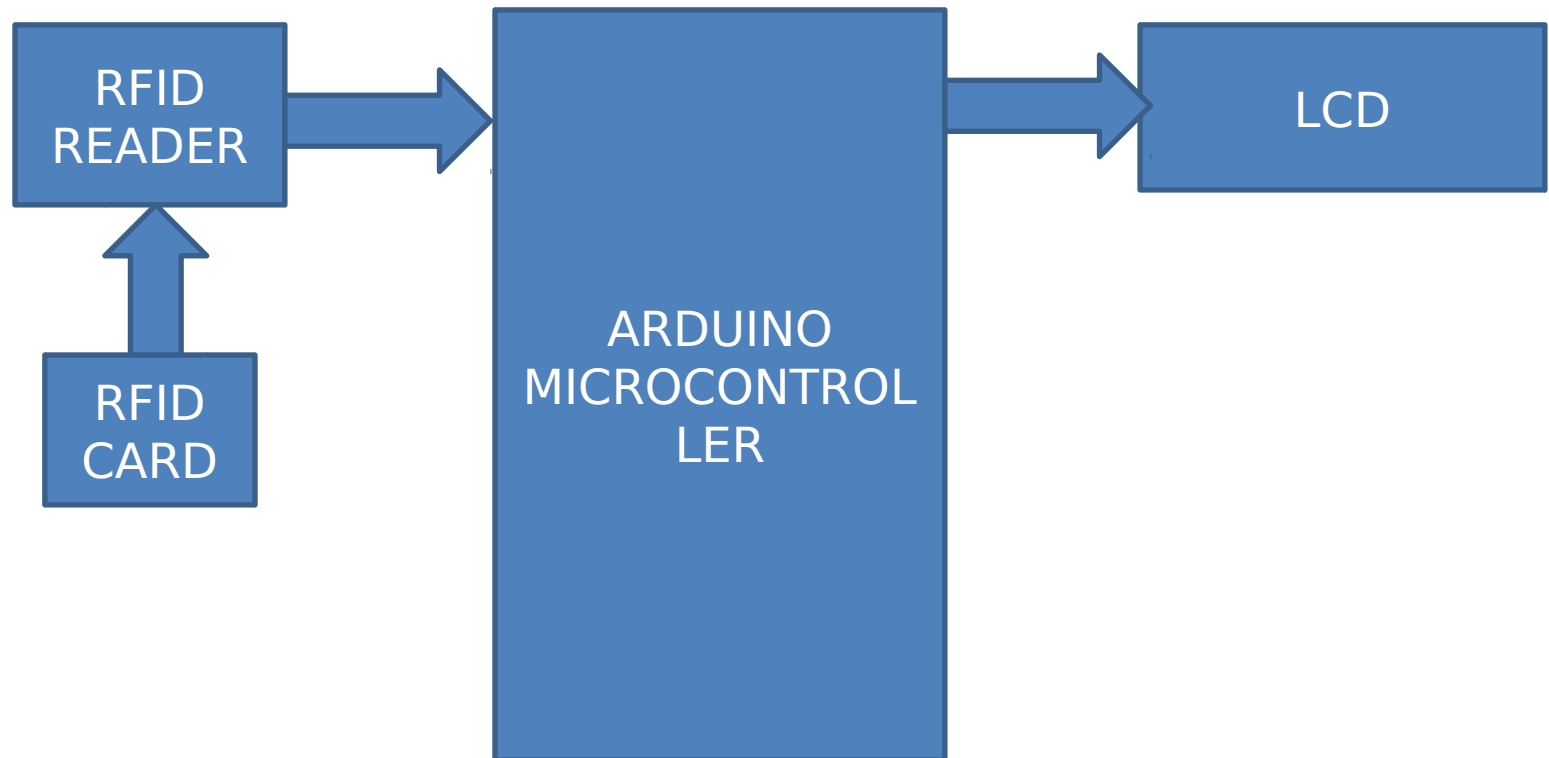


# **RFID CART**

# ABSTRACT

- RFID encompasses any wireless communication that allows remote retrieval of information associated with a particular commodity, product, component.
- project put forwards a unique solution to reduce the average time a customer spends at a supermarket.
- The product with the appropriate tag is read by the reader on the cart and the product's details are displayed on the LCD screen.
- Product taken can be return back also. As the customer puts each product information of these products along with the bill amount are displayed on the LCD display.

# BLOCK DIAGRAM

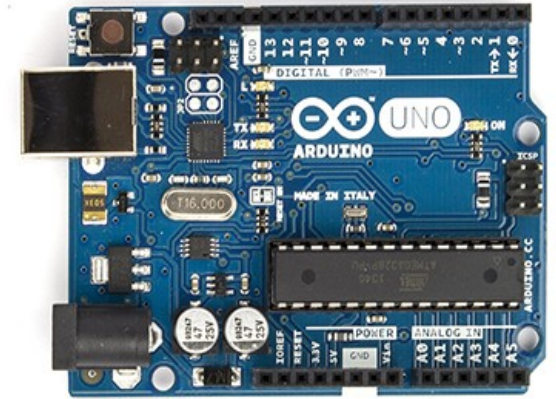


# BLOCK DESCRIPTION

## ARDUINO UNO

### Features

- ATmega328P microcontr
- Input voltage - 7-12V
- 14 Digital I/O Pins (6 PWM outputs)
- 6 Analog Inputs
- 32k Flash Memory
- 16Mhz Clock Speed



# Atmega 328 p

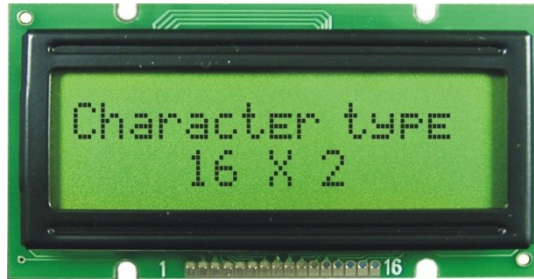
- 32K bytes of In-System Programmable Flash
- 1K bytes EEPROM
- 2K bytes SRAM
- 23 general purpose I/O lines
- 32 general purpose working registers
- three flexible Timer/Counters with compare modes, internal and external interrupts
- a serial programmable USART
- a byte-oriented 2-wire Serial Interface, an SPI serial port
- a 6-channel 10-bit ADC
- a programmable Watchdog Timer with internal Oscillator
- five software selectable power saving modes.

# RFID TAG



- RFID tag has two types: passive and active tag.
- active tags use a power source in terms of small battery, which is used to power the integrated circuits and broadcast the signal to the reader. Active tags are typically much more reliable because it is used for longer distance than passive tag

# LIQUID CRYSTAL DISPLAY



- These modules are preferred over seven segments.
- LCDs consume much less power than LED
- gas-display displays because they work on the principle of blocking light rather than emitting it.
- A 16x2 LCD means it can display 16 characters per line and there are 2 such lines

# RFID READER



- The RFID Reader Module is designed specifically for low-frequency (125 kHz) passive tags. Reader is the device that scans the tag and decodes the received data.
- This reader has on-chip power supply
- Single-wire, 9600 baud Serial TTL interface to PC and other processors.



- **Software requirements**
- Tool
  - Arduino IDE
- Programming Languages
  - Embedded C/C++

# CONCLUSION

- The paper is characterized by Automatic control; Easiness to identify the Manufacturing and Expiry dates. Total Bill can be estimated and displayed beforehand, therefore reducing the overall shopping time. This paper demonstrates the importance of RFID and how well it can suit our daily day-to-day life and make it relatively less burdensome.

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