

DESIGN AND DEVELOPMENT OF MEDICINE DISPENSER

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ABSTRACT

Now a day's medicines play a pivotal role in our daily life. It helps us in maintaining health, curing diseases etc. By using this machine we can deliver drugs in emergency cases and make sure that medicines will be available during night time also. Medicine Dispenser can save people's life by providing medicines in cases of emergency at any point of time. This machine can be placed in village areas, backward areas and highways where medical stores will not be available. Anyone can easily access this Medicine dispenser just by scanning the prescription. This project consists of ARDUINO which has control over all the other sub systems. RFID is used for user authentication, whenever there is shortage of medicines with the help of GSM we will send message to authorized person. Medicine dispenser is used to store the medicines.

I. INTRODUCTION:

Degrees of community condition are closely linked to health irregularity. Those people who are having poor health will be becoming poor and people who are poor will be having poor health. According to the World Health Organisation, within countries those of lesser social economic gradation have the worst heath results. Health also appears to have a active social component associating it to education and approach to information. In terms of health, poverty includes little income, minor education, social elimination and environmental downfall. The poor within most countries are trapped in a cycle in which poverty tends to ill health and ill health tens to poverty. Medicine dispenser, could prove to be beneficial and hence important in growing countries like India where health care is almost detracting.

In various countries like India several people are dying due to lack of proper medication, identification of diseases in early stages and due to lack of medical stores near them on time. Problems arises when there is an emergency situation and medical stores are not available near them at that particular point of time. If medical stores are available near them there is another problem that the particular medicine is available in store or not. In many backward areas there are no hospitals and medical stores they need to travel for kilometres to find medicines for their diseases. Medicine Dispenser will help in solving these issues by the medicines at any point of time.

Medicine dispenser is very much convenient that it can be equipped in very small area. This Medicine Dispenser will be very advantageous to the people and it is very easy to handle. Just by scanning the prescription people can obtain required medicines easily without any authorised person.

II.LITERATURE SURVEY:

In this paper we are analysing the current issue that is being challenged by the society. Under medicines legislation, General Sale List (GSL) people can buy the medicines from ordinary retail outlets, that type of medicines may be sold or supplied from a Medicine dispenser. Life will become a little easier with a new Medicine dispenser that dispenses medicines. People will be able to get medicines which are mentioned in the prescription by scanning it. Minor problems such as cold, fever etc have a peculiar way of inviting people during night times when medical stores are not available. By the Medicine dispenser we can supply medicines that can be sold directly to a consumer from machine scanning a valid prescription. People can have access to medicine at night times by using this machine.

