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Heart Attack Detection and Health Monitoring of Paralysis Patient

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ABSTRACT: This project explains that, we have developed a smart ration card the usage of Radio Frequency identity (RFID) method to save you the ration forgery as there are probabilities that the shopkeeper may additionally promote the cloth to a person else and take the profit and put a few false amount of their statistics. In this device, a RFID tag is used that includes the member of the family information and the consumer desires to show this tag to the RFID reader. The microcontroller related to the reader will tests for the user authentication. If the user is found real then the quantity of ration to take delivery of to the purchaser in keeping with the total quantity of own family members might be displayed on show device. This smart ration card is free from theft as the statistics approximately the delivered ration may be ship.

RFID based automatic ration distribution system is an approach in public distribution system useful for more efficient, accurate and automatic technique of ration distribution. The present ration distribution system has drawbacks like inaccurate measurement of goods, low processing speed, large waiting time and material theft. In this paper proposed system is based on RFID and the proposed system replaces the manual work in ration shop. To get materials in shop need to show the RFID tag to the RFID card reader, then the controller checks the customer's codes and details in the respective cards. After verification, customer need to select material and quantity using QR-code sensor. After delivering the required material to customer, the microcontroller sends the information to the customer as well as Public Distribution System authorities.

I. INTRODUCTION

India's Public Distribution machine (PDS) is the largest retail device in the international Public distribution machine affords a ration card issued beneath an order or authority of the nation government for the purchase of critical consumer materials like rice, wheat, kerosene and oil. Nation authority's troubles exclusive ration cards like yellow ration card, saffron ration card, and white ration card relying on family annual profits. The customer cloth is provided to ration card holders within the first week of every month by way of ration shopkeeper. Public Distribution machine is one of the widely debatable troubles that involve malpractice. The guide intervention in weighing of the substances ends in faulty measurements and/or it is able to happen, the ration save owner illegally uses patron substances without earlier information of ration card holders. The proposed machine aids to control malpractices which are Present in ration shop by means of changing guide work with automatic system primarily based on RFID. Every purchaser i.e. circles of relative's head furnished RFID card which acts as ration card. The RFID card has unique identity wide variety. The patron scans the cardboard on RFID reader that's interfaced with microcontroller kept at ration shop. As soon as client is tested via password, the device asks the patron to pick appropriate material and amount of material thru keypad. This project paper explains that, we have developed a smart ration card the usage of Radio Frequency identity (RFID) method to save you the ration forgery as there are probabilities that the shopkeeper may additionally



promote the cloth to a person else and take the profit and put a few false amount of their statistics. In this device, a RFID tag is used that includes the member of the family information and the consumer desires to show this tag to the RFID reader.

II. LITERATURE SURVEY

The present PDS (Public Distribution System) framework has disadvantages like low processing speed, imprecise quantity of goods, material theft, and large waiting time in rationing shop. RFID (Radio Frequency Identification) based programmed rationing shop is novel approach out in the PDS valuable for more effective, precise, and mechanized method of distribution of ration. An accurate, automated, and efficient RFID based technology used for distribution of ration which is an advanced methodology in PDS. The proposed automated rationing system depends on RFID innovation that replaces regular ration card by RFID tag. Customer's database is already saved in ARM microcontroller which is given by Government Authority.

III. OBJECTIVE

- Streamline the distribution process of food supplies, ensuring timely and efficient allocation to beneficiaries.
- Implement measures to prevent fraud in the distribution system, ensuring that only legitimate cardholder's access allocated resources.
- Move towards a paperless system, contributing to environmental sustainability by reducing paperwork associated with traditional ration distribution.
- Optimize resource utilization and reduce operational costs through the implementation of RFID technology.
- Implement RFID technology for accurate and up-to-date inventory management, preventing shortages or overstock situations.

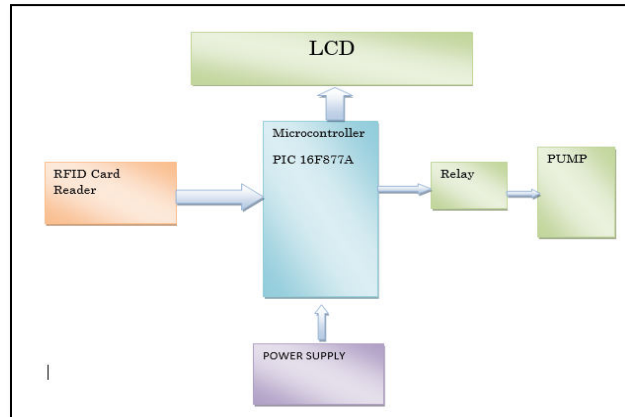
Problem Statement:

