

LAMPIRAN

```
#include <IRremote.h>
#include <Wire.h>
#include <LiquidCrystal_I2C.h>
#include <SoftwareSerial.h>
#include <stdio.h>
#include <ctype.h>

LiquidCrystal_I2C lcd(0x3F,20, 4);
int RECV_PIN      = 4;
int output1      = 5;
int output2      = 6;
int buzzer       = 7;
int relay_1      = 8;
int relay_2      = 9;
int relay_3      = 10;
int relay_4      = 11;
int bluetoothtx  = 12;
int bluetoothrx  = 13;

String dataDikirim;

SoftwareSerial bluetooth(bluetoothtx, bluetoothrx);

int digit        =0;
int digitpswd    =4;
String input     ="";
```

```
String pass          ="";
int ipass            =0;
int kunci            =1945;
unsigned int value   =0;
char K;
bool is_pilih_menu  = false;
bool is_ubah_pass   = false;
bool is_remote       = false;
bool is_bluetooth    = false;

#define code0        0xFFB04F
#define code1        0xFF30CF
#define code2        0xFF18E7
#define code3        0xFF7A85
#define code4        0xFF10EF
#define code5        0xFF38C7
#define code6        0xFF5AA5
#define code7        0xFF42BD
#define code8        0xFF4AB5
#define code9        0xFF52AD
#define codeReset    0xFFA25D
#define atas         0xFF02FD
#define bawah        0xFF9867
#define kanan        0xFF906F
```

```
#define kiri      0xFFE01F
#define ok       0xFFA857

IRrecv irrecv(RECV_PIN);
decode_results results;

void setup()
{
  lcd.init();
  lcd.backlight();
  lcd.clear();

  lcd.home();
  lcd.print("HELLO MAHENDRA");
  lcd.setCursor(0,1);

  lcd.print("PASSWORD[....]");

  Serial.begin(9600);
  bluetooth.begin(9600);
  irrecv.enableIRIn();

  pinMode(output1, OUTPUT);
  pinMode(output2, OUTPUT);
  pinMode(relay_1, OUTPUT);
```

```
        pinMode(relay_2, OUTPUT);
        pinMode(relay_3, OUTPUT);
        pinMode(relay_4, OUTPUT);
        pinMode(buzzer, OUTPUT);

        digitalWrite(relay_1,HIGH);
        digitalWrite(relay_2,HIGH);
        digitalWrite(relay_3,HIGH);
        digitalWrite(relay_4,HIGH);
    }

void loop() {
    if (bluetooth.available() && is_bluetooth == false){
        K          = bluetooth.read();
        if(K == '1'){
            value   = 0xFF30CF;
        }else if(K == '2'){
            value   = 0xFF18E7;
        }else if(K == '3'){
            value   = 0xFF7A85;
        }else if(K == '4'){
            value   = 0xFF10EF;
        }else if(K == '5'){
            Value   = 0xFF38C7;
        }else if(K == '6'){
```

```

value      = 0xFF5AA5;
}else if(K == '7'){
Value      = 0xFF42BD;
}else if(K == '8'){
value      = 0xFF4AB5;
}else if(K == '9'){
value      = 0xFF52AD;
}else if(K == '0'){
value      = 0xFFB04F;
}
K = '';
is_bluetooth = true;
}else if (irrecv.decode(&results)){
value      = results.value;
irrecv.resume();
is_remote   = true;
}
if (is_remote == true || is_bluetooth == true){
if(digit != digitpswd || is_ubah_pass == true){
switch(value) {
        case code0:
                input = "0";
                pass=pass+input;
                lcd.clear();

```

```
        lcd.clear();
        lcd.home();
        lcd.print("HELLO MAHENDRA");
        lcd.setCursor(0,1);
        lcd.print("PASSWORD[");
        lcd.print(pass);
        lcd.print("]");
    digit=digit+1;
    is_remote = false;
    is_bluetooth = false;