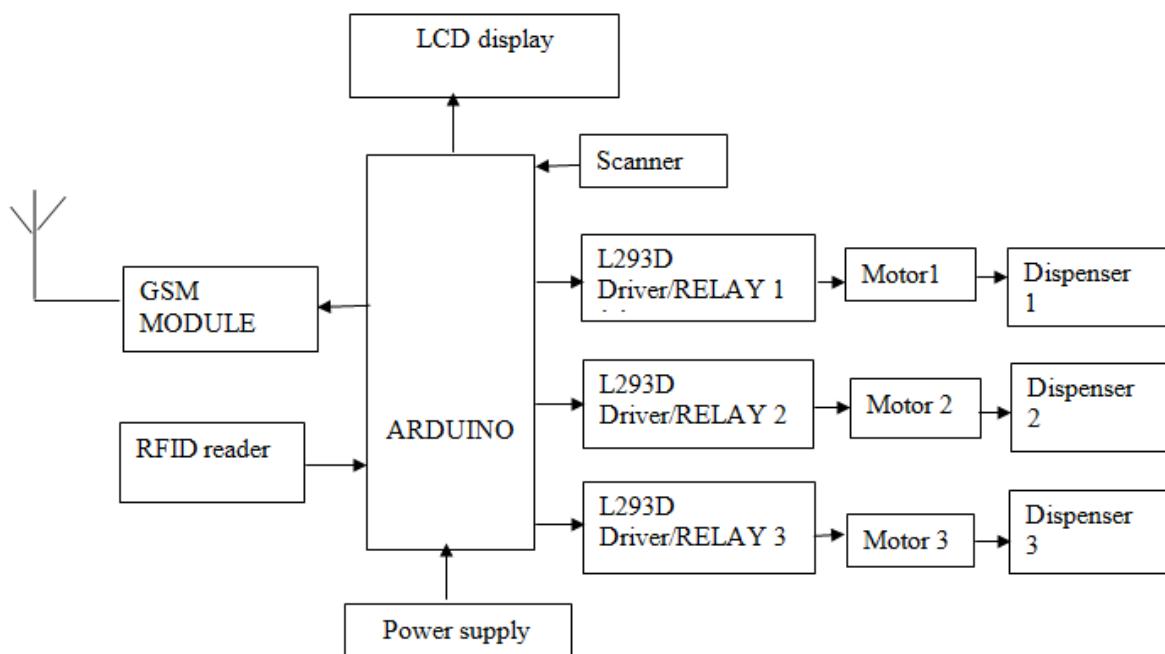
III. PROPOSED WORK

This project is used to develop a system where people can be able to access medicines at any time. Medicine dispenser can deliver medicines in the prescription by scanning it, so it will be very advantageous to the society. This Medicine dispenser will dispense medicines within two steps.

- a. Scanning prescription.
- b. Acquiring requested medicine.

At first the user needs a valid prescription to access the medicines in Medicine dispenser. User should scan the prescription and can able to see the medicines which are available in the machine. After scanning the prescription machine will search for the medicine. If the medicine is present in the machine, then medicine will be dispensed otherwise message will be sent to authorised person using GSM module and medicine will not be dispensed. Finally, the medicine is collected.

IV. BLOCK DIAGRAM:



V.WORKING:

The block diagram of Medicine dispenser is as shown in the figure. Arduino is the main part of the system which has control over other sub systems like GSM, LCD display, dispenser and RFID. When the medicine is not available in the machine then message will be sent to authorised person through GSM.

- Arduino: It is the main part of the system which has control over other components.
- Display: It is used to show the medicines available in the Medicine dispenser.
- Medicine Dispenser: It is nothing but a storage part of the Medicine dispenser which stores all the medicines.
- User has to scan the prescription to acquire requested medicines.
- Dispenser will dispense the requested medicine to the user after scanning the prescription.

VI. HARDWARE AND THE SOFTWARE REQUIREMENTS:

a. Hardware:

ARDUINO
RFID reader.
LCD - 16 x 2
Medicine dispenser
Scanner
Driver
GSM module
Motor
voltage regulators for power supply

b. Software:

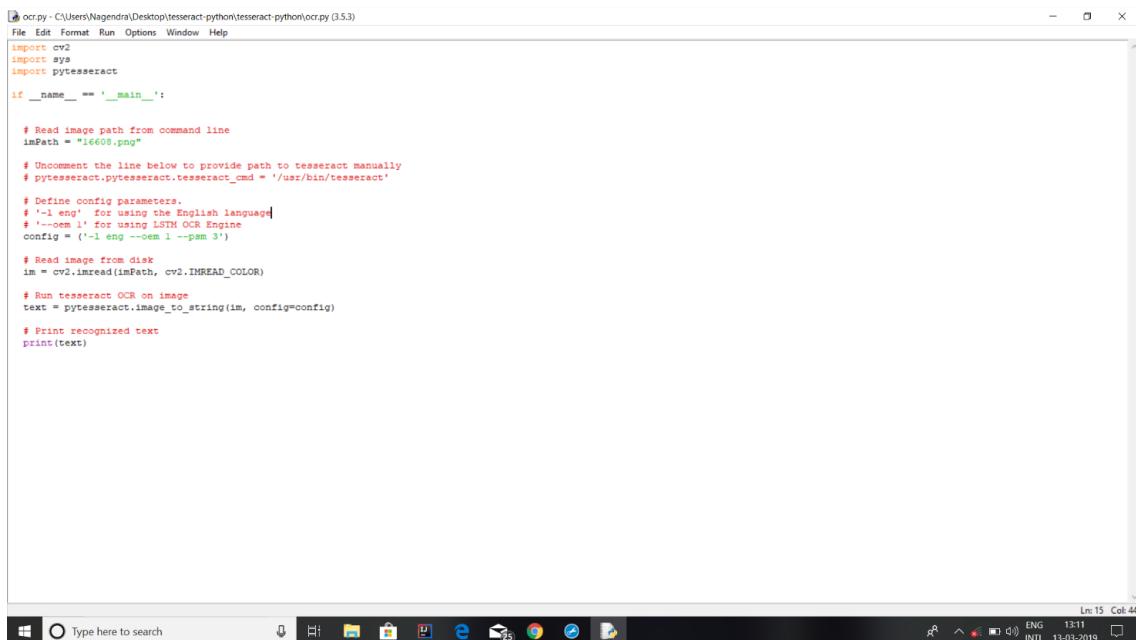
Embedded C
Python

VII. RESULTS:

PREREQUISITES

In order to make the most of this, you will need to have a little bit of programming experience. All examples in this book are in the Python programming language. Familiarity with Python or other scripting languages is suggested, but not required.