The main problem that the paper addresses is the current inefficiency in the system of food distribution for people. This inefficiency manifests in several ways: long lines at food distribution points, irregular food distribution schedule, and lack of variety in food items. Here I have developed an automated ration vending machine (RFID) that would help to alleviate some of these inefficiencies. This machine would be stationed at food distribution points and would dispense the ration according to the ration details. In addition, the machine would be able to keep track of the food items in distributed, which would help to ensure that food is distributed properly and there is no malpractice in it. The current PDS system in India offers nearly 1 billion people gains at a cheap price. In the traditional rationing system, there is a risk of illicit product consumption; materials may be stolen by entering incorrect entries made in the register without the ration card holder's knowledge. As a result, a significant quantity of money provided by the government is squandered. Apart from these low processing speed, high waiting time are major drawbacks of the traditional system. Considering the current scenario of the pandemic and economic disturbance within the country, the government cannot afford corruption and money squandering.

IV. PROPOSED SYSTEM

While developing any Controller based electronic system, there are some steps which must be followed. These steps are:

- Deciding system specifications i.e., Block diagram
- Selection of system components
- Design of circuit diagram
- Design of PCB layout
- Manufacturing of PCB layout
- Component mounting & soldering
- Testing and troubleshooting of hardware
- Design of enclosure or structure.



Selection criterion for Controller: -

- The PIC16F877A features 256 bytes of EEPROM data memory.
- self-programming.
- an ICD, 2 Comparators.
- 8 channels of 10-bit Analog-to-Digital (A/D) converter.
- Pinout compatible to another 28-pin or 40/44-pin.

Selection criterion for RFID Reader: -

- Serial RS232/TTL output
- Operating Frequency is 125KHz.
- Based on operating – 3.5-5.5V.
- Range is 5-8 cm.

Selection criterion for gsm module: -

- Speed
- Power requirement-3.3V
- No. of channel – 12/ 14
- Selection criterion for amplifier :-
- Based on no. channel- 8 channel
- Based on recording time- each channel store 1.5 min recording
- Based on operating voltage.

Selection criterion for lcd :-

- Based on operating voltage.
- Based on types of LCD.
- Based on display character.

Selection criterion for temperature sensor:-

- Types of sensor.
- Operating voltage- 1.7 – 2.5v
- Temperature rage.

Microcontroller PIC16F877A:

Micro-controller is heart of the system. It has number of features and its controlled over all process we can write code and load the controller for control real time application processes. A timer module used to allow the micro-controller to perform tasks for certain time periods. A serial i/o port to allow data to flow between the controller and other devices such as a PIC or another microcontroller. An ADC used to allow the microcontroller to accept analogue input data for processing.

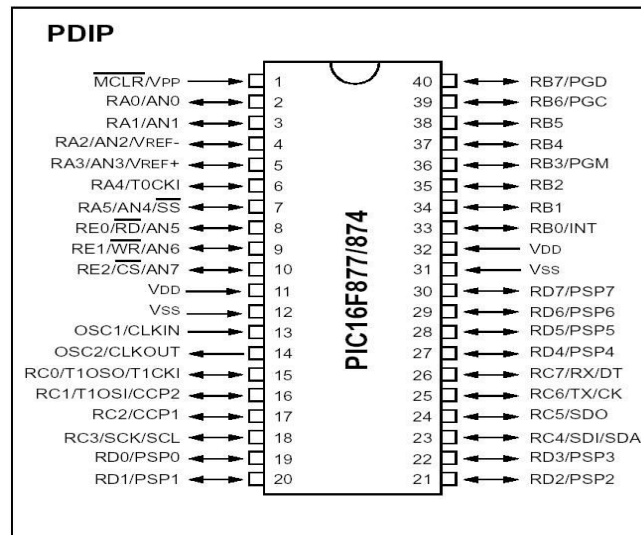


High-Performance RISC CPU:

- Only 35 single-word instructions to learn
- All single-cycle instructions except for program branches, which are two-cycle
- Operating speed: DC – 20 MHz clock input DC – 200 ns instruction cycle
- Up to 8K x 14 words of Flash Program Memory,
- Up to 368 x 8 bytes of Data Memory (RAM),
- Up to 256 x 8 bytes of EEPROM Data Memory
- Pinout compatible to another 28-pin or 40/44-pin
- PIC16CXXX and PIC16FXXX microcontrollers

Peripheral Features:

