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Smart Medicine Assistant Using Arduino Board

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Abstract:- Medicines are one of the most vital requirements in the society. There is a chance for the pharmacist to sell expired medicines due to human error. To avoid such situations, a smart medicine assistant can be used to avoid such dangerous situations. By creating barcode with the use of Raspberry-pi and IoT technology, the expiry date and stock availability can easily be examined. This will make revolution in medical field.

I. INTRODUCTION

Presently persistent would give their solution to drug store, and afterward a drug specialist gets this remedy, looks for the medication and provides for the patient. While giving the medication to the patient, the drug specialist will check for expiry date physically and conveys it to the patient which can make mistake now and again by selling lapsed items the patient [1-5]. The retailers in the drug store for the most part deal with the issue of offering a terminated item to the purchasers which is truly dangerous as it is done physically which can be supplanted by standardized tag framework. In this venture, we propose a framework which makes less blunder and time taken to check the stock accessibility of the meds and its expiry date has been made by the utilization of Arduino uno with the assistance of standardized identifications [6-8]. The motivation behind this venture is to ensure the wellbeing for the patients by not offering the lapsed items to the patients and furthermore to take a note of the stock accessibility by lessening the mistakes and time taken [9-11]. As a rule, a patient would give their remedy to drug store, and afterward a drug specialist gets this solution, looks for the medication and provides for the patient. While giving the medication to the patient, the drug specialist will check for expiry date physically and conveys it to the patient which can make mistake on occasion by selling terminated items the patient. During this interaction, it requires heaps of investment on checking medication and it's additionally risky for the patients. So in this article, writers have acquainted a framework with check the subtleties of the medication, for example, the expiry date, name of the medication by typical Scanner and show the outcome in PC. The library which contains the standardized identification subtleties has been originally made by perusing the scanner tag from the web camera which changes over the picture into dim picture and by changing over the standardized tags into double digits which frames a personality for the standardized identification [12-16]. Utilizing the standardized identification number got by change is utilized for putting away the subtleties of the medication, for example, name of the medication, cost of the tablet and expiry date of the medication The reason for this undertaking is to ensure the security for the patients by not offering the lapsed items to the patients and furthermore to take a note by diminishing the blunders and time taken [17-20].

➢ *Problems Identified*

In the current framework, to know the stock accessibility of a medication the drug specialist needs to check it physically from a data set and furthermore to be aware to the subtleties of the medication, for example, its expiry date, cost and name of the medication would be checked physically by perusing the subtleties which is on the medication. The time taken is more when it's performed physically to check the expiry date of the medication structure a data set, as since the method involved with checking is done physically by the drug specialist there are chances of blunders to happen, for example, by offering the lapsed item to the patient which is extremely perilous. At drug store there are chances of giving lapsed items to a patient while selling the medication or likewise by not checking the termination of the items which are available. In capable to this issue, we propose a framework by utilizing scanner tags to really look at the medication and lapse of the medication.

II. EXISTING SYSTEM

In the current framework, to realize the expiry date of a medication the drug specialist needs to check it physically from a data set and furthermore to be aware to the subtleties of the medication, for example, its expense and name of the medication would be checked physically by perusing the subtleties which is on the medication. The time taken is more when it's performed physically to check the expiry date of the medication structure a data set, as since the most common way of checking is done physically by the drug specialist there are chances of blunders to happen, for example, by offering the terminated item to the patient which is exceptionally perilous.

➢ *Problem Statement*

At drug store there are chances of giving lapsed items to a patient while selling the medication or likewise by not checking the termination of the items which are available. In mindful to this issue, we propose a framework by utilizing scanner tags to really take a look at the medication and termination of the medication. A portion of the difficulties of existing framework are slow access, not solid, low proficient, less precision, high intricacy, significant expense and so on, At first the standardized identification which is over the medication is examined by the scanner tag scanner that is associated with the Arduino Uno by the USB port peruses the picture and converts the picture into dim picture for change of the codes into double codes to unscramble the code wherein the subtleties of the medication is put away on Arduino which goes about as the data set containing the data of medication, for example, its name, expiry date and cost, then it checks for expiry by contrasting with the ongoing date with the date of termination, on the off chance that lapsed it show the outcome on chronic screen that it has been

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terminated if else it will begin to show the name of the medication, its date of expiry, cost and the stock accessibility will be shown on the chronic screen after fulfillment of filtering it will begin to filter for next picture by scanner.

