LAMPIRAN

```
/*************************************************
  This is an example sketch for our optical Fingerprint sensor

  Designed specifically to work with the Adafruit BMP085 Breakout
  ----> http://www.adafruit.com/products/751

  These displays use TTL Serial to communicate, 2 pins are required to
  interface
  Adafruit invests time and resources providing this open source code,
  please support Adafruit and open-source hardware by purchasing
  products from Adafruit!

  Written by Limor Fried/Ladyada for Adafruit Industries.
  BSD license, all text above must be included in any redistribution
 *************************************************/
#include <Adafruit_Fingerprint.h>
#include <SoftwareSerial.h>
#include <LiquidCrystal_I2C.h>
#include <Wire.h>
SoftwareSerial SIM900(7, 8);
LiquidCrystal_I2C lcd(0x3F, 20,4);
int getFingerprintIDez();
// pin #2 is IN from sensor (GREEN wire)
```

```
// pin #3 is OUT from arduino  (WHITE wire)
SoftwareSerial mySerial(2, 3);
const int buttonmerah = 6;
int buttonState_merah = 0;
Adafruit_Fingerprint finger = Adafruit_Fingerprint(&mySerial);
void setup()
{
  Serial.begin(9600);
  SIM900.begin(19200);
  SIM900power();
pinMode (4, OUTPUT);
pinMode (5, OUTPUT);
pinMode(buttonmerah, INPUT);
digitalWrite (5, HIGH);
 lcd.begin();

    for(int i = 0; i< 3; i++)
  {
    lcd.backlight();
    delay(250);
    lcd.noBacklight();
    delay(250);
  }
```

```
lcd.backlight();
 lcd.setCursor(0,0); //Start at character 4 on line 0
lcd.print("Keamanan Pintu ");
delay(1000);
lcd.setCursor(0,1);
lcd.print("Mengguanakan Jari "); // Print text on 2nd Line
delay(1000);
lcd.setCursor(0,2);
lcd.print("Project"); //Print 20 characters on 3rd line
delay(1000);
lcd.setCursor(0,3);
lcd.print("By erlangga");
delay(1000);
lcd.clear();
Serial.println("fingertest");
// set the data rate for the sensor serial port
finger.begin(57600);
if (finger.verifyPassword()) {
  Serial.println("Jari Di temukan");
} else {
  lcd.setCursor(0,2);
  lcd.print("Jari Tidak Di temukan");
  Serial.println ("C");
```

```
    while (1);
  }
  lcd.setCursor(0,0);
  lcd.print("Tempelkan Jari Anda:");
}
void SIM900power()
// software equivalent of pressing the GSM shield "power" button
{
  digitalWrite(9, HIGH);
  delay(1000);
  digitalWrite(9, LOW);
  delay(5000);
}
void pintu()
{
  SIM900.print("AT+CMGF=1\r");                                    // AT command
to send SMS message
  delay(100);
  SIM900.println("AT + CMGS = \"+6281377839024\"");                          //
recipient's mobile number, in international format
  delay(100);
  SIM900.println("Pintu dibuka  paksa");        // message to send
  delay(100);
```

```
  SIM900.println((char)26);                    // End AT command with a ^Z, ASCII code
26

  delay(100);

  SIM900.println();

  delay(5000);                              // give module time to send SMS

  SIM900power();                            // turn off module

}

void erlangga()

{

  SIM900.print("AT+CMGF=1\r");                                          // AT command
to send SMS message

  delay(100);

  SIM900.println("AT + CMGS = \"+6281377839024\"");                              //
recipient's mobile number, in international format

  delay(100);

  SIM900.println("Erlangga Masuk Rumah");        // message to send

  delay(100);

  SIM900.println((char)26);                    // End AT command with a ^Z, ASCII code
26

  delay(100);

  SIM900.println();

  delay(5000);                              // give module time to send SMS

  SIM900power();                            // turn off module

}
```

```
void loop()                    // run over and over again
{
  buttonState_merah = digitalRead(buttonmerah);
  if (buttonState_merah == LOW)
  {

   lcd.setCursor(0,3);
   lcd.print("Tebuka");
     digitalWrite (4, HIGH);
     delay (200);
     digitalWrite (4, LOW);
     delay(100);
      digitalWrite (4, HIGH);
     delay (200);
     digitalWrite (4, LOW);
     delay (100);
      digitalWrite (4, HIGH);
     delay (200);
     digitalWrite (4, LOW);
    pintu();
  }
  else
  {
```

```
      lcd.setCursor(0,3);
     lcd.print("Closed");
}
  getFingerprintIDez();
  delay(50);            //don't ned to run this at full speed.
}
uint8_t getFingerprintID() {
  uint8_t p = finger.getImage();
  switch (p) {
    case FINGERPRINT_OK:
      Serial.println("Image taken");
      break;
    case FINGERPRINT_NOFINGER:
      Serial.println("No finger detected");
      return p;
    case FINGERPRINT_PACKETRECIEVEERR:
      Serial.println("Communication error");
      return p;
    case FINGERPRINT_IMAGEFAIL:
      Serial.println("Imaging error");
      return p;
    default:
      Serial.println("Unknown error");
```

```
    return p;
  }
  // OK success!
  p = finger.image2Tz();
  switch (p) {
    case FINGERPRINT_OK:
      Serial.println("Image converted");
      break;
    case FINGERPRINT_IMAGEMESS:
      Serial.println("Image too messy");
      return p;
    case FINGERPRINT_PACKETRECIEVEERR:
      Serial.println("Communication error");
      return p;
    case FINGERPRINT_FEATUREFAIL:
      Serial.println("Could not find fingerprint features");
      return p;
    case FINGERPRINT_INVALIDIMAGE:
      Serial.println("Could not find fingerprint features");
      return p;
    default:
      Serial.println("Unknown error");
      return p;
```

```
  }
  // OK converted!
  p = finger.fingerFastSearch();
  if (p == FINGERPRINT_OK) {
    Serial.println("Found a print match!");
  } else if (p == FINGERPRINT_PACKETRECIEVEERR) {
    Serial.println("Communication error");
    return p;
  } else if (p == FINGERPRINT_NOTFOUND) {
    Serial.println("Did not find a match");
    return p;
  } else {
    Serial.println("Unknown error");
    return p;
  }
  // found a match!
  Serial.print("Found ID #"); Serial.print(finger.fingerID);
  Serial.print(" with confidence of "); Serial.println(finger.confidence);
}
// returns -1 if failed, otherwise returns ID #
int getFingerprintIDez() {
  uint8_t p = finger.getImage();
  if (p != FINGERPRINT_OK)  return -1;
```

```
p = finger.image2Tz();
if (p != FINGERPRINT_OK)  return -1;


p = finger.fingerFastSearch();
if (p != FINGERPRINT_OK)  return -1;
// found a match!
Serial.print("Found ID-c #"); Serial.print(finger.fingerID);
if (finger.fingerID==55)
{
  Serial.print ("KETEMU ID 1");
}
 else if (finger.fingerID==4)
{
   lcd.setCursor(0,1);
   lcd.print("Erlangga");
  lcd.setCursor(0,3);
  lcd.print("Tebuka");
   digitalWrite (4, HIGH);
   delay (200);
   digitalWrite (4, LOW);
   digitalWrite (5, LOW);
   delay(10000);
   digitalWrite (5, HIGH);
```

```
    erlangga();
    lcd.setCursor(0,1);
    lcd.print("*Thanks*");
  }
  Serial.print(" with confidence of "); Serial.println(finger.confidence);
  return finger.fingerID;
}
```