    delay(500);
    break;

    case code1:
        if(is_pilih_menu){
            lcd.clear();
            digitalWrite(relay_1,LOW);
            digitalWrite(relay_2,LOW);
            lcd.print("Pintu Terbuka....");
            delay(5000);
            reset();
            digitalWrite(relay_1,HIGH);
            digitalWrite(relay_2,HIGH);
        }else{
```

```
    input = "1";
    pass=pass+input;
    lcd.clear();
    lcd.home();
    lcd.print("HELLO MAHENDRA");
    lcd.setCursor(0,1);
    lcd.print("PASSWORD[");
    lcd.print(pass);
    lcd.print("]");
    digit=digit+1;
    is_remote = false;
    is_bluetooth = false;
}
break;
case code2:
    if(is_pilih_menu){
        lcd.clear();
        digitalWrite(relay_3,LOW);
        digitalWrite(relay_4,LOW);
        lcd.print("Pintu tertutup....");
        delay(5000);
        reset();
        digitalWrite(relay_3,HIGH);
        digitalWrite(relay_4,HIGH);
```

```
    }else{
        input = "2";
        pass=pass+input;
        lcd.clear();
        lcd.home();
        lcd.print("HELLO MAHENDRA");
        lcd.setCursor(0,1);
        lcd.print("PASSWORD[");
        lcd.print(pass);
        lcd.print("]");
        digit=digit+1;
        is_remote = false;
        is_bluetooth = false;
    }
    break;
    case code3:
        if(is_pilih_menu){
            lcd.clear();
            lcd.home();
            lcd.print("MASUKAN PASSWORD BARU ANDA!!");
            for(int i=0;i<16;i++){
                lcd.scrollDisplayLeft();
                delay(400);
            }
        }
    }
```



```
        lcd.clear();
        lcd.home();
        lcd.print("MASUKAN PASSWORD BARU ANDA!!");
        lcd.setCursor(0,1);
        lcd.print("[.....]");
        is_pilih_menu = false;
        is_ubah_pass = true;
    }else{

        input = "3";
        pass=pass+input;
        lcd.clear();
        lcd.home();
        lcd.print("HELLO MAHENDRA");
        lcd.setCursor(0,1);
        lcd.print("PASSWORD[");
        lcd.print(pass);
        lcd.print("]");
        digit=digit+1;
        is_remote = false;
        is_bluetooth = false;
    }
    break;
    case code4:
```

```
input = "4";
pass=pass+input;
lcd.clear();
lcd.home();
lcd.print("HELLO MAHENDRA");
lcd.setCursor(0,1);
lcd.print("PASSWORD[");
lcd.print(pass);
lcd.print("]");
digit=digit+1;
is_remote = false;
is_bluetooth = false;
break;
case code5:
input= "5";
pass=pass+input;
lcd.clear();
lcd.home();
lcd.print("HELLO MAHENDRA");
lcd.setCursor(0,1);
lcd.print("PASSWORD[");
lcd.print(pass);
lcd.print("]");
digit=digit+1;
```

```
is_remote = false;
is_bluetooth = false;
break;
case code6:
input = "6";
pass=pass+input;
lcd.clear();
lcd.home();
lcd.print("HELLO MAHENDRA");
lcd.setCursor(0,1);
lcd.print("PASSWORD[");
lcd.print(pass);
lcd.print("]");
digit=digit+1;
is_remote = false;
is_bluetooth = false;
break;
case code7:
input= "7";
pass=pass+input;
lcd.clear();
lcd.home();
lcd.print("HELLO MAHENDRA");
lcd.setCursor(0,1);
```

```
lcd.print("PASSWORD[");  
lcd.print(pass);  
lcd.print("]");  
digit=digit+1;  
is_remote = false;  
is_bluetooth = false;  
break;  
case code8:  
input = "8";  
pass=pass+input;  
lcd.clear();  
lcd.home();  
