

Lampiran

```
#include <LiquidCrystal.h>
#include <Servo.h>
#include "DHT.h"

Servo servo,servo2;
LiquidCrystal lcd(2, 3, 4, 5, 6, 7);

#define DHTPIN 52 //menggunakan pin 2 untuk pemasangan sensornya
#define DHTTYPE DHT11 //memilih tipe DHT11, bisa diubah menjadi DHT22,
DHT21

DHT dht(DHTPIN, DHTTYPE); //setting pin yang dipilih dan tipe DHT

int listrik = 47;
int kipas = 49;
int lampu = 51;
int uvc = 53;

int state,pilih,i,x=200,set_time,j=9,m,s,z=13,k,o;
char val;
int humidity, suhu, tgs;

void setup() {
  // put your setup code here, to run once:
  dht.begin();
  servo.attach(9);
  servo2.attach(8);
  lcd.begin(16,2);

  servo.write(60);
  servo2.write(0);

  //////////// relay
  pinMode(listrik, OUTPUT);
  pinMode(kipas, OUTPUT);
  pinMode(lampu, OUTPUT);
  pinMode(uvc, OUTPUT);

  digitalWrite(listrik, HIGH); //kipas
  digitalWrite(kipas, HIGH); //kipas
  digitalWrite(lampu, HIGH); //lampu
  digitalWrite(uvc, HIGH); //ballast
```

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////////// keypad
pinMode(38, OUTPUT);
pinMode(40, OUTPUT);
pinMode(42, OUTPUT);
pinMode(44, INPUT);
pinMode(46, INPUT);
pinMode(48, INPUT);
pinMode(50, INPUT);

digitalWrite(38, HIGH);
digitalWrite(40, HIGH);
digitalWrite(42, HIGH);
digitalWrite(44, HIGH);
digitalWrite(46, HIGH);
digitalWrite(48, HIGH);
digitalWrite(50, HIGH);
// digitalWrite(49, LOW); //lampu
lcd.begin(16, 2);
lcd.setCursor(0,0);
lcd.print("Bismillah");
delay(2000);
  lcd.setCursor(0,1);
  lcd.print("SCANNING.....");
delay(2000);
lcd.clear();
}

void tampiltime(){
  lcd.setCursor(0,1);
  lcd.print("Set time: ");
  lcd.setCursor(11,1);
  lcd.print(m);
  lcd.setCursor(12,1);
  lcd.print(" : ");
  lcd.setCursor(14,1);
  lcd.print(s);
}

}

void tampil() {
  humidity = dht.readHumidity();
  suhu = dht.readTemperature();
  tgs = analogRead(A0);
  lcd.setCursor(0,0);
  lcd.print("S:");
  lcd.setCursor(2,0);

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lcd.print(suhu);
lcd.setCursor(5,0);
lcd.print("H:");
lcd.setCursor(7,0);
lcd.print(humidity);
lcd.setCursor(10,0);
lcd.print("MQ:");
lcd.setCursor(13,0);
lcd.print(tgs);

if (tgs>=100) {lcd.clear();delay(100);}
// else z=13;
}

void kerja() {
switch (pilih) {
case 0: {
humidity = dht.readHumidity();
suhu = dht.readTemperature();
tgs = analogRead(A0);
lcd.setCursor(0,0);
lcd.print(" SISTEM OK ");
delay(1000);
lcd.setCursor(0,1);
lcd.print("S=");
lcd.setCursor(2,1);
lcd.print(suhu);
lcd.setCursor(5,1);
lcd.print("H=");
lcd.setCursor(7,1);
lcd.print(humidity);
lcd.setCursor(10,1);
lcd.print("MQ:");
lcd.setCursor(13,1);
lcd.print(tgs);
delay(1000);
if(suhu > 25 && humidity <= 60 && tgs>=60) {
//
lcd.clear();
pilih=1;
break;
}
break;
}
}
}

```

////////////////////////////////////// detik

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case 1: { // keypad
  //tampil();
  tampiltime();
  digitalWrite(38, LOW);
  digitalWrite(40, HIGH);
  digitalWrite(42, HIGH);
  delay(50);

  if(digitalRead(44) == 0){ s = s*0; delay(x); lcd.clear(); pilih=1; break;}
  if(digitalRead(46) == 0){ s = (s*10)+9; delay(x);}
  if(digitalRead(48) == 0){ s = (s*10)+6; delay(x);}
  if(digitalRead(50) == 0){ s = (s*10)+3; delay(x);}

  if(s>59) s=59;

  pilih=11;
  break;
}

case 11: {
  tampiltime();

  digitalWrite(38, HIGH);
  digitalWrite(40, LOW);
  digitalWrite(42, HIGH);
  delay(50);

  if(digitalRead(44) == 0){ s = (s*10)+0; delay(x);}
  if(digitalRead(46) == 0){ s = (s*10)+8; delay(x);}
  if(digitalRead(48) == 0){ s = (s*10)+5; delay(x);}
  if(digitalRead(50) == 0){ s = (s*10)+2; delay(x);}

  if(s>59) s=59;
  pilih=12;
  break;
}

case 12: {
  tampiltime();

  digitalWrite(38, HIGH);
  digitalWrite(40, HIGH);
  digitalWrite(42, LOW);
  delay(50);

  if(digitalRead(44) == 0)      {lcd.clear(); delay(x); pilih=2; break;}

