND MATERIALS

1. Here the patients will be able to take only prescribed dosage of medicine.So that we can avoid misuse of medicine(eg.avoiding human error).Here we are using Servo motor for dropping the medicines.Beagleboard is a microprocessor and we used for dumping code.Pvc Pipes are used for making the medicine fall correctly.

2. Hardware : BeagleBone, Servo Motor, PVC pipes Firebase, Website, Application

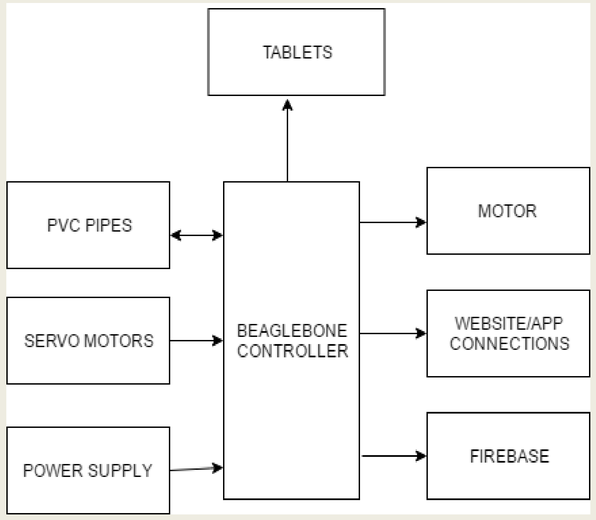



Figure 1. BLOCK DIAGRAM OF PILL DISPENSING

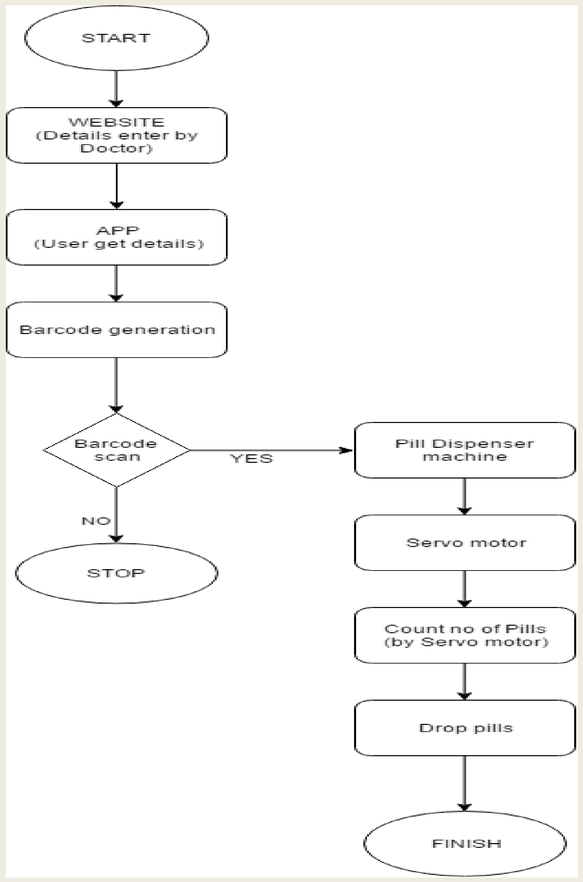



Figure 2. Flowchart

## RESULTS

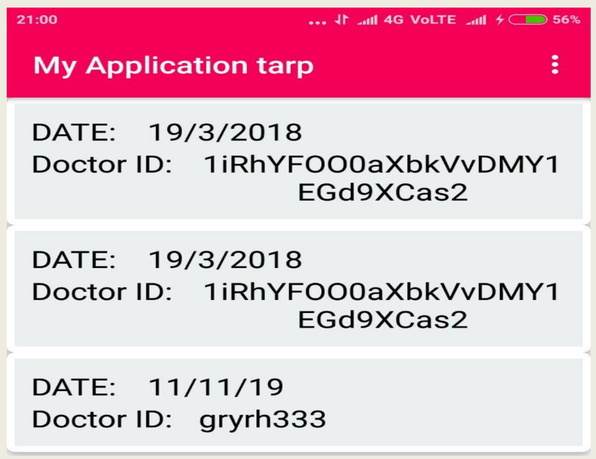



Figure 3 User-size Application

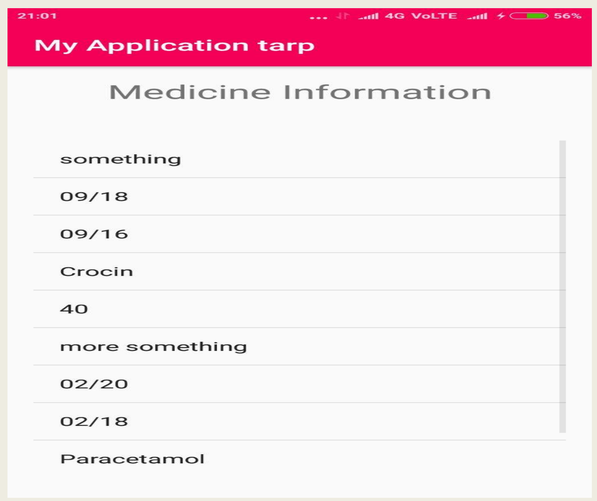



Figure 4 Information of the Medicines

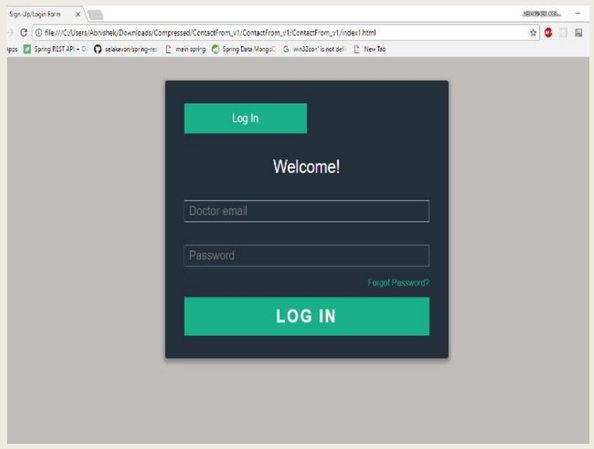



Figure 5. Login page for Doctor (Website)

