ATTANDANCE SYSTEM

2024

—

Shivam
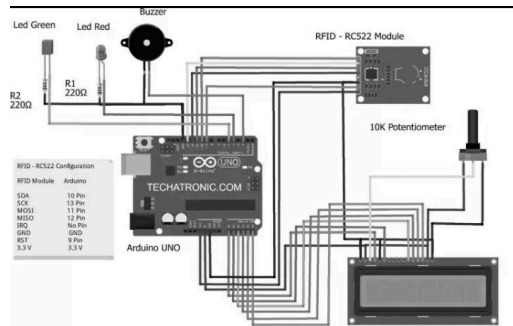HVV
Rothak gate
Bhiwani 127021

Link: https://github.com/indiavibe/shivam.com

Components needed in this project

1. Arduino UNO
2. RF IDE
3. 20/4 lcd display
4. Jumper wire
5. Power rail (breadboard)
6. Buzzer
7. Led (red, blue)
8. Type-b cable

Example code

```
#include <SPI.h>

#include <MFRC522.h>

#include "LiquidCrystal.h"


LiquidCrystal lcd(14, 15, 16, 17, 18, 19);

#define SS_PIN 10

#define RST_PIN 9

#define LED_G 6 //define green LED pin

#define LED_R 4 //define red LED pin

#define BUZZER 2 //buzzer pin


MFRC522 mfrc522(SS_PIN, RST_PIN); // Create MFRC522 instance.


void setup() {
  Serial.begin(9600); // Initiate a serial communication
  SPI.begin(); // Initiate SPI bus
  mfrc522.PCD_Init(); // Initiate MFRC522
  lcd.begin(20,4); // Turn on the blacklight and print a message.
  pinMode(LED_G, OUTPUT);
  pinMode(LED_R, OUTPUT);
  pinMode(BUZZER, OUTPUT);
  noTone(BUZZER);
}


void loop() {
  // Look for new cards
  if ( ! mfrc522.PICC_IsNewCardPresent()) {
    lcd.setCursor(3,0);
```

```
    lcd.print("SHOW YOUR");
    lcd.setCursor(4,1);
    lcd.print("ID CARD");
    return;
} else{
    lcd.clear();
}

// Select one of the cards
if ( ! mfrc522.PICC_ReadCardSerial()) {
    return;
}

//Show UID on serial monitor
Serial.print("UID tag :");
String content= "";
byte letter;
for (byte i = 0; i < mfrc522.uid.size; i++) {
    Serial.print(mfrc522.uid.uidByte[i] < 0x10 ? " 0" : " ");
    Serial.print(mfrc522.uid.uidByte[i], HEX);
    content.concat(String(mfrc522.uid.uidByte[i] < 0x10 ? " 0" : " "));
    content.concat(String(mfrc522.uid.uidByte[i], HEX));
}
Serial.println();
content.toUpperCase();

if (content.substring(1) == "36 B1 03 32") //change here the UID of the card/cards that you want to give access
{
    lcd.print("STUDENT 01");
```

```
    lcd.setCursor(0,1);

    lcd.print("PRESENT");

    digitalWrite(LED_G, HIGH);

    tone(BUZZER, 500);

    delay(300);

    noTone(BUZZER);

    delay(3000);

    digitalWrite(LED_G, LOW);

    lcd.clear();

    lcd.setCursor(0,3);

    lcd.print("ATAL"); // Display your name here

    delay(2000);

  }


  else if (content.substring(1) == "81 93 40 43") //change here the UID of the card/cards that
you want to give access

  {

    lcd.print("STUDENT 02");

    lcd.setCursor(0,1);

    lcd.print("PRESENT");

    digitalWrite(LED_G, HIGH);

    tone(BUZZER, 500);

    delay(300);

    noTone(BUZZER);

    delay(3000);

    digitalWrite(LED_G, LOW);

    lcd.clear();

    lcd.setCursor(0,3);

    lcd.print("ATAL"); // Display your name here

    delay(2000);
```

```
    }

  else if (content.substring(1) == "91 69 3E 43") //change here the UID of the card/cards that
you want to give access
  {
    lcd.print("STUDENT 03");
    lcd.setCursor(0,1);
    lcd.print("PRESENT");
    digitalWrite(LED_G, HIGH);
    tone(BUZZER, 500);
    delay(300);
    noTone(BUZZER);
    delay(3000);
    digitalWrite(LED_G, LOW);
    lcd.clear();
    lcd.setCursor(0,3);
    lcd.print("ATAL"); // Display your name here
    delay(2000);
  }

  else
  {
    lcd.print("UNAUTHORIZE");
    lcd.setCursor(0,1);
    lcd.print("ACCESS");
    digitalWrite(LED_R, HIGH);
    tone(BUZZER, 300);
    delay(2000);
    digitalWrite(LED_R, LOW);
    noTone(BUZZER);
```
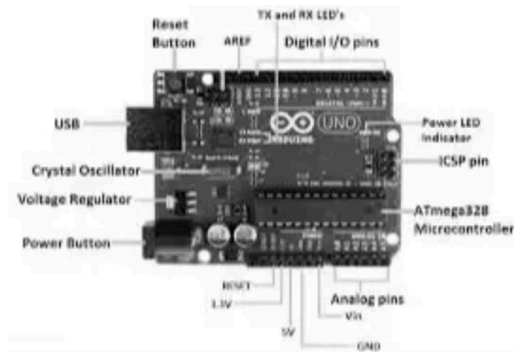
```
  lcd.clear();
 }
}
```