```

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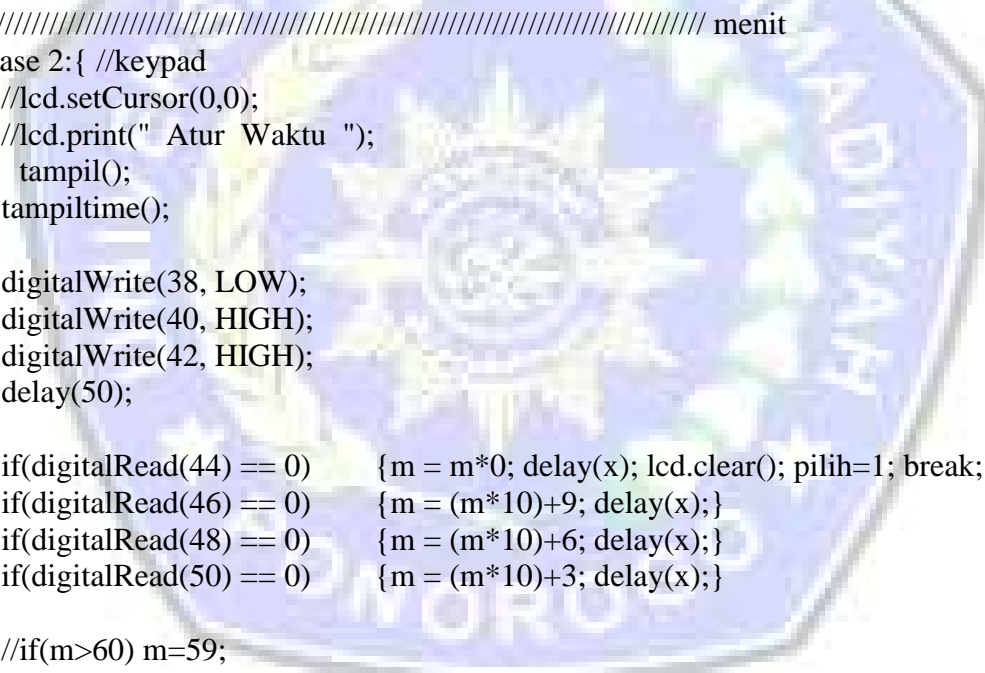
if(digitalRead(46) == 0)      {s = (s*10)+7; delay(x);}
if(digitalRead(48) == 0)      {s = (s*10)+4; delay(x);}
if(digitalRead(50) == 0)      {s = (s*10)+1; delay(x);}

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if(s>59) s=59;
pilih=1;
break;
}

```



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////////////////////////////////////////// menit
case 2: { // keypad
  //lcd.setCursor(0,0);
  //lcd.print(" Atur Waktu ");
  // tampil();
  tampiltime();

  digitalWrite(38, LOW);
  digitalWrite(40, HIGH);
  digitalWrite(42, HIGH);
  delay(50);

  if(digitalRead(44) == 0)      {m = m*0; delay(x); lcd.clear(); pilih=1; break;}
  if(digitalRead(46) == 0)      {m = (m*10)+9; delay(x);}
  if(digitalRead(48) == 0)      {m = (m*10)+6; delay(x);}
  if(digitalRead(50) == 0)      {m = (m*10)+3; delay(x);}

  //if(m>60) m=59;
  pilih=21;
  break;
}

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case 21: {
  // tampiltime();
  lcd.setCursor(13,1);
  lcd.print(" : ");
  lcd.setCursor(11,1);
  lcd.print(m);
}

