AUTOMATIC MEDICINE VENDING MACHINE

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***Abstract*— Degrees of social status are closely linked to health inequalities. Those with poor health tend to fall into poverty and the poor tend to have poor health. According to the World Health Organization, within countries those of lower social economic strata have the worst health outcomes. Health also appears to have a strong social component linking it to education and access to information. In terms of health, poverty includes low income, low education, social exclusion and environmental decay. The poor within most countries are trapped in a cycle in which poverty breeds ill health and ill health breeds poverty. Any Time Medicine Vending Machine is although not a new concept in its entirety, it could prove to be useful and hence important in developing countries like India where healthcare is a1most critical**.

I.INTRODUCTION

Now-a-days in this fast moving world, appliances which are completely automatic are preferred. This is the biggest advantage of this project. The system is fully controlled by the 16 bit PIC micro controller. Automated dispensing machines decentralized medication distribution systems that provide computer-controlled storage, dispensing, and tracking of medications have been recommended as one potential mechanism to improve efficiency and patient safety, and they are now widely used in many hospitals. There is no doubt that these machines can enhance the efficiency of medication distribution, but their capacity to reduce medication errors is controversial and depends on many factors, including how users design and implement the systems. Still, we are con_dent in providing the following reasons and experiences to support our position that automated dispensing machines improve patient safety. Automated dispensing machines provide secure medication storage on patient care units, along with electronic tracking of the use of narcotics and other controlled medicines. Automated dispensing machines enhance rest-dose availability and facilitate the timely ad- ministration of medications by increasing their accessibility on patient care units. This been_t is particularly important in emergency departments and intensive care units, where most hospitals still use a poor stock system because of frequent dose changes and need for immediate access.

II.BASIC BLOCK DIAGRAM OF MEDICINE VENDING MACHINE

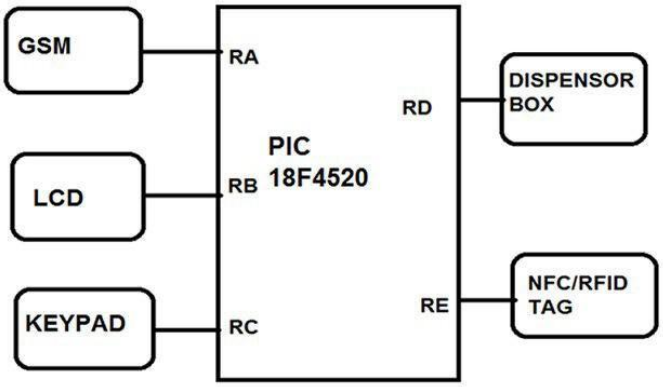

Fig.1:Block Diagram

A. PIC 18F4520

In this project we are using PIC micro controller. It is programmed using C language,which provides an effective environment for performing the task. Devices in the PIC18F2455/2550/4455/4520 family are available in 28-pin and 40/44-pin packages.

B. Dispenser Box

It is made up of number of drawers which stored the medicine and drawer moves with the help of stepper motor. In drawer spring mechanism is used to come medicine strips forward therefore it very easy to buy a medicine for a customer and it i s safe.

1) *S p r i n g Mechanism*

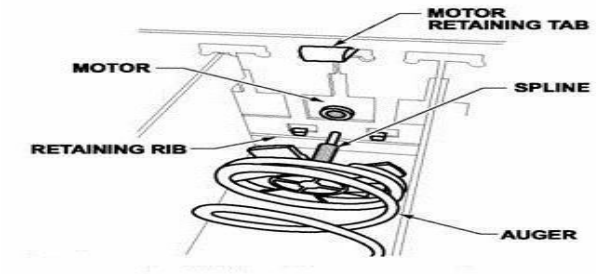

Fig. 2:Spring Mechanism

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C. NFC (Near Field Communication)

This is basically wireless data transfer tool which uses NFC card to store the data .In this project we are using this tag for person identification instead of cash payment. What is NFC?? NFC is near field communication it allows two electronic devices to exchange information if they are close to each other. An NFC tag contains small amounts of data that can be read by NFC enabled readers .it is basically a chip Pulse an antenna usually embedded within a sticker,or poster. NFC tags can contains URLs,V cards and more.

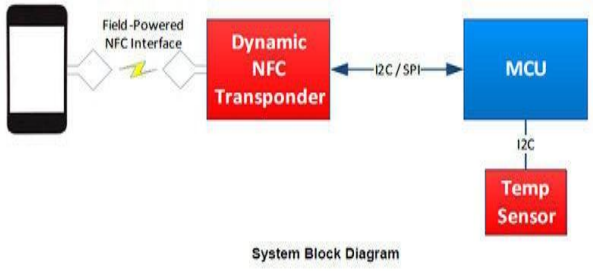

Fig.3 NFC(general concept)

NFC tags are considered passive devices, which means that they operate without a power supply of their own and are reliant on an active device to come into range before they are activated.

