

LAMPIRAN 1

SOURCE CODE

```
#define BLYNK_PRINT Serial

//inisialisasi header file
#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>
#include <SPI.h>
#include <MFRC522.h>

//inisialisasi RFID module
#define SS_PIN 2
#define RST_PIN 0

//inisialisasi pin
#define relay 16
#define buzzer 3
#define echoPin 4 // attach pin D2 Arduino to pin Echo of HC-SR04
#define trigPin 5 //attach pin D3 Arduino to pin Trig of HC-SR04

// defines variables
long duration; // variable for the duration of sound wave travel
int distance; // var

MFRC522 mfrc522(SS_PIN, RST_PIN);

//setting blynk app&wifi
char auth[] = "VALfrsT4lNXbG9C6PxpCVwypSvI4pzcU";
char ssid[] = "Galaxy A50s7BE1";
char pass[] = "cakman212";

int a=0;

WidgetTable table;
BLYNK_ATTACH_WIDGET(table, V2);
```

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int rowIndex = 0;
int benar=0;
String text;

//Virtual write button open door
BLYNK_WRITE(V0)
{
  int pinValue = param.asInt();
  if(pinValue==HIGH){
    digitalWrite(relay,HIGH);
    table.addRow(rowIndex, "OPEN Android", "Family");
    table.pickRow(rowIndex);
    rowIndex++;

    digitalWrite(buzzer,HIGH);
    delay(100);
    digitalWrite(buzzer,LOW);
    delay(100);
    digitalWrite(buzzer,HIGH);
    delay(100);
    digitalWrite(buzzer,LOW);
    delay(100);
    Blynk.notify("Android membuka pintu");
  }
  else{
    digitalWrite(relay,LOW);
  }
}

void setup()
{
  Serial.begin(9600);

  Blynk.begin(auth, ssid, pass);
  SPI.begin();
  mfrc522.PCD_Init();
}

```

```

pinMode(trigPin, OUTPUT); // Sets the trigPin as an OUTPUT
pinMode(echoPin, INPUT);
pinMode(relay,OUTPUT);
pinMode(buzzer,OUTPUT);

digitalWrite(relay,LOW);
digitalWrite(buzzer,LOW);
}

void loop()
{
  rfid();
  ultra();
  Blynk.run();
}

void ultra(){
  digitalWrite(trigPin, LOW);
  delayMicroseconds(5);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);
  distance = duration * 0.035 / 2;
  if(distance<=15){
    table.addRow(rowIndex, "ADA ORANG TERDETEKSI", "!!!");
    table.pickRow(rowIndex);
    rowIndex++;
    Blynk.notify("ADA ORANG TERDETEKSI");
  }
}

void rfid(){
  if( ! mfrc522.PICC_IsNewCardPresent()){
    return;
  }
}

```

```

if( ! mfr522.PICC_ReadCardSerial()){
  return;
}

Serial.print("UID tag :");
String content = "";
String nama="";
byte letter;

for(byte i = 0; i < mfr522.uid.size; i++){
  Serial.print(mfr522.uid.uidByte[i] < 0x10 ? " 0" : " ");
  Serial.print(mfr522.uid.uidByte[i], HEX);
  content.concat(String(mfr522.uid.uidByte[i] < 0x10 ? " 0" : " "));
  content.concat(String(mfr522.uid.uidByte[i], HEX));
}

Serial.println();
Serial.print("Pesan : ");
content.toUpperCase();

if(content.substring(1) == "04 1A 1F 2A E7 2E 80"){
  Serial.println("Kartu Diterima");
  Serial.println();
  benar=1;
  nama="Firmansyah Hadi";
  digitalWrite(relay,HIGH);
  Blynk.virtualWrite(V0, 1);
  digitalWrite(buzzer,HIGH);
  delay(100);
  digitalWrite(buzzer,LOW);
  delay(100);
  digitalWrite(buzzer,HIGH);
  delay(100);
  digitalWrite(buzzer,LOW);
  delay(4000);
  digitalWrite(relay,LOW);
}

```

```

    Blynk.virtualWrite(V0, 0);

}

else if(content.substring(1) == "02 B6 F9 11 20 76 60"){
    Serial.println("Kartu Diterima");
    Serial.println();
    benar=1;
    nama="SIM Firman";
    digitalWrite(relay,HIGH);
    Blynk.virtualWrite(V0, 1);
    digitalWrite(buzzer,HIGH);
    delay(100);
    digitalWrite(buzzer,LOW);
    delay(100);
    digitalWrite(buzzer,HIGH);
    delay(100);
    digitalWrite(buzzer,LOW);
    delay(4000);
    digitalWrite(relay,LOW);
    Blynk.virtualWrite(V0, 0);

}

else{
    Serial.println("Kartu Ditolak");
    table.addRow(rowIndex, content.substring(1), "REJECTED");
    table.pickRow(rowIndex);
    rowIndex++;
    benar=0;
    digitalWrite(buzzer,HIGH);
    delay(500);
    digitalWrite(buzzer,LOW);
    delay(200);
    digitalWrite(buzzer,HIGH);
}

```

```
delay(500);
digitalWrite(buzzer,LOW);
delay(200);
digitalWrite(buzzer,HIGH);
delay(500);
digitalWrite(buzzer,LOW);
delay(200);
digitalWrite(buzzer,HIGH);
delay(500);
digitalWrite(buzzer,LOW);
delay(200);
digitalWrite(buzzer,HIGH);
delay(500);
digitalWrite(buzzer,LOW);
delay(1000);
Blynk.notify(nama+" Kartu tidak Dikenal");
}
if(benar==1){
  table.addRow(rowIndex, content.substring(1), nama);
  table.pickRow(rowIndex);
  rowIndex++;
  Blynk.notify(nama+" Pintu telah Terbuka");
}
}
```