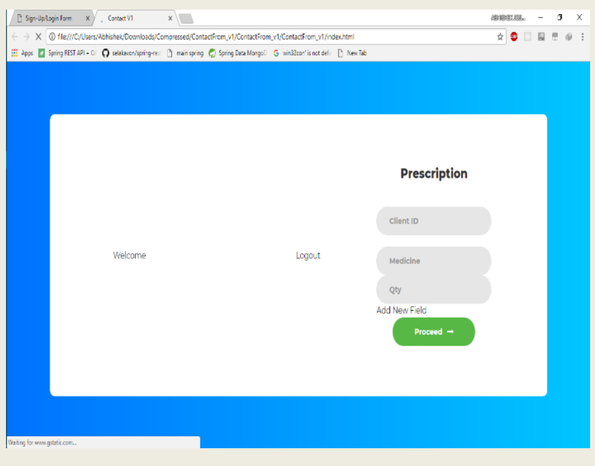



Figure 6. Prescription Module

## CONCLUSION

- Except for set up operation and retrieval of individual doses from medication containers, the dispenser is fully automatic. By monitoring the user's actions during set up, the dispenser prevents errors in medication identification. By automating the choices of dose sizes and times according to a machine readable MSS, the dispenser relieves the user from the burden of interpreting medication directions and special administration instructions and thus prevents the common errors due to misinterpretation. By using algorithms that can take advantage of the scheduling flexibility provided by the sizable ranges of dosage parameters of modern medications.

## REFERENCES

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