ARDUIONO:

#include <Wire.h>

#include <SPI.h>

#include <MFRC522.h>

#define SS\_PIN 10

#define RST\_PIN 9

static int bill=0;

MFRC522 mfrc522(SS\_PIN, RST\_PIN);

void setup() {

Wire.begin(8);

SPI.begin(); // Initiate SPI bus

mfrc522.PCD\_Init(); // Initiate MFRC522

Serial.println("Approximate your card to the reader...");

Serial.println();/\* join i2c bus with address 8 \*/

Wire.onReceive(receiveEvent); /\* register receive event \*/

Wire.onRequest(requestEvent); /\* register request event \*/

Serial.begin(9600); /\* start serial for debug \*/

}

void loop() {

if ( ! mfrc522.PICC\_IsNewCardPresent())

{

return;

}

// 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();

Serial.print("Message : ");

content.toUpperCase();

if (content.substring(1) == "C0 99 02 25") //change here the UID of the card/cards that you want to give access

{

//Wire.write("a");

Serial.println("welcome!");

Serial.println("Your shopping started");

Serial.println();

delay(3000);

}

else if (content.substring(1) == "B4 02 56 D3") //change here the UID of the card/cards that you want to give access

{

Serial.println("name: dairy milk ");

Serial.println("cost: 25");

Serial.println("Added");

Serial.println();

bill=bill+25;

delay(3000);

}

else if (content.substring(1) == "D5 1F D2 83") //change here the UID of the card/cards that you want to give access

{

Serial.println("name: dairy milk ");

Serial.println("cost: 25");

Serial.println("Removed");

Serial.println();

bill=bill-25;

delay(3000);

}

else {

Serial.println(" Access denied");

delay(3000);

}

Serial.println("YOUR BIlL:");

Serial.println(bill);

delay(100);

}

// function that executes whenever data is received from master

void receiveEvent(int howMany) {

while (0 <Wire.available()) {

char c = Wire.read(); /\* receive byte as a character \*/

Serial.print(c); /\* print the character \*/

}

Serial.println(); /\* to newline \*/

}

// function that executes whenever data is requested from master

void requestEvent() {

Wire.write(bill); /\*send string on request \*/

}

\*\*\*\*\*\*\*\*\*SECOND\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#include <Wire.h>

// Create MFRC522 instance.

#include <ESP8266WiFi.h>

#include <FirebaseArduino.h>

#define FIREBASE\_HOST "smartshoppingcart-9abcd.firebaseio.com"

#define FIREBASE\_AUTH "QPeoWr3AypPB2aaxil0oV6su7USEOvRJBEFOIPE5"

#define WIFI\_SSID "PG Lab"

#define WIFI\_PASSWORD "Pg@105##"

//int n=0;

void setup() {

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

Serial.begin(9600);/\* begin serial for debug \*/

// connect to wifi.

WiFi.begin(WIFI\_SSID, WIFI\_PASSWORD);

Serial.print("connecting");

while (WiFi.status() != WL\_CONNECTED) {

Serial.print(".");

delay(500);

}

Serial.println();

Serial.print("connected: ");

Serial.println(WiFi.localIP());

Firebase.begin(FIREBASE\_HOST, FIREBASE\_AUTH);

Wire.begin(D1, D2); /\* join i2c bus with SDA=D1 and SCL=D2 of NodeMCU \*/

}

void loop() {// Look for new cards

// set value

int d;

Wire.beginTransmission(8); /\* begin with device address 8 \*/

Wire.write("Hello Arduino"); /\* sends hello string \*/

Wire.endTransmission(); /\* stop transmitting \*/

Wire.requestFrom(8, 13); /\* request & read data of size 13 from slave \*/

if(Wire.available()){

char c = Wire.read();

d=(int)c;

Serial.print(d);

}

Firebase.setFloat("bill", d);

// handle error

if (Firebase.failed()) {

Serial.print("setting /number failed:");

Serial.println(Firebase.error());

return;

}

Serial.println();

delay(1000);

}