- Timer0: 8-bit timer/counter with 8-bit prescaler
- Timer1: 16-bit timer/counter with prescaler, can be incremented during Sleep via external crystal/clock
- Timer2: 8-bit timer/counter with 8-bit period register, prescaler and postscaler
- Two Capture, Compare, PWM modules
- Capture is 16-bit, max. resolution is 12.5 ns
- Compare is 16-bit, max. resolution is 200 ns
- PWM max. resolution is 10-bit
- Synchronous Serial Port (SSP) with SPI™
- (Master mode) and I2C™ (Master/Slave)
- Universal Synchronous Asynchronous Receiver
- Transmitter (USART/SCI) with 9-bit address detection
- Parallel Slave Port (PSP) – 8 bits wide with external RD, WR and CS controls (40/44-pin only)
- Brown-out detection circuitry for
- Brown-out Reset (BOR)



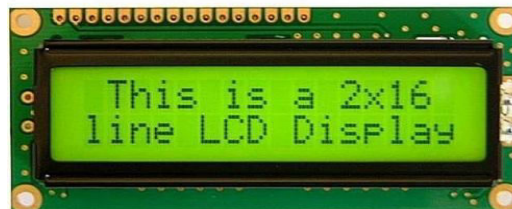
A high quality 16 character by 2-line intelligent display module, with back lighting, Works with almost any microcontroller. This is a popular 16x2 LCD display. It is based on the hd44870 display controller hence it is easy to interface with most micro controllers. It works of 5v and has a green back light.

Specifications:

- Operating Voltage is 4.7V to 5.3V
- Current consumption is 1mA without backlight
- Alphanumeric display module, meaning can display alphabets and numbers



- Consists of two rows and each row can print 16 characters.
- Each character is built by a 5×8-pixel box
- It can also display any custom generated characters
- Available in Green and Blue Backlight



EM18 RFID Reader

EM18 is a RFID reader which is used to read RFID tags of frequency 125 kHz.

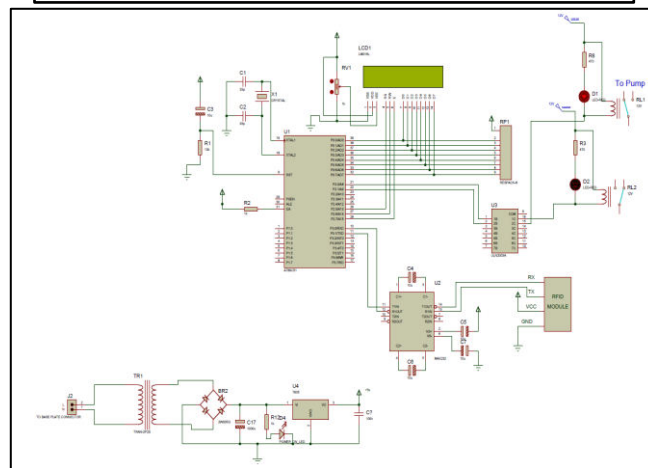
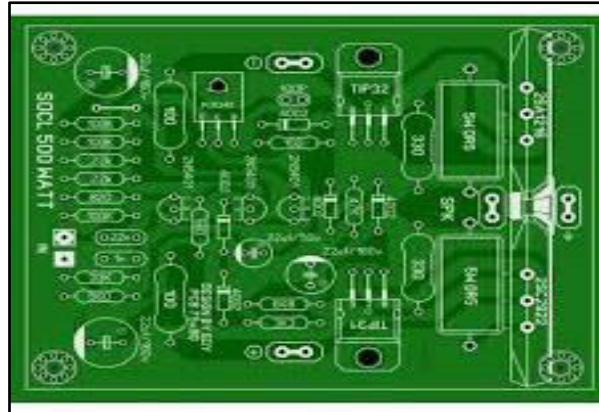
After reading tags, it transmits unique ID serially to the PC or microcontroller using UART communication or Wiegand format on respective pins.

EM18 RFID reader reads the data from RFID tags which contains stored ID which is of 12 bytes.

EM18 RFID reader doesn't require line-of-sight. Also, it has identification range which is short i.e. in few centimeters.



Zero PCB is basically a general-purpose printed circuit board (PCB), also known as preboard or DOT PCB. It is a thin rigid copper sheet with holes pre-drilled at standard intervals across a grid with 2.54mm (0.1-inch) spacing between holes. Each hole is encircled by a round or square copper pad so that component lead can be inserted into the hole and soldered around the pad without short-circuiting the nearby pads and other leads. For connecting the lead of component with another lead, solder these together or join these using a suitable conducting wire.



