

ARDUINO CODE

```
#include <SPI.h>

#include <MFRC522.h>

#include "SoftwareSerial.h"

#define SS_PIN 10

#define RST_PIN 9

#define led 7

#define redled 6

MFRC522 mfrc522(SS_PIN, RST_PIN); // Create a MFRC522 object.

SoftwareSerial ser(2,3); // RX, TX

void setup()

{

  pinMode(led,OUTPUT);

  pinMode(redled,OUTPUT);

  Serial.begin(9600); // Initiate the serial communication

  ser.begin (115200);

  SPI.begin(); // Initiate the SPI bus

  mfrc522.PCD_Init(); // Initiate MFRC522

  Serial.println("PLEASE PUT RFID TAG IN FRONT OF THE SCANNER...");

  Serial.println();

}

void loop()

{

  // Look for new cards
```

```

if ( ! mfrc522.PICC_IsNewCardPresent())

{

    return;

}

// Select one of the cards

if ( ! mfrc522.PICC_ReadCardSerial())

{

    return;

}

//Show UID on serial monitor


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();

Serial.print("Roll No./Name: ");

content.toUpperCase();

if (content.substring(1) == "BA 96 7B 82" ) //change here the UID of the card

{

```

```
Serial.println("1-Vivek Garg");
```

```
digitalWrite(led,HIGH);
```

```
delay(1500);
```

```
digitalWrite(led,LOW);
```

```
ser.write(1);
```

```
Serial.println();
```

```
delay(3000);
```

```
}
```

```
if (content.substring(1) == "AA 8A C9 25" ) //change here the UID of the card
```

```
{
```

```
Serial.println("2-Liza");
```

```
digitalWrite(led,HIGH);
```

```
delay(1500);
```

```
digitalWrite(led,LOW);
```

```
ser.write(2);
```

```
Serial.println();
```

```
delay(3000);
```

```
}
```

```
/* if (content.substring(1) == "D7 63 6D B5" ) //change here the UID of the card
```

```
{
```

```
Serial.println("3-Yashika");
```

```
digitalWrite(led,HIGH);
```

```
delay(1500);
```

```
digitalWrite(led,LOW);

ser.write(3);

Serial.println();

delay(3000);

}*/

else

{

Serial.println("RFID NOT RECOGNISED");

digitalWrite(redled,HIGH);

delay(1500);

digitalWrite(redled,LOW);

}

}
```

NODE MCU 12 MODULE

```
#include <ESP8266WiFi.h>

#include "Adafruit_MQTT.h"

#include "Adafruit_MQTT_Client.h"

// WiFi parameters

#define WLAN_SSID    "One plus Nord Abi"

#define WLAN_PASS    "a.b.i@123"


// Adafruit IO

#define AIO_SERVER    "io.adafruit.com"
```

```
#define AIO_SERVERPORT 1883
```

```
#define AIO_USERNAME "Abi35"
```

```
#define AIO_KEY "aio_CMCI64fYI8L1nmaEpRL9V9YQuyqm"
```

```
WiFiClient client;
```

```
// Setup the MQTT client class by passing in the WiFi client and MQTT server and login details.
```

```
Adafruit_MQTT_Client mqtt(&client, AIO_SERVER, AIO_SERVERPORT, AIO_USERNAME, AIO_KEY);
```

```
Adafruit_MQTT_Publish Attendance = Adafruit_MQTT_Publish(&mqtt, AIO_USERNAME "/feeds/rfid-attendance");
```

```
char ID;
```

```
void setup() {
```

```
  Serial.begin(115200);
```

```
  Serial.println(F("Adafruit IO Example"));
```

```
  // Connect to WiFi access point.
```

```
  Serial.println(); Serial.println();
```

```
  delay(10);
```

```
  Serial.print(F("Connecting to "));
```

```
  Serial.println(WLAN_SSID);
```

```
  WiFi.begin(WLAN_SSID, WLAN_PASS);
```

```
  while (WiFi.status() != WL_CONNECTED) {
```

```
    delay(500);  
    Serial.print(F("."));  
}  
Serial.println();
```

```
Serial.println(F("WiFi connected"));  
Serial.println(F("IP address: "));  
Serial.println(WiFi.localIP());
```

```
// connect to adafruit io  
connect();
```

```
}
```

```
// connect to adafruit io via MQTT
```

```
void connect() {  
    Serial.print(F("Connecting to Adafruit IO... "));  
    int8_t ret;  
    while ((ret = mqtt.connect()) != 0) {  
        switch (ret) {  
            case 1: Serial.println(F("Wrong protocol")); break;  
            case 2: Serial.println(F("ID rejected")); break;  
            case 3: Serial.println(F("Server unavail")); break;  
            case 4: Serial.println(F("Bad user/pass")); break;  
            case 5: Serial.println(F("Not authed")); break;
```

```

    case 6: Serial.println(F("Failed to subscribe")); break;

    default: Serial.println(F("Connection failed")); break;
}

if(ret >= 0)

    mqtt.disconnect();

Serial.println(F("Retrying connection..."));

delay(5000);

}

Serial.println(F("Adafruit IO Connected!"));

}

void loop() {

    // ping adafruit io a few times to make sure we remain connected

    if(! mqtt.ping(3)) {

        // reconnect to adafruit io

        if(! mqtt.connected())

            connect();

    }

    if ( Serial.available() ) { // Update and send only after 1 seconds

        char a = Serial.read();

        ID = a;

        if ( ! Attendance.publish(ID)) {           //Publish to Adafruit

```

```
    Serial.println(F("Failed"));
} else {
    Serial.println(F("Sent!"));
}
}
}
```