INTRODUCTION OF ARDUINO and RFID

Arduino is an open-source electronics platform based on easy-to-use hardware and software. Arduino boards are able to read inputs - light on a sensor, a finger on a button, or a Twitter message - and turn it into an output - activating a motor, turning on an LED


Radio Frequency Identification (RFID) is a technology that uses radio waves to passively identify a tagged object. It is used in several commercial and industrial applications, from tracking items along a supply chain to keeping track of items checked out of a library.
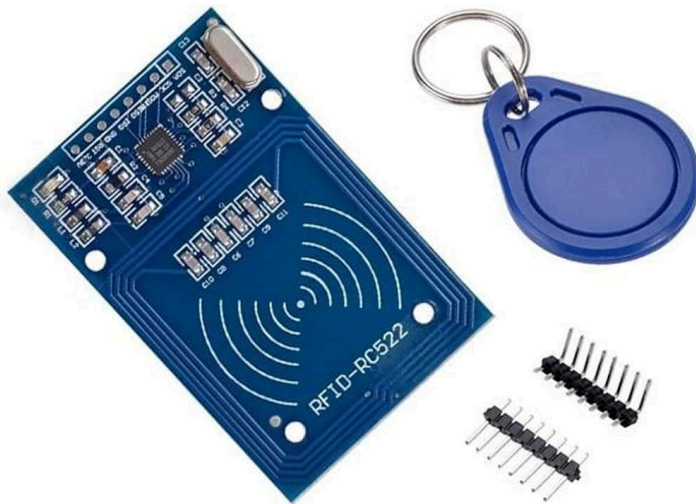
Liquid crystal display

20×4 LCD Display : Commonly Used in: Student Project, Collage, copiers, fax machines, laser printers, industrial test equipment, networking equipment such as routers and storage devices. SIZE: 20×4 (4 Rows and 20 Characters per Row), Can display 4-lines X 20-characters.
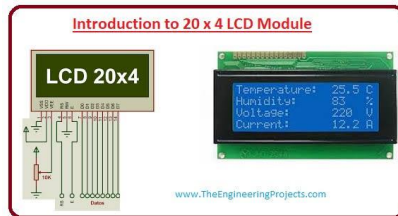
Attendance system

It allows employees to mark and store their attendance online, which is especially convenient for employees who work remotely. It can also work alongside your leave and shift management system to cut down on duplicate tasks, such as converting absences into leave days.