LAMPIRAN

```
#include <LiquidCrystal_I2C.h>
#include <Keypad.h>
#include <Wire.h>
#include <LCD.h>
int LDR_Pin = A0; //analog pin 0
int laserPin = 10;
const byte ROWS = 4; //four rows
const byte COLS = 4; //four columns
const int nada[8]={
  131,175,262,349,523,698,1047,1397};
char keys[ROWS][COLS] = {
  {
    '1','2','3','A'        }
  ,
  {
    '4','5','6','B'        }
  ,
  {
    '7','8','9','C'        }
  ,
  {
    '*','0','#','D'        }
};
char berita[16]={
  ' ',' ',' ',' ',
  ' ',' ',' ',' ',
  ' ',' ',' ',' ',
  ' ',' ',' ',' '};
```

```
char tampil[16]={
  '','','','',
  '','','','',
  '','','','',
  '','','',''};
byte rowPins[ROWS] = {
  9,8,7,6}; //connect to the row pinouts of the keypad
byte colPins[COLS] = {
  5,4,3,2}; //connect to the column pinouts of the keypad

  boolean valOnePresent = false;
boolean next = false;
boolean final = false;
String num1, num2;

LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE);
Keypad keypad = Keypad( makeKeymap(keys), rowPins, colPins, ROWS, COLS
);
byte k=4,n=0;

String jawab,kunci="123456";

void setup() {
  lcd.begin(COLS, ROWS);
  lcd.setCursor(1,0);
  Serial.begin(9600);
  pinMode (laserPin, OUTPUT);
  lcd.print("Welcome In");
  delay(2000);
  lcd.clear();
  lcd.setCursor(1,0);
```

```
  lcd.print("Makruf Home");
  delay(3000);
  lcd.clear();
  pinMode(13,OUTPUT);
  pinMode(10,OUTPUT);
  pinMode(11,OUTPUT);
  pinMode(12, OUTPUT);
  digitalWrite(13,HIGH);
  digitalWrite(11,HIGH);
  digitalWrite(12,HIGH);
  noTone(0);
  lcd.begin(20, 4);
  Serial.print("Password:");
  lcd.print("Password:");
}

void loop() {
  //check key pressed



  char key = keypad.getKey();
  if (key != NO_KEY){
    berita[n]=key;
    tampil[n]='*';
    tone(10, nada[k],250);
    n++;
    if(n>15){
      for(n=1;n<=15;n++)berita[n-1]=berita[n];
      n=15;
      berita[n]=' ';
```

```
  }
  lcd.setCursor(0, 1);
  lcd.print(tampil);
  noTone(4);
 }
if(key=='#'){
  // jawaban 6 digit pertama yang masuk dipindah ke string
  for(n=0;n<6;n++)jawab+=berita[n];
  if(jawab==kunci)
  {

    lcd.setCursor(0, 1);
    Serial.print ("AKSESS OKE");
    lcd.print("Access Granted !");
    digitalWrite(13,LOW);
    digitalWrite(11, LOW);
    digitalWrite(12, HIGH);
    tone(10, nada[7],1000);

  }
  else {
    lcd.setCursor(0, 1);
    Serial.print ("AKSES DI LARANG");
    lcd.print("Access Denied ! ");
    tone(10, nada[1],500);
  }
  delay(1500);
  for(n=0;n<=15;n++){
    berita[n]=' ';
    tampil[n]=' ';
  }
```

```
  lcd.setCursor(0, 1);
  lcd.print(tampil);
  n=0;
  jawab=String();
 }
 else if( key == '*' )
 {

 valOnePresent = false;
  final = false;
  num1 = "";
  num2 = "";
 digitalWrite(13,HIGH);
 digitalWrite(11  ,HIGH);
 delay(100);
 }

}
```