LAMPIRAN

WEMOS D1 R2 :

```
#include <SPI.h>
#include <MFRC522.h>
#include <Wire.h>
#include <Servo.h>

#define PRX_PIN D3
#define RST_PIN D4
#define SS_PIN D8

MFRC522 mfrc522(SS_PIN, RST_PIN);

char *gate = "close";
bool ir = digitalRead(PRX_PIN);
byte readCard[4];
Servo myservo;

void setup() {
  Wire.begin();
  Serial.begin(9600);
  pinMode(PRX_PIN, INPUT);
  mfrc522.PCD_Init();
  myservo.attach(D0);
  myservo.write(0);
}

void loop() {
  ir = digitalRead(PRX_PIN);
  Serial.println(gate);
  if (gate == "open") myservo.write(175);
```

```
if (gate == "close") myservo.write(5);
Serial.println("PROX Sensor => " + (String)ir);
delay(5);
if (!mfrc522.PICC_IsNewCardPresent() && gate == "close") {
  Serial.println("Ready");
  return;
}
if (!mfrc522.PICC_ReadCardSerial() && gate == "close") {
  Serial.println("Bad read (was card removed too quickly?)");
  return;
}
if (mfrc522.uid.size == 0 && gate == "close") {
  Serial.println("Bad card!");
  return;
}
if (mfrc522.uid.size > 0 && gate == "close") {
  Serial.println(F("Scanned PICC's UID:"));
  for (uint8_t i = 0; i < 4; i++) {
    readCard[i] = mfrc522.uid.uidByte[i];
    Serial.print(readCard[i], HEX);
  }
  Serial.println("");
  mfrc522.PICC_HaltA();
  gate = "open";
  Wire.beginTransmission(8);
  Wire.write(1);
  Wire.endTransmission();
  Serial.println("Gate Open");
}

if (gate == "open" && ir == false) {
  gate = "wait";
```

```
    Serial.println("Wait car to cross");
  }

  if (gate == "wait" && ir == true) {
    gate = "close";
    Serial.println("Car crossed");
  }
}
```

ARDUINO NANO:

```
#include <GyverTM1637.h>
#include <SPI.h>
#include <MFRC522.h>
#include <Wire.h>

#define CLK_PIN 2
#define DIO_PIN 3
#define PRX_PIN 5
#define RST_PIN 9
#define SS_PIN 10

MFRC522 mfrc522(SS_PIN, RST_PIN);
GyverTM1637 display(CLK_PIN, DIO_PIN);

byte full[] = { _F, _U, _L, _L };
byte stat[] = { _i, _n, _i, _t };
byte done[] = { _d, _O, _n, _E };

char *gate = "close";
byte readCard[4];
int count;
bool ir = digitalRead(PRX_PIN);

void setup() {
  display.brightness(7);
  display.twistByte(stat, 50);
  Wire.begin(8);
  Wire.onReceive(receiveEvent);
  Serial.begin(9600);
  pinMode(PRX_PIN, INPUT);
  mfrc522.PCD_Init();
```

```
  display.clear();
  display.twistByte(done, 50);
  count = 0;
  delay(500);
}

void loop() {
  ir = digitalRead(PRX_PIN);
  display.displayInt(count);
  Serial.println(count);
  Serial.println(gate);
  Serial.println("PROX Sensor => " + (String)ir);
  if (!mfrc522.PICC_IsNewCardPresent() && gate == "close") {
    Serial.println("Ready");
    return;
  }
  if (!mfrc522.PICC_ReadCardSerial() && gate == "close") {
    Serial.println("Bad read (was card removed too quickly?)");
    return;
  }
  if (mfrc522.uid.size == 0 && gate == "close") {
    Serial.println("Bad card!");
    return;
  }
  if (mfrc522.uid.size > 0 && gate == "close") {
    Serial.println(F("Scanned PICC's UID:"));
    for (uint8_t i = 0; i < 4; i++) {  //
      readCard[i] = mfrc522.uid.uidByte[i];
      Serial.print(readCard[i], HEX);
    }
    Serial.println("");
    mfrc522.PICC_HaltA();
```

```
    count++;
    gate = "open";
    Serial.println("Gate Open");
   }

   if (gate == "open" && ir == false) {
    gate = "wait";
    Serial.println("Wait car to cross");
   }

   if (gate == "wait" && ir == true) {
    gate = "close";
    Serial.println("Car crossed");
   }
}

void receiveEvent(int data) {
  int x = Wire.read();    // receive byte as an integer
  Serial.println(x);
  if (count > 0) count--;
}
```