III. Circuit

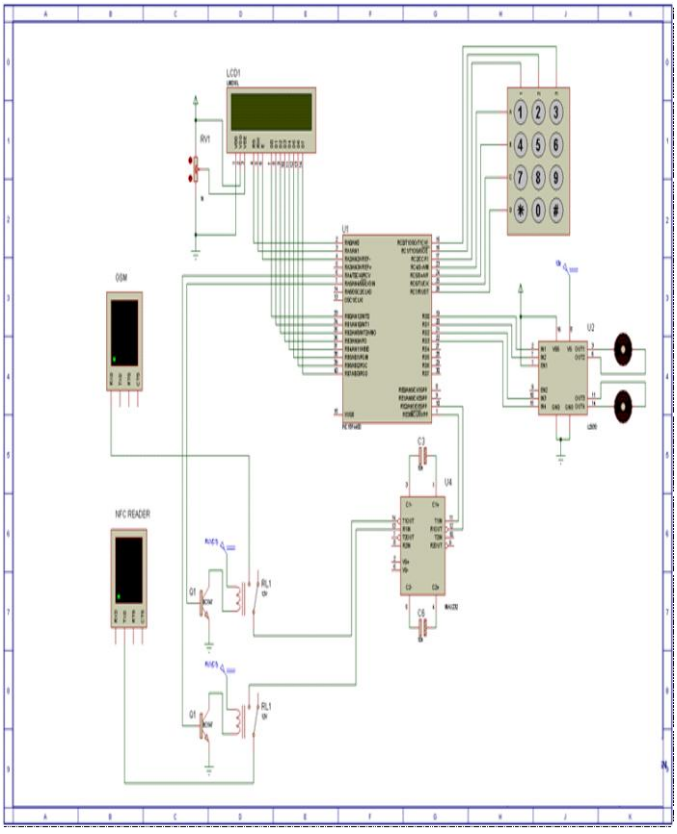

Fig.4:Circuit Diagram

IV. Flowchart

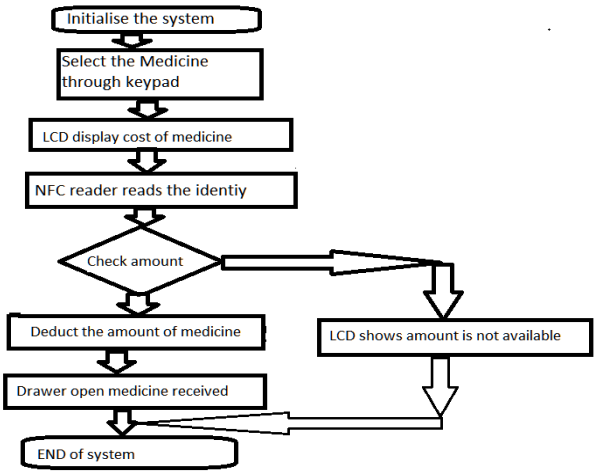

Fig.5:Flowchart

IV. PCB layout

Different steps involved in the fabrication of a PCB are as follows.

- Component layout design.
- PCB layout design.
- Transferring the PCB layout design onto the PCB board Laminate
- Developing or etching the PCB
- Other operation like drilling, cutting, tinning, etc,

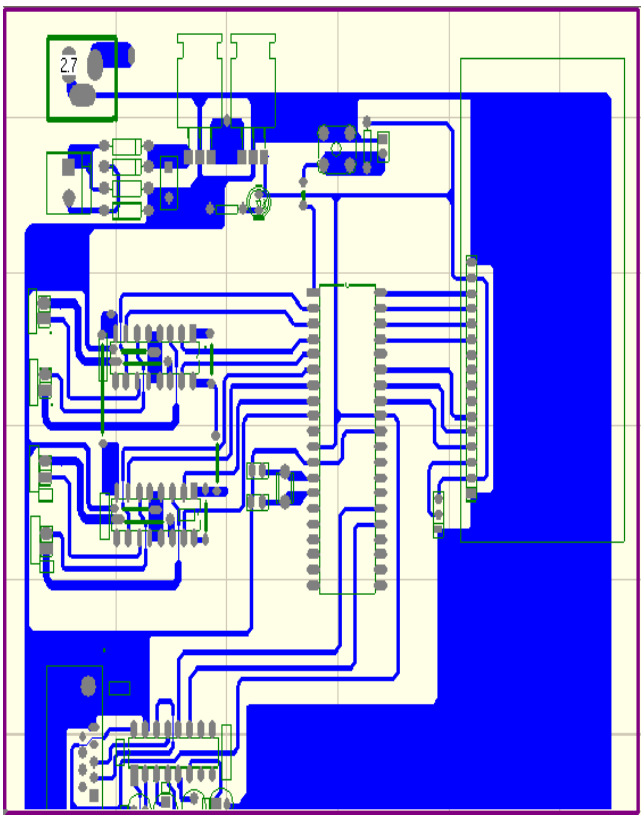

Fig.6:Layout

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V. Future Scope

This study focuses on the design and implementation of A NFC Operated MEDICINE Vending Machine that can dispense different medicine through dropping a specified Medicine by taking the reference of keypad. There are different types of medicines in a machine. The machine accepts money through RFID tag and will not accept any other type of money. Once the tag has been detected, the machine automatically dispenses the right medicine. The automatic medicine vending Machine will cater the needs of the customers with no further human intervention required. The machine is user-friendly and is very simple to operate. The customers will only have to deal with the NFC tag to be dropped to the machine which will correspond to the medicine to be dispensed. With this, labor cost will be minimized and it will also give entrepreneurs the opportunity to attract more customers with this innovation.

VI. Conclusion

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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