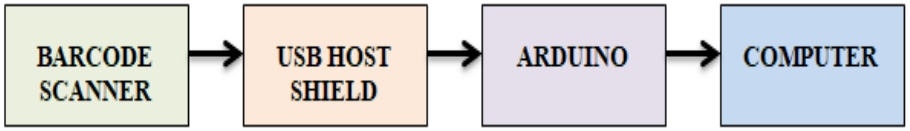

Fig 1. Block diagram of proposed system

In the proposed plan, the standardized identification framework utilized as the data set support framework by first perusing the scanner tag through a web camera which changes over the picture into dim picture so it would be not difficult to change over the picture into double digits as it would be of highly contrasting in variety and with the assistance of the standardized tag library which has the incentive for each code, the parallel digit is shaped setting and edge esteem which distinguishes the dim and light shades for transformation to show the exceptional character number for the scanner tag. By utilizing that remarkable personality number of the scanner tag, we store the data of the medication, for example, its name, expiry date, cost and its accessibility of a specific medication is put away with the assistance of Embedded c in the Arduino.

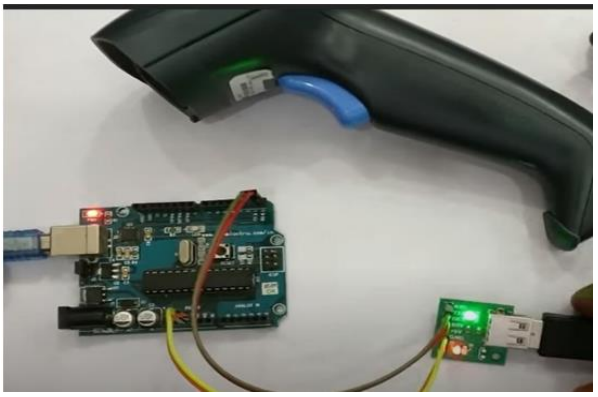

Fig 2. Prototype of proposed system

It goes about as the information base and when the standardized identification is filtered it checks for expiry by contrasting the ongoing date and the expiry date of the medication, assuming its lapsed it shows the outcome on chronic screen that it has been terminated and on the off chance that it's not lapsed it will show its name, cost, expiry date of the medication on the chronic screen.

Table 1 Characteristics of advanced scanning

Advanced scanning		**CCD**	**Laser**	**Pen**
Features	Poor quality and remote label reading fast readingImpact resistance	Fast readingImpact resistance	Remote andwide labelreading	Inexpensive
Disadvantages	-	Does not readremote labelswell	Low impact resistance	Practice requiredfor operation Remote readingnot possible

With different enhancements to the perusing system in cutting edge examining, high thickness and ineffectively printed scanner tag names can be perused without any problem. Indeed, even scanner tags that made perusing be unpleasant in the past can be perused effortlessly, while the convenience has been improved impressively.

The USB cable has typically four wires to connect the A type connector;

Table 2.Wire connection of USB

Pin 1	Red	+5V
Pin 2	White	D-
Pin3	Green	D+
Pin 4	Black	GND

III. CONCLUSION

Concerning end, the subtleties inside the card can be perused out and have the option to get down on the subtleties from the module showing fundamental data in regards to the items. This will assist with recognizing the lapsed items in the store network. In future work, we will attempt to do this as a brilliant peruser framework and to add it for charging. Our shrewd medication collaborator serves to effectively realize the expiry date of the medication .the key rationale is to guarantee wellbeing of patients and buyers. By filtering the scanner tags of the medication, the drug specialist can realize the expiry date rather than physically looking at it.

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