You'll also need to know some basic mathematics. This book is hands-on and example driven: lots of examples and lots of code, so even if your math skills are not up to par, do not worry! The examples are very detailed and heavily documented to help you follow along.



```
ocr.py - C:\Users\Nagendra\Desktop\tesseract-python\tesseract-python\ocr.py (3.5.3)
File Edit Format Run Options Window Help
import cv2
import sys
import pytesseract

if __name__ == '__main__':
    # Read image path from command line
    imPath = "16608.png"

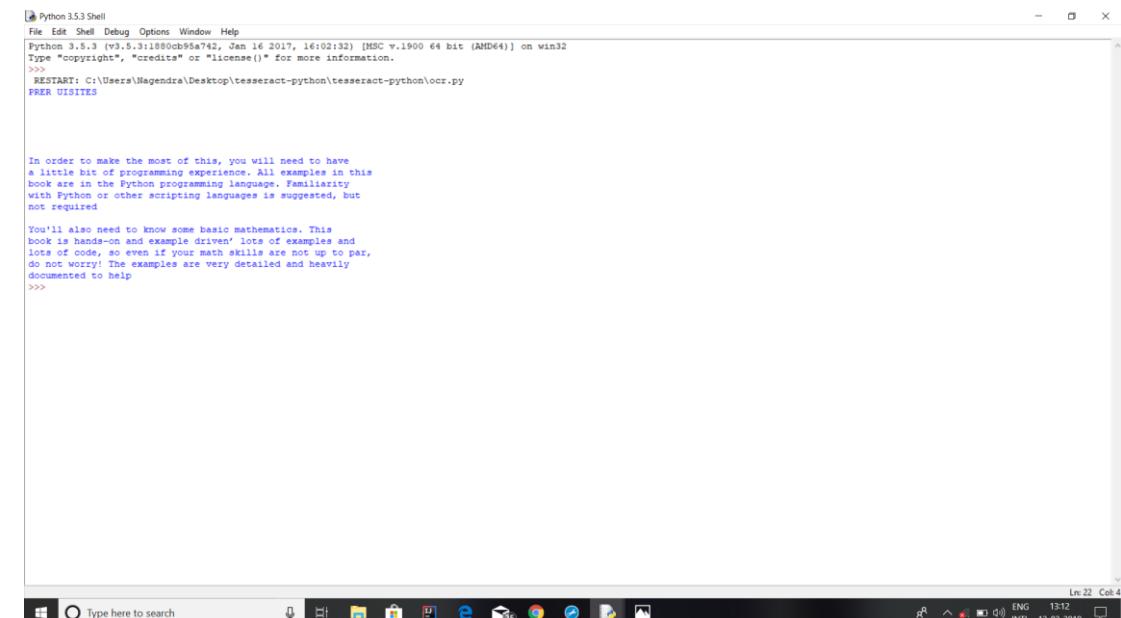
    # Uncomment the line below to provide path to tesseract manually
    # pytesseract.pytesseract.tesseract_cmd = '/usr/bin/tesseract'

    # Define config parameters.
    # '-l eng' for using the English language,
    # '-c oem 1' for using LSTM OCR Engine
    config = ('-l eng --oem 1 --psm 3')

    # Read image from disk
    im = cv2.imread(imPath, cv2.IMREAD_COLOR)

    # Run tesseract OCR on image
    text = pytesseract.image_to_string(im, config=config)

    # Print recognized text
    print(text)
```



```
Python 3.5.3 Shell
File Edit Shell Debug Options Window Help
Python 3.5.3 (v3.5.3:1e880cb95a742, Jan 16 2017, 16:02:32) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> RESTART: C:\Users\Nagendra\Desktop\tesseract-python\tesseract-python\ocr.py
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>>>
```

VIII. CONCLUSION:

From this concept we are conclude that, the concept of Medicine dispenser is very useful to the people. It gives availability of medicines at any point of time, also in backward areas. It will be advantageous to the society. It will be very easy to access. It doesn't require any sales person for operation anyone can access this machine.

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