

LAMPIRAN

```
////////////////////// MODUL SMS ////////////////////////
#include <Sim800L.h>
#include <SoftwareSerial.h>

#define RX 10
#define TX 11

Sim800L GSM(RX, TX);
char* text;
char* number;
bool error;

////////////////////// RTC ////////////////////////
#include <DS3231.h>
DS3231 rtc(SDA, SCL);
Time t;

////////////////////// LCD 16X2//////////////////////
#include <Wire.h>
#include <LiquidCrystal_PCF8574.h>
LiquidCrystal_PCF8574 lcd(0x3F);

////////////////////// LEVEL AIR ////////////////////////
const int pinatas=5;
int level_atas = 0;
int level_bawah = 0;
const int pinbawah=6;

////////////////////// RELAY POMPA ////////////////////////
const int pompa=8;

////////////////////// flow sensor ////////////////////////
#include <FlowMeter.h>
FlowMeter Meter = FlowMeter(2);
const unsigned long period = 1000;

void MeterISR() {
  // let our flow meter count the pulses
  Meter.count();
}

void setup() {
  // put your setup code here, to run once:
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```

GSM.begin(4800);
  //text="Testing Sms";      //text for the message.
  //number="2926451386";    //change to a valid
number.
  //error=GSM.sendSms(number,text);

  // OR
  //Sim800L.sendSms("+5401111111111","the text go
here")
attachInterrupt(INT0, MeterISR, RISING):
  Meter.reset();

rtc.begin();
  lcd.begin(16, 2);
  lcd.setBacklight(255);
  lcd.setCursor(2, 0);
  lcd.print("YOGA MULYA H");
  lcd.setCursor(0, 1);
  lcd.print("    14520323");
  delay(1000);
  lcd.clear();

  // The following lines can be uncommented to set
the date and time
  //rtc.setDOW(WEDNESDAY); // Set Day-of-Week
to SUNDAY
  //rtc.setTime(12, 32, 00); // Set the time
to 12:00:00 (24hr format)
  //rtc.setDate(1, 1, 2014); // Set the date to
January 1st, 2014

pinMode(pinatas, INPUT);
pinMode(pinbawah, INPUT);
pinMode(pompa, OUTPUT);
digitalWrite(pompa, LOW);
delay(500);

}

void loop() {
  // put your main code here, to run repeatedly:
  t = rtc.getTime();
  level_atas = digitalRead(pinatas);
  level_bawah = digitalRead(pinbawah);

  bacaflow();
  bacawaktu();

  if (level_atas ==LOW && level_bawah==LOW &&
Meter.getCurrentFlowrate() >=10)

```

```

{  bacaflow();
   bacawaktu();

   lcd.setCursor(0, 1);
   lcd.print("TENGAH  ");
   digitalWrite(pompa,LOW);}

else if (level_atas ==LOW && level_bawah==LOW &&
Meter.getCurrentFlowrate() <=10)
{ bacaflow();
  bacawaktu();
  kirimsmsflow();
  delay(200);
  digitalWrite(pompa,HIGH);
  while (level_atas ==LOW && level_bawah==LOW &&
Meter.getCurrentFlowrate() <=10)
  {
  bacaflow();
  bacawaktu();
  lcd.setCursor(0, 1);
  lcd.print("TENGAH  ");
  digitalWrite(pompa,HIGH);}
  }

else if ( level_atas==LOW &&level_bawah==HIGH &&
Meter.getCurrentFlowrate() >=10)
{ bacaflow();
bacawaktu();
kirimsmslevel();
delay(200);
kirimsmslevel();
delay(200);
while( level_atas==LOW &&level_bawah==HIGH &&
Meter.getCurrentFlowrate() >=10)
{bacaflow();
bacawaktu();
  lcd.setCursor(0, 1);
  lcd.print("BAWAH  ");
  digitalWrite(pompa,HIGH);}
  }

else if ( level_atas==LOW &&level_bawah==HIGH &&
Meter.getCurrentFlowrate() <=10)
{ bacaflow();
  bacawaktu();
  kirimsmslevel();
  delay(800);
  kirimsmslevel();
  delay(500);

```

```

while(level_atas==LOW    &&level_bawah==HIGH    &&
Meter.getCurrentFlowrate()<=10)
{bacaflow();
  bacawaktu();
  lcd.setCursor(0, 1);
  lcd.print("BAWAH  ");
  digitalWrite(pompa,HIGH);}

}

```

```

else if (level_atas==HIGH && level_bawah==LOW &&
Meter.getCurrentFlowrate()>=10)
{ bacaflow();
  bacawaktu();

  lcd.setCursor(0, 1);
  lcd.print("ATAS  ");
  digitalWrite(pompa,LOW);
}

```

```

else if (level_atas==HIGH && level_bawah==LOW &&
Meter.getCurrentFlowrate()<=10)
{ bacaflow();
  bacawaktu();

  kirimsmsflow();
  delay(200);
  kirimsmsflow();
  delay(300);
  while(level_atas==HIGH    && level_bawah==LOW    &&
Meter.getCurrentFlowrate()<=10)
{bacaflow();
  bacawaktu();
  lcd.setCursor(0, 1);
  lcd.print("ATAS  ");
  digitalWrite(pompa,HIGH);}
}

```

```
}
```

```
void bacawaktu()
{
  lcd.setCursor(8, 1);
  lcd.print(rtc.getTimeStr());
  //lcd.print(rtc.getTimeStr(FORMAT_SHORT));
  delay (100);
}
```

```
void bacaflow()
{delay(period);

  // process the (possibly) counted ticks
  Meter.tick(period);

  // output some measurement result
  Serial.println("Currently " +
String(Meter.getCurrentFlowrate()) + " l/min, " +
String(Meter.getTotalVolume())+ " l total.");
  lcd.setCursor(0, 0);
  lcd.print("flow=");
  lcd.setCursor(6, 0);
  lcd.print(String(Meter.getCurrentFlowrate()));
  lcd.print(" ");
  lcd.setCursor(12, 0);
  lcd.print("L/M");
}
```

```
void kirimsmsflow()
{text="POMPA AIR KONDISI RUSAK DAN LEVEL AIR
NORMAL"; //text for the message.
  number="085331865894"; //change to a valid
number.
  error=GSM.sendSms(number,text);
}
```

```
void kirimsmslevel()
{text="SUMUR KERING"; //text for the message.
  number="085331865894"; //change to a valid
number.
}
```

```
error=GSM.sendSms(number,text);  
}
```

```
void kirimsmsleveldanflow()  
{text=" dan POMPA AIR KONDISI RUSAK"; //text  
for the message.  
number="085331865894"; //change to a valid  
number.  
error=GSM.sendSms(number,text);  
}
```

