List Program (NodeMCU ESP8266)

```
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27, 16, 2); // set the LCD address to 0x27 for a 16 chars and 2 line display

#include <SoftwareSerial.h>
SoftwareSerial mySerial (14, 12);

// Fill-in information from your Blynk Template here
#define BLYNK_TEMPLATE_ID "TMPL0F6VrwEp"
#define BLYNK_DEVICE_NAME "ikan asin"

#define BLYNK_FIRMWARE_VERSION        "0.1.0"

#define BLYNK_PRINT Serial
//#define BLYNK_DEBUG

#define APP_DEBUG

// Uncomment your board, or configure a custom board in Settings.h
//#define USE_SPARKFUN_BLYNK_BOARD
#define USE_NODE_MCU_BOARD
//#define USE_WITTY_CLOUD_BOARD
//#define USE_WEMOS_D1_MINI
int waktu = 0;
#include "BlynkEdgent.h"
BLYNK_WRITE(V1)
{
  int pinValue = param.asInt(); // assigning incoming value from pin V1 to a variable
  Serial.print("waktu = ");
  Serial.println(pinValue);
  waktu = pinValue;
  mySerial.print(pinValue);
  mySerial.print("t");
  lcd.home();
  lcd.print("time        ");
  lcd.setCursor(0, 1);
  lcd.print(waktu);
  lcd.print("            ");
```

```
}
BLYNK_WRITE(V2)
{
  int pinValue = param.asInt(); // assigning incoming value from pin V1 to a variable

  if (pinValue == 1) {
    mySerial.print('x');
    Serial.println("solenoid on");
    lcd.home();
    lcd.print("selenoid ON      ");
  }
  else {
    mySerial.print('X');
    Serial.println("solenoid off");
    lcd.home();
    lcd.print("selenoid OFF      ");
  }
}

BLYNK_WRITE(V3)
{
  int pinValue = param.asInt(); // assigning incoming value from pin V1 to a variable
  if (pinValue == 1) {
    mySerial.print('y');
    Serial.println("pemantik on");
    lcd.home();
    lcd.print("pemantik ON      ");
  }
  else {
    mySerial.print('Y');
    Serial.println("pemantik off");
    lcd.home();
    lcd.print("pemantik OFF      ");
  }
}
BLYNK_WRITE(V4)
{
  int pinValue = param.asInt(); // assigning incoming value from pin V1 to a variable
  if (pinValue == 1) {
    mySerial.print('z');
```

```
    Serial.println("blower on");
    lcd.home();
    lcd.print("blower ON      ");
  }
  else {
    lcd.home();
    lcd.print("blower OFF      ");
    mySerial.print('Z');
    Serial.println("blower off");
  }
}
BLYNK_WRITE(V5)
{
  int pinValue = param.asInt(); // assigning incoming value from pin V1 to a variable
  if (pinValue == 1) {
    lcd.home();
    lcd.print("buzzer ON      ");
    mySerial.print('w');
    Serial.println("buzzer on");
  }
  else {
    lcd.home();
    lcd.print("buzzer OFF      ");
    mySerial.print('W');
    Serial.println("buzzer off");
  }
}

BLYNK_WRITE(V0)
{
  int pinValue = param.asInt(); // assigning incoming value from pin V1 to a variable
  if (pinValue == 1) {
    Serial.print("mulai");
    mySerial.print("m");
    lcd.home();
    lcd.print("Mulai      ");
    lcd.setCursor(0, 1);
    lcd.print(waktu);
    lcd.print("            ");
  }
```

```
}


void setup()
{
  lcd.init();                    // initialize the lcd
  lcd.backlight();

  Serial.begin(115200);
  mySerial.begin(9600);
  delay(100);

  BlynkEdgent.begin();
}

void loop() {
  BlynkEdgent.run();
  if (mySerial.available()) {
    data = (char)mySerial.read();
    Serial.write(data);
    if (data == 'x') {
      lcd.home();
      lcd.print("Waktu = ");
      lcd.print(inputString);
      lcd.print("        ");
      inputString = "";
    }
    else if (data == 'y') {
      lcd.setCursor(0,1);
      lcd.print("Suhu = ");
      lcd.print(inputString);
      lcd.print("        ");
      inputString = "";
    }
    else {
      inputString += data;
    }
  }
}
```

List Program (Sistem)

```
#define blower 0
#define selenoid 16
#define pemantik 5
#define buzzer 4

#include <SoftwareSerial.h>
SoftwareSerial mySerial (14, 12);

#include <DallasTemperature.h>
#include <OneWire.h>
#define ONE_WIRE_BUS 13  //D1 pin of nodemcu
OneWire oneWire(ONE_WIRE_BUS);
DallasTemperature sensors(&oneWire);                    // Pass the oneWire reference to Dallas Temperature.

