

INVENTORY MANAGEMENT FOR MEDICINE PLACE FINDER USING ARDUINO

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Abstract:

The paper proposed the finding medicine place and inventory management of different medicine. Medicine updating form is created using visual basic software. The proposed system uses arduino board and to store database using Microsoft access. The arduino board is programmed in such a way that it will receive data from computer and indicate appropriate drawer where medicine is placed. The output of medicine place is fed to the arduino accordingly data coming from computer and particular drawer number is displayed.

Keywords: Arduino, visual basics, database

Introduction-

In day today life medical field is having great importance. Every day we found crowd at the medical store. The seller alone has to do duty of providing not only the appropriate medicine but also in time.

In traditional medical system the medication is done by remembering the place of medicine. Hence many of times it happens that he can't found the required medicine in time. And also there are varieties of medicine are available in medical store. The seller alone has to keep in memory the place of each and every medicine. Also he has to keep the updates about the sale, purchase information, availability and also the most important expiry date of medicine. Hence it is too hectic and risky job as there are certain limitations in remembering capacity of human memory.

Hence now we are going to develop our new project "MEDICAL STORE AUTOMATION" This is Arduino based system where going to apply "automatic indicating drawer system". The main aim of the system is to find the place of the required medicine by automatic indicating that drawer. For this prepare a data depth providing information about medicine with its rack address by using visual basic software. Also facility of updating information about medicine i.e. entry of new medicine can be made easily. Hence in overall all problems of traditional medical store system can be overcome and work will be done in efficient manner.

Block Diagram

Block diagram of this project is as given in fig 1.

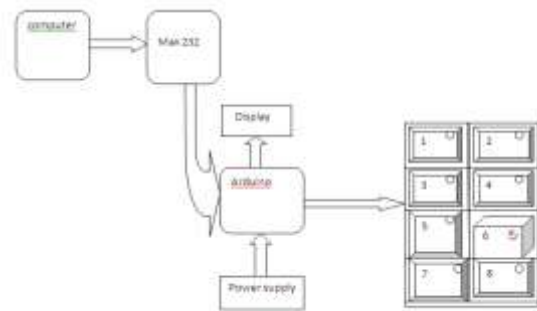


Fig 1: Block Diagram of project

In this system there is centralised computer having windows operating system along with Microsoft loaded data. By which MS-access as a data base. In the visual basic software user registration or medicine updating form is created. This entry form the user will enter entire data base of available all the medicine along with its quantity. When entry form is fulfilled correctly then the data is transferred to Arduino through max232. It will display the particular drawer number as well as send this command to rack and drawer is indicated automatically.

Flowchart of computer operation:

Flow chart of this project is as given in fig 2

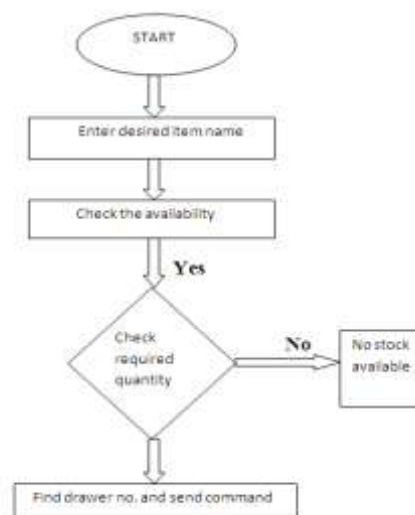


Fig 2: flowchart of computer

In this system user entry form is created. Where medicine name, quantity and rack number is stored in this entry form.

When user enter the particular medicine name in computer then it will check whether the medicine is available or not. Then it will check required quantity of medicine if the medicine is available then it will send the command to arduino otherwise it will display stock is not available. The user enter the sold quantity again the data base will be arrange balance will be remain in database. Based on this he will take the decision of stock quantity comes to end then immediately he will able to order new quantity based on inventory receive.

Entry form:

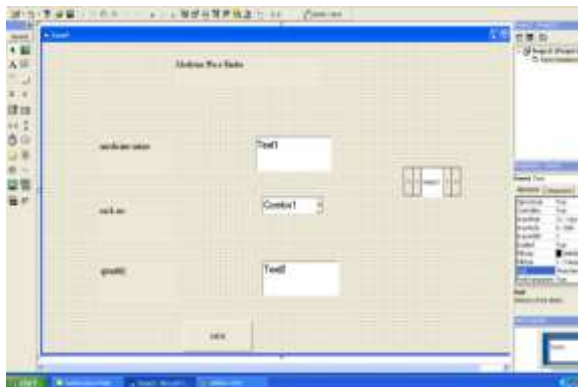


Fig2.1: User registration or medicine updating form

Flowchart of Arduino:

Flowchart of Arduino is as given in fig 2.1

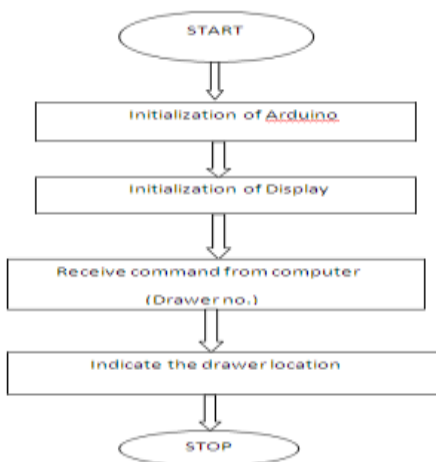


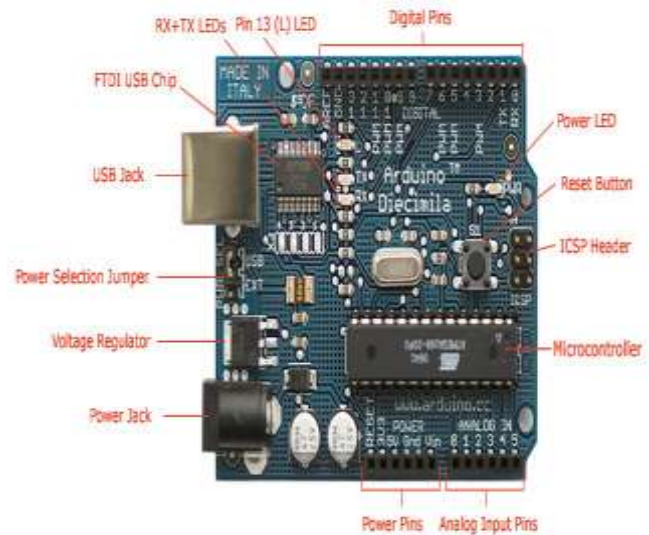
Fig 2.1: flowchart of Arduino

In this module receive the command from computer(drawer number) .The medicine in corresponding drawer will be automatically indicating through LED. Then user will open the drawer and will give the particular medicine to the customer.

Arduino-

The Arduino Uno R3 is a open source microcontroller board based on the ATmega328 chip. This Board has 14 digital input/output pins, 6 analog inputpins, Onboard 16 MHz

ceramic resonator, Port for USB connection, Onboard DC power jack, An ICSP header and a microcontroller reset button. External (non-USB) power can come either from an AC-to-DC adapter (wall-wart) or battery.The board can operate on an external supply of 6 to 20 volts. If supplied with less than 7V.



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Fig 3:Arduino Board

(B) SOFTWARE DETAILS:

• **Visual basic:**

Visual Basic is a tool that allows you to develop Windows (Graphic User Interface - GUI) applications. The applications have a familiar appearance to the user. Visual Basic is a fairly easy programming language to learn and it is for anybody who is interested in programming but lack professional training in software engineering. Learning VB will help young children to improve their logical thinking skills and develop their minds. You can choose to program in VB purely for fun and enjoyment or you can create more advanced applications such as educational courseware and commercial software.

- Visual Basic operates in three modes.
 - Design mode** - used to build application
 - Run mode** - used to run the application
 - Break mode** - application halted and debugger is available.

Forms - Windows that you create for user interface

Controls - Graphical features drawn on forms to allow user interaction (text boxes, labels, scroll bars, command buttons, etc.) (Forms and Controls are **objects**.)

Properties - Every characteristic of a form or control is specified by a property. Example properties include names, captions, size, color, position, and contents. Visual Basic applies default properties. You can change properties at design time or run time.

Methods - Built-in procedure that can be invoked to impart some action to a particular object.

Event Procedures - Code related to some object. This is the code that is executed when a certain event occurs.

General Procedures - Code not related to objects. This code must be invoked by the application.

Modules - Collection of general procedures, variable declarations, and constant definitions used by application.

The **Main Window** consists of the title bar, menu bar, and toolbar. The title bar indicates the project name, the current Visual Basic operating mode, and the current form. The menu bar has drop-down menus from which you control the operation of the Visual Basic environment. The toolbar has buttons that provide shortcuts to some of the menu options. The main window also shows the location of the current form relative to the upper left corner of the screen (measured in twips) and the width and length of the current form.

The **Form Window** is central to developing Visual Basic applications. It is where you draw your application.

Conclusion:

This system is very effective for medical store automation. It reduced human efforts in day to day life. This module use to keep the updates about the sale, purchase information, availability and also the most important expiry date of medicine.

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