ATM (All Time Medicine) Counter For Medicine Self-Dispensing

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Abstract: - **Medicines play a crucial role in maintaining health, preventing illness, managing, chronic conditions and curing disease. All Time Medicine (ATM) is a machine which delivers the medicine in emergency cases and ensure availability of drugs 24x7 and hence the name "All Time Medicine". ATM 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 PIC micro controller which controls the other sub systems 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.**

Keyword: **Medicine, RFID, GSM, LCD, Motor, Dispenser.**

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. ATM will help in solving these problems by providing the medicines 24x7.

II. OBJECTIVE

The objective of the project is to develop a system to deliver medicine 24x7 to the people. The machine can deliver mainly Over The Counter (OTC) drugs, pain killer, first-aid products etc., so it will be very useful to the society. Medicine dispensing process is done in four steps.

1. Authentication of registered user.
2. Selection of required medicine.
3. Payment.
4. Collection of requested medicine.

First the user needs to register in a particular authorized center with prescribed drugs. Then user will be provided with RFID Tag and password. During transaction user must first swipe the card Request for the required medicine should be made by the user by scrolling through the menu displayed on the screen. The machine will search for the requested medicine in dispenser. If the medicine is present in the machine, then the payment has to be made for the requested/available quantity of the medicine. Finally, the medicine is collected.

III. LITERATURE SURVEY

This chapter explains existing problem that the society is facing. Under medicines legislation, General Sale List (GSL) medicines (i.e., those that may be purchased from ordinary retail outlets such as supermarkets) may be sold or supplied from a vending machine. Life will become a little easier with an innovative vending machine that dispenses medicines. Users will be able to get basic Over-The-Counter (OTC) medicine at any time (24x7). Minor illnesses have a strange way of inviting people in the middle of the night when pharmacies are already closed. Over-the-counter (OTC) drugs are a class of medicines sold directly to a consumer without a prescription from a health care professional, as compared to prescription drugs, which may be sold only to consumers possessing a valid prescription. People will able to access the medicine with the help of this machine even at the night time. With this, first aid can be provided in time to the user. Medicines sold or supplied from a vending machine should satisfy the condition laid down by the Medical Council of India. Medicines which these restrictions apply are mainly aspirin and paracetamol. Products containing these substances should not exceed 16 tablets in a package for sale.

IV. SOFTWARE REQUIREMENTS

- Embedded c
- MPLAB IDE
- CCSC Compiler

V. BLOCK DIAGRAM
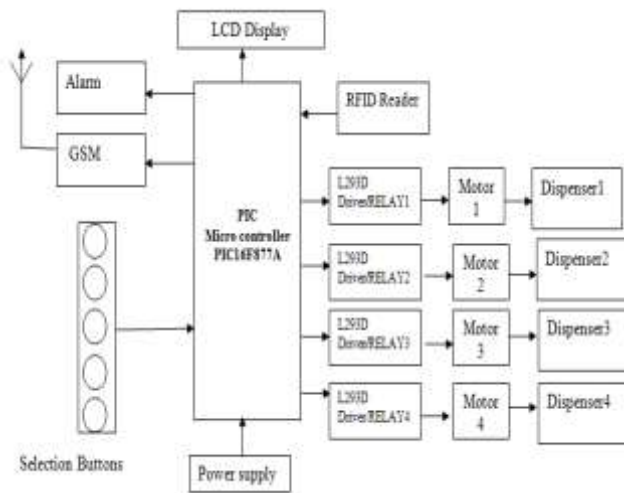
VI. HARDWARE REQUIREMENTS

- Microcontroller PIC16F877A
- LCD - 16 x 2
- RFID Reader
- GSM MODEM
- Medicine Dispenser
- Motor
- L293D Driver
- 7812/ 7805 voltage regulators for power supply
- Power supply circuit

VII. TECHNICAL SPECIFICATIONS

Operating voltage of embedded circuitry is 5VDC.

Current consumption of device in active mode approx.200mill amp@ no load and approx.1000mill amp@ full load

Operating frequency of device is 20 MHZ

VIII. 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 database, the user will have to mention the disease name. The dispenser will dispense the medicine automatically for that disease.

IX. 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

X. RESULT

From this concept we are conclude that, the automatic medicine vending machine is technically feasible to the peoples. It is based in PIC micro-controller provide GSM service. It gives availability of medicines all the time, also in rural areas. it is very helpful. It gives ease of access also. It is sales person-less service which is based on smart card.

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