

Health Automatic Medicine Vending Machine

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Abstract: Medicines play a crucial role in maintaining health, preventing illness, managing, chronic conditions and curing disease. This is a machine which delivers the medicine in emergency cases and ensures availability of drugs 24x7. This will be very useful in saving life in case of an accident on highways, remote areas, rural areas and places where medical stores are not within the reach in case of emergency. At least first aid can be made easily accessible with the help of this system. This project consists of Advanced RISC Machine (ARM) process or which controls the other subsystems such as RFID Reader, Global System for Mobile communication (GSM), medicine dispenser, inventory control. RFID tag identifies the specific user. GSM sends the message to the inventory control when the medicines needs to be refill. Medicine dispenser is the storage part of the machine which stores the medicine.

Keywords: Medicine; Machine; Block; GSM; people

I. INTRODUCTION

Several people in India die due to lack of diagnosis in first place and non-availability of medicine on time. Problem arise when need of some medicine is urgent and drug-stores are not open or drug is not available in stock, especially during night time. In remote areas, rural areas and places where public turnover is less, the availability of medicines within the patient's reach is a critical issue. These are some of the main problems that are being faced by the society in present scenario. This machine will help in solving these problems by providing the medicines 24x7.

II. OBJECTIVE

The first user needs to register in a particular authorized center with prescribed drugs. RFID Tag & Password. Swipe the card & enter the personal identification number (PIN). Request for the required medicine by scrolling through the menu displayed on the screen. Searching for the requested medicine in dispenser, Medicine is collected

III. WORKING

The block diagram of All Time Medicine is as shown in the figure 1. ARM is the main part of the system. It controls other subsystems like GSM, display, dispenser and inventory control.

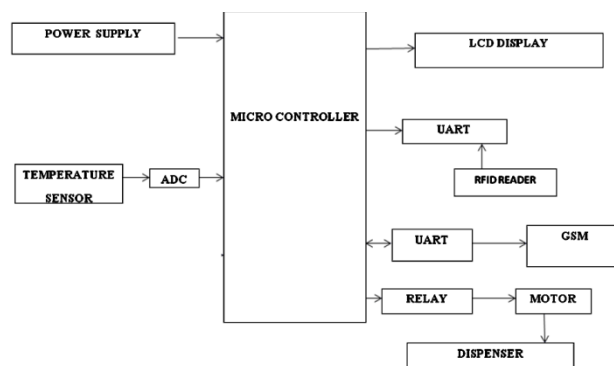


Fig 1. Block Diagram

When the medicine becomes less than some quantity GSM will send message to the inventory controller.

- i) *ARM*: It is the main part of the system where the other components will be controlled by it.
- ii) *Display and keypad*: The main function of the display is to show the registered medicines available in the machine and with the help of keypad the customer can enter the name of the required medicine.
- iii) *Inventory Control*: Controlling the inventory of drugs is critical to the functioning of machine. The inventory controller continuously monitors the level of each medicine. Biometric, unique identification of finger print device
- iv) *Medicine Dispenser*: It is the storage part of the machine which stores all the medicines. It consists of series of springs in which the medicines are placed. The database relevant to all the general diseases will be stored in the database and the user has to Type the disease name using Keypad. Upon typing the name, the Dispenser will dispense the relevant medicine that particular disease.

Government and private medicines can also be stored in the system. If the people use BPL card number, then medicines will be dispensed free of cost.

IV. LITERATURE SURVEY

The public or Society facing problem. By vending machine life is little easier. User will be able to get basic over the counter (OTC) medicine at any time (24x7). Minor illnesses treatment emergencies, Night time accessing the machine, 1st aid is provided. Satisfaction by the medical council of India Products should not exceed

16 tablets in a package for sale. OTC (Over the Counter):
 Medicine sale without prescription directly delivery.