lcd.print("HELLO MAHENDRA");  
lcd.setCursor(0,1);  
lcd.print("PASSWORD[");  
lcd.print(pass);  
lcd.print("]");  
digit=digit+1;  
is_remote = false;  
is_bluetooth = false;  
break;  
case code9:  
input = "9";  
pass=pass+input;
```

```
lcd.clear();  
lcd.home();  
lcd.print("HELLO MAHENDRA");  
lcd.setCursor(0,1);  
lcd.print("PASSWORD[");  
lcd.print(pass);  
lcd.print("]");  
digit=digit+1;  
is_remote = false;  
is_bluetooth = false;  
break;  
case codeReset:  
    digitpswd = 4;  
    kunci = 1945;  
    lcd.clear();  
    lcd.home();  
    lcd.print("Password Telah dirubah ke default");  
    for(int i=0;i<16;i++){  
        lcd.scrollDisplayLeft();  
        delay(400);  
    }  
    lcd.clear();  
    lcd.home();  
    lcd.print("Password Telah dirubah ke default");
```

```
lcd.setCursor(0,1);  
lcd.print(pass);  
delay(2000);  
is_remote = false;  
is_bluetooth = false;  
reset();  
break;  
case ok:  
    digitpswd = digit;  
    kunci = pass.toInt();  
    lcd.clear();  
    lcd.home();  
    lcd.print("Password Telah dirubah");  
    for(int i=0;i<16;i++){  
        lcd.scrollDisplayLeft();  
        delay(1000);  
    }  
    lcd.clear();  
    lcd.home();  
    lcd.print("Password Telah dirubah");  
    lcd.setCursor(0,1);  
    lcd.print(pass);  
    delay(1000);  
    is_remote = false;
```

```
is_bluetooth = false;
reset();
break;
case atas:
    lcd.clear();
    lcd.home();
    lcd.print("Tombol Atas");
    is_remote = false;
    is_bluetooth = false;
break;
case bawah:
    lcd.clear();
    lcd.home();
    lcd.print("Tombol Bawah");
    is_remote = false;
    is_bluetooth = false;
break;
case kanan:
    lcd.clear();
    lcd.home();
    lcd.print("Tombol Kanan");
    is_remote = false;
    is_bluetooth = false;
break;
```

case kiri:

```
        lcd.clear();
        lcd.home();
        lcd.print("Tombol Kiri");
        break;
    }
} else if(is_ubah_pass == false){
    if(digit==digitpswd){
        ipass=pass.toInt();
        if(ipass==kunci){
            lcd.clear();
            lcd.home();
            lcd.print(pass);
            lcd.setCursor(0,1);
            lcd.print("password benar");
            lcd.clear();
            lcd.print("1.Buka 2.Tutup");
            lcd.setCursor(0,1);
            lcd.print("3.Ubah Password");
            LedOn();
            is_pilih_menu = true;
        } else {
            lcd.clear();
            lcd.home();
```



```
        lcd.print(pass);
        lcd.setCursor(0,1);
        lcd.print("password salah");
        digitalWrite(buzzer, HIGH);
        digitalWrite(output1, LOW);
        delay(2000);
        LedOff();
        reset();
    }
    pass ="";
    ipass =0;
    digit = 0;
}
}
}
}

void LedOn(){
    digitalWrite(output1, HIGH);
}
void LedOff(){
    digitalWrite(output2, HIGH);
}
```

```
void reset(){
    is_remote = false;
    is_bluetooth = false;
    is_pilih_menu = false;
    is_ubah_pass = false;
    pass = "";
    ipass = 0;
    digit = 0;
    LedOff();
    lcd.clear();
    lcd.home();
    lcd.print("HELLO MAHENDRA");
    lcd.setCursor(0,1);
    digitalWrite(output1, LOW);
    digitalWrite(output2, LOW);
    digitalWrite(buzzer, LOW);
    lcd.print("[.....]");
}
```