String inputString = "";         // a String to hold incoming data
char data;

void setup() {
  Serial.begin(9600);
  mySerial.begin(9600);
  pinMode(selenoid, OUTPUT);
  pinMode(pemantik, OUTPUT);
  pinMode(buzzer, OUTPUT);
  pinMode(blower, OUTPUT);

  digitalWrite(selenoid, HIGH);
  digitalWrite(pemantik, HIGH);
  digitalWrite(buzzer, HIGH);
  digitalWrite(blower, HIGH);
  sensors.begin();
  inputString.reserve(200);

}
int waktu = 0;
bool api = 0;
void loop() {
  if (mySerial.available()) {
```

```
data = (char)mySerial.read();
Serial.write(data);
if (data == 'x') {
  digitalWrite(selenoid, LOW);
  inputString = "";
}
else if (data == 'X') {
  digitalWrite(selenoid, HIGH);
  inputString = "";
}
else if (data == 'y') {
  digitalWrite(pemantik, LOW);
  inputString = "";
}
else if (data == 'Y') {
  digitalWrite(pemantik, HIGH);
  inputString = "";
}
else if (data == 'z') {
  digitalWrite(blower, LOW);
  inputString = "";
}
else if (data == 'Z') {
  digitalWrite(blower, HIGH);
  inputString = "";
}
else if (data == 'w') {
  digitalWrite(buzzer, LOW);
  inputString = "";
}
else if (data == 'W') {
  digitalWrite(buzzer, HIGH);
  inputString = "";
}
else if (data == 't') {
  waktu = inputString.toInt();
  Serial.println(waktu);
  inputString = "";
}
else if (data == 'm') {
```

```
    Serial.print("Sistem on: ");
    Serial.println(waktu);
    delay(300);
    Serial.println("Selenoid ON: ");
    digitalWrite(selenoid, LOW);
    delay(30000);
    Serial.println("Pemantik ON: ");
    digitalWrite(pemantik, LOW);
    delay(20000);
    Serial.println("Pemantik OFF: ");
    digitalWrite(pemantik, HIGH);
    Serial.println("Masak: ");
    for (int i = 0; i < waktu; i++) {
      sensors.requestTemperatures();             // Send the command to get temperatures
      Serial.println("Temperature is: ");
      Serial.println(sensors.getTempCByIndex(0));   // Why "byIndex"? You can have more than one IC on the same bus. 0 refers to the first IC on the wire
      Serial.println("Selesai: ");
      mySerial.print(i);
      mySerial.print('x');
      mySerial.print(sensors.getTempCByIndex(0));
      mySerial.print('y');
      if (sensors.getTempCByIndex(0) > 80) {
        digitalWrite(blower, LOW);
      }
      if (sensors.getTempCByIndex(0) < 60) {
        digitalWrite(blower, HIGH);
      }
      if (sensors.getTempCByIndex(0) < 60 && api == 0) {
        api = 1;
        digitalWrite(blower, HIGH);
        Serial.println("Selenoid ON: ");
        digitalWrite(selenoid, LOW);
        delay(10000);
        Serial.println("Pemantik ON: ");
        digitalWrite(pemantik, LOW);
        delay(10000);
        Serial.println("Pemantik OFF: ");
        digitalWrite(pemantik, HIGH);
      }
```

```
      if (sensors.getTempCByIndex(0) > 100) {
        digitalWrite(selenoid, HIGH);
        api = 0;
      }
      Serial.println(i);
      delay(1000);
    }
    digitalWrite(selenoid, HIGH);
    Serial.println("buzzer on: ");
    digitalWrite(buzzer, LOW);
    delay(5000);
    Serial.println("buzzer off: ");
    digitalWrite(buzzer, HIGH);
    inputString = "";
  }
  else {
    inputString += data;
  }
 }
}
```