V. HARDWARE & SOFTWARE REQUIREMENTS

A. Hardware

- Microprocessor–ARMLPC2148
- 4*4Keypad
- LCD-16x2
- RFID Reader
- Medicine Dispenser
- Motor
- L293D Driver
- 7812/7805 voltage regulators for power supply
- Power supply circuit
- LM317

B. Software

- Embedded c
- Kiel-c compiler
- Flash magic burner software.
- HJTAG Debugger
- MATLAB

VI. TECHNICAL SPECIFICATIONS

- Operating voltage of embedded circuitry is 3.3vdc
- Current consumption of device in active mode 200mill amp
- Operating frequency of device is 20 to 60MHZ

VII. ADVANTAGES

It's very much portable that it can be installed in very less area. No Individual person needed for maintenance. Easy to use Provides 24/7 medicine facility, since online transaction involved no fear of robbery. Since disease name and relevant medicine will be stored in the data base, the user will have to mention the disease name. The dispenser will dispense the medicine automatically for that disease.

People can avail the free medicine facility by entering the BPL card number.

VIII. APPLICATIONS

The concept is very much useful in day to day life for common people. This can be implemented everywhere such as shopping malls. It can be implemented on National Highways. It can be installed in Railway stations

A. What Kind Of Drugs Will This Machine Vend?



Fig 2. Drugs

B. What was there in past?

In past people, was infected will infected and no medicine was leading to death. Without a treatment and purpose medicine at a time on a moment

Slowly time came that the Doctor have came to exist and invented medicine for disease and started curing the disease for the people, But the people however is not reachable to the clinic (or) doctor and the patient was unable to get treatment and it could occur for death.

The diseases were such as fever, cold, cough, etc like minor diseases.

C. Present

At present nowadays people will approach to the clinic get the disease cured. And there are 100's of clinics to get treated, but the disadvantage is that at the right time people can't reach because the clinics will be closed.

The Automatic Medicine Vending Machine is invented for the 24x7 working if clinic is closed.

Now this Machine is present and is available anytime, by paying money u can get medicine.

And some Vending machines are made in such a way that without Doctor's description, Medicine will not be given.

D. My proposed project is that-

The Medicine which was invented for the people to receive the Medicine that will be without paying money

This machine will give medicine freely to the people in need.

This machine will be installed in the highways, for the people who will meet with accident, can take the treatment like 1st aid without paying at the site of emergency, as the person met with accident may not have money at the moment.

Secondly this machine will be installed near villages and where poor people reside. As village people are not much educated, they will not have prescription. At some times, the people may die with the small health issues and without proper treatment at the right time.

This machine will be helping people for curing the diseases at the time of 1st aid by giving treatment at the 1st stage only.

Also some of the village people are poor, they may not have money at the right time. At that time, this machine will help for giving treatment and medicine without doctor prescription and money, at the right moment, and any time (24x7).

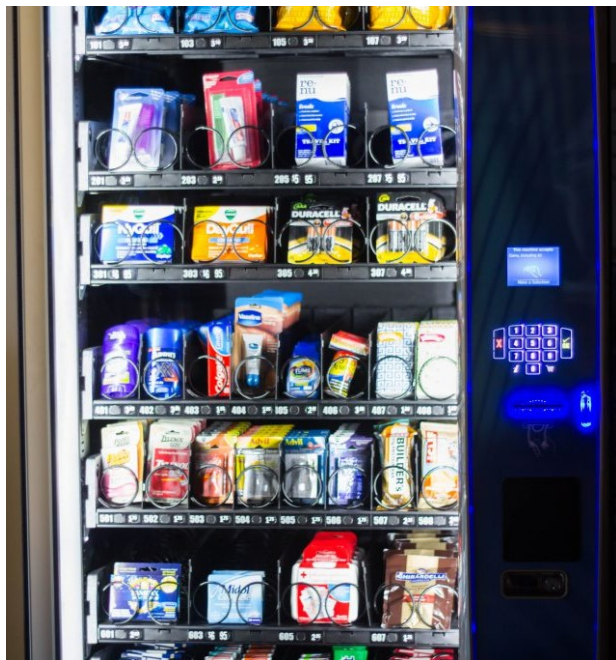


Fig 3. An example of real time system.

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