Circuit Diagram of System

VII. CONCLUSION

The traditional gadget has drawbacks like malpractices, low processing speed, and lengthy ready time at ration keep getting fabric and fabric robbery in ration keep with no acknowledgement to government and patron. To triumph over above troubles, automated ration saves played critical function. The automatic ration saves concerned RFID in addition to GSM generation to distribute the kerosene or grain material. Ration card is replaced with the aid of RFID and data is dispatched to customer the use of GSM module. The proposed device creates the transparency in public distribution device as the paintings will become computerized. With the assist of this machine, it's far possible to make public distribution system green and free from malpractices. The proposed machine has blessings like its miles helpful to prevent malpractices at ration shop, maintain information well, reduces paperwork, time saving approach and cost powerful.

VIII.ACKNOWLEDGEMENT

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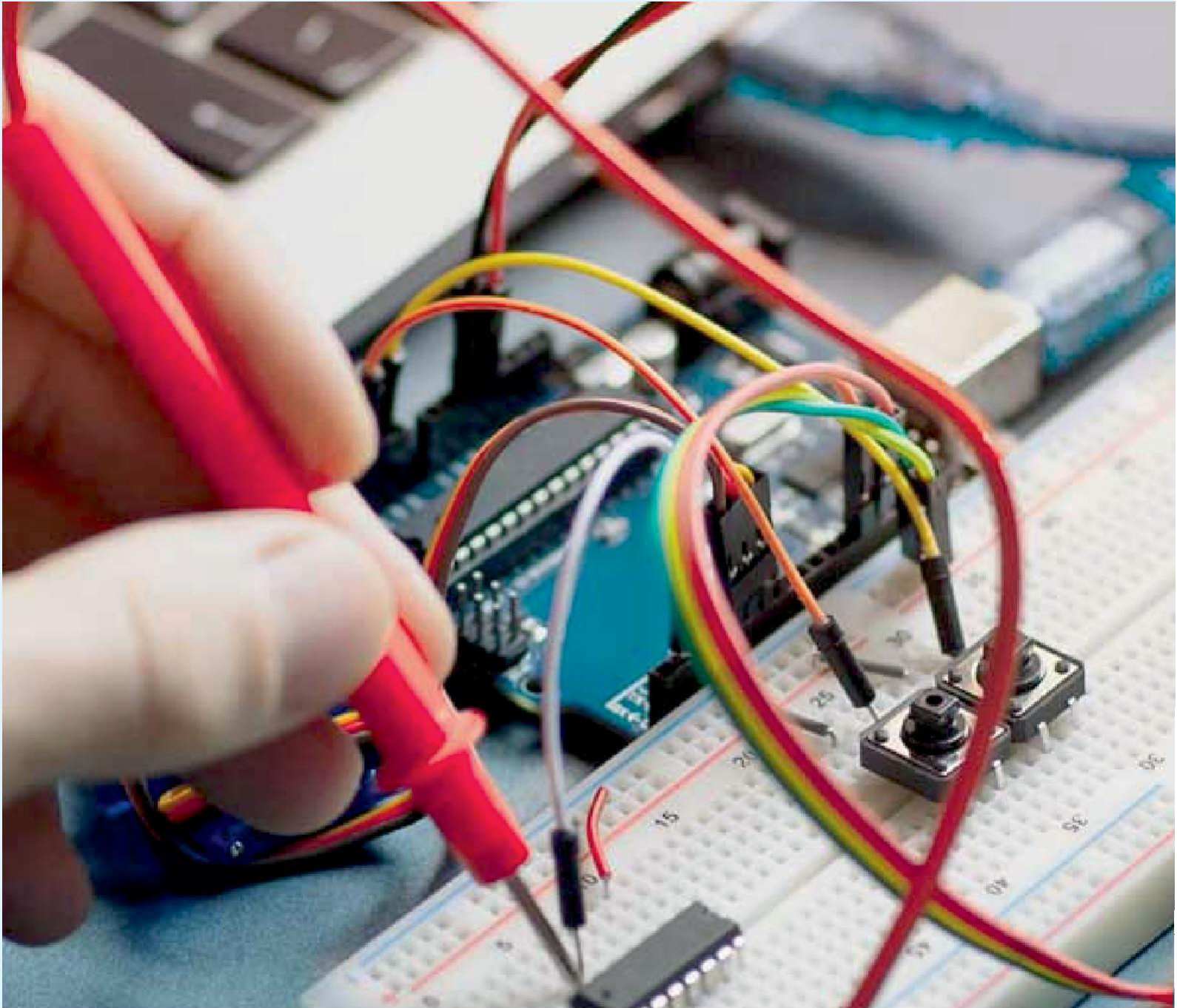
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Credit goes to our friends, staff members of Electrical Engineering Department and the Institute’s Library for their help and timely assistance.



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