Sekolah Tinggi Manajemen Informatika & Komputer

(S T M I K) Atma Luhur

KARTU KONSULTASI BIMBINGAN SKRIPSI

NIM : 12115 00017

Nama : ERLANGGA SATRIA PERMANA

Jurusan : TEKNIK INFORMATIKA

No. Handphone : .....

Semester : GENAP Tahun Akademik 20.16/20.17

Dosen Pembimbing : Ade Septryanti S.Kom. M.T

Judul Skripsi : .....

.....

.....

No	Tanggal	Uraian	Paraf Pembimbing
1	10-4-17	Bab I, Bab II	
2.	13-4-17	Bab I	
3.	19-4-17	Bab I, Bab II	
4.	27-4-17	Bab I	
5.	3-5-17	Bab II, Bab III	
6.	9-5-17	Bab III	
7.	15-5-17	Bab IV	
8.	5-6-17	Bab IV, Bab V, Demo alat	
9.	12-6-17	Demo alat	
10.	3-7-17	Demo alat	
11.	5-7-17	Demo alat	
12	8-7-17	Demo alat	

Mahasiswa diatas telah melakukan bimbingan dengan jumlah materi yang telah mencukupi untuk disidangkan.

Pangkalpinang, 10 Juli 2017

Dosen Pembimbing

(Ade Septryanti, S.Kom, M.T)

Mahasiswa

(Erlangga Satria Permana)

STMIK ATMA LUHUR PANGKALPINANG
Jln. Jend.Sudirman – Selindung Lama Pangkalpinang
Propinsi Kepulauan Bangka Belitung

BIODATA PENULIS SKRIPSI

Pendadaran/Lulus Tanggal : 4 Agustus 2017
Wisuda Tanggal :

NIM	: 1211500017
Nama	: Erlangga Satria Permana
Jenis Kelamin	: Pria
Tempat & Tangga Lahir	: Mentok, 22 Juni 1993
Status	: Belum Nikah
Agama	: Islam
Program Studi	: Teknik Informatika
Pekerjaan saat ini	: -
Alamat	: Kp. Menjelang Baru RT.01/12 Kecamatan Muntok, Kabupaten Bangka Barat
No Telepon/ HP	: 081377839024
Nama Ayah	: Rosyadi
Nama Ibu	: Erlia Betty
Pekerjaan Ayah	: Buruh Harian
Pekerjaan Ibu	: Ibu rumah tangga
Alamat Orang Tua	: Kp. Menjelang Baru RT.01/12 Kecamatan Muntok, Kabupaten Bangka Barat
Judul Skripsi	: Rancang Bangun Aplikasi Pengaman Pintu Rumah Berbasis Sidik Jari Dan *Magnetic* Sensor
Dosen Pembimbing	: Ade Septryanti, S.Kom., M.T.

Pangkalpinang, 4 Agustus 2017
Penulis

Erlangga Satria Permana