```

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lcd.setCursor(14,1);
lcd.print(s);

digitalWrite(38, HIGH);
digitalWrite(40, LOW);
digitalWrite(42, HIGH);
delay(50);

if(digitalRead(44) == 0)    {m = (m*10)+0; delay(x);}
if(digitalRead(46) == 0)    {m = (m*10)+8; delay(x);}
if(digitalRead(48) == 0)    {m = (m*10)+5; delay(x);}
if(digitalRead(50) == 0)    {m = (m*10)+2; delay(x);}
//if(m>=60) m=59;
pilih=22;
break;
}
case 22: {
// tampiltime();
lcd.setCursor(13,1);
lcd.print(" : ");
lcd.setCursor(11,1);
lcd.print(m);
lcd.setCursor(14,1);
lcd.print(s);

digitalWrite(38, HIGH);
digitalWrite(40, HIGH);
digitalWrite(42, LOW);
delay(50);

if(digitalRead(44) == 0 && tgs>0){
  digitalWrite(listrik, LOW); //listrik
  digitalWrite(kipas, LOW); //kipas
  digitalWrite(lampu, LOW); //lampu
  digitalWrite(uvc, LOW); //ballast
  lcd.clear(); delay(x); pilih=3; break;
}
if(digitalRead(46) == 0)    {m = (m*10)+7; delay(x);}
if(digitalRead(48) == 0)    {m = (m*10)+4; delay(x);}
if(digitalRead(50) == 0)    {m = (m*10)+1; delay(x);}
//if(m>60) m=59;
pilih=2;
break;
}

case 3: {
  tampil();

```

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servo.write(10); //60
servo2.write(50); //30

if(tgs > 80) {
  servo.write(10); //60
  servo2.write(50); //30
}

if(s > 0) {
  s--;
}

if(s == 0 && m > 0) {
  s = 59;
  m--;
}

if(s < 10){
  j=10;
}
if(m == 0 && s == 0){
  lcd.clear();
  pilih=4;
  break;
}

if(suhu >= 35) {
  digitalWrite(51, HIGH); //lampu
} else {
  digitalWrite(51, LOW); //lampu
}

lcd.setCursor(3,1);
lcd.print("T=");
lcd.setCursor(7,1);
lcd.print(" : ");
lcd.setCursor(6,1);
lcd.print(m);
lcd.setCursor(j,1);
lcd.print(s);

/*
if(tgs < 30) {
  digitalWrite(53, HIGH); //ballast
}

```

```

if(tgs > 30) {
    tgs+=80;
    digitalWrite(53, LOW); //ballast
}*/
delay(1000);
break;
}

case 4:{
    lcd.setCursor(0, 0);
    lcd.print("selesai");
    delay(2000);

    digitalWrite(listrik, HIGH); //listrik
    digitalWrite(kipas, HIGH); //kipas
    digitalWrite(lampu, HIGH); //lampu
    digitalWrite(uvc, HIGH); //ballast
    servo.write(60); //60
    servo2.write(0); //30
    ///////////////////////////////////////////////////
    pilih =5;
}
case 5: {
    opening();
    if(digitalRead(44) == 0) {lcd.clear(); pilih=0; break; }

}
} //switch
} //kerja

void opening(){
    digitalWrite(38, HIGH);
    digitalWrite(40, HIGH);
    digitalWrite(42, LOW);

    for(o=0;o<=15;o++){
        digitalWrite(38, HIGH);
        digitalWrite(40, HIGH);
        digitalWrite(42, LOW);
        lcd.setCursor(0, 0);
        lcd.print("MAU LAGI ???");
        lcd.setCursor(o, 1);
        lcd.print("TEKAN *");
        if(digitalRead(44) == 0) {lcd.clear(); pilih=0;break; }
        delay(200);
        lcd.clear();
        if(o==15){

```



```
        for (k=15;k>=0;k--){
            digitalWrite(38, HIGH);
digitalWrite(40, HIGH);
digitalWrite(42, LOW);
        lcd.setCursor(0, 0);
        lcd.print("MAU LAGI ???");
        lcd.setCursor(k , 1);
        lcd.print("TEKAN *");
        if(digitalRead(44) == 0) {lcd.clear(); pilih=0; break;  }
        delay(200);
        lcd.clear();
        }
    }
}
```

```
void loop() {
    // put your main code here, to run repeatedly:
    kerja();
} //loop
```

