

LAMPIRAN II

Program Arduino



```

#include <Keypad.h>
#include <LiquidCrystal.h>
#include <SoftwareSerial.h>
#include <Password.h>
#include "SIM900.h"
#include "sms.h"
#include <ID20Reader.h>

int waitSMS = 20;

// bagian gsm
MSGSM sms;
boolean started=false;
char smsbuffer[160];
byte type_sms=SMS_UNREAD;
boolean cocokSMS = false;
char kode[6] = "CHECK";
char n[20];
char jumlahSMS[7];
char pos_sms_rx; //Received SMS position
// bagian lcd
LiquidCrystal lcd (12,11,5,4,3,2);

// bagian rfid
SoftwareSerial mySerial(10, 12);
char Tag[13] = "kosong";
int numdata;
byte bt;

// bagian keypad + password
Password password = Password( "123" );
const byte ROWS = 4;
const byte COLS = 3;
char keys[ROWS][COLS] = {
  {'1','2','3'},
  {'4','5','6'},
  {'7','8','9'},
  {'*','0','#'}
};

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byte rowPins[ROWS] = {5, 4, 3, 2};
byte colPins[COLS] = {A0, A1, A2};
Keypad keypad = Keypad( makeKeymap(keys), rowPins, colPins, ROWS, COLS
);
bool pass = false;

int sum;

// menu handler
// 0 -> home, 1 -> tag, 2 -> xxx
int menu = 0;

void setup()
{
  lcd.begin(16,2);
  lcd.print("INISIALISASI..");
  Serial.begin(9600);
  keypad.addListener(keypadEvent);
  delay(2000);
  initPassword();
}

void keypadEvent(KeypadEvent eKey)
{
  switch (keypad.getState())
  {
    case PRESSED:
      lcd.setCursor(0,1);
      lcd.print(eKey);
      switch (eKey)
      {
        case '*': checkPassword(); break;
        case '#': password.reset(); break;
        default: password.append(eKey);
      }
    }
  }

void initPassword() {
  lcd.clear();
  lcd.setCursor(0,0);

```

```
lcd.print("Password :");
}
void initGSM() {
  if(gsm.begin(19200)){
    lcd.clear();
    lcd.print("GSM OK");
    delay(100);
    started = true;
  } else
  {
    lcd.clear();
    lcd.print("GSM OFF");
    delay(2000);
  }
}
void checkPassword()
{
  if (password.evaluate())
  {
    lcd.clear();
    lcd.setCursor(0,0);
    lcd.print("Success");
    delay (500);
    password.reset();
    pass = true;
  }
  else
  {
    lcd.clear();
    password.reset();
    initPassword();
    pass = false;
  }
}
void menutag()
{
  lcd.clear();
  lcd.print("Dekatkan Tag");
```

```
delay(600);
int incomingByte=0;
int i = 0;
if (mySerial.available() > 0)
while(i<13){
  if (mySerial.available() > 0)
  {
    incomingByte = mySerial.read();
    if (incomingByte == 2)
    {
      bt = 0;
      i++;
    }
    else
    {
      if(bt < 12)
      {
        Tag[bt]=incomingByte;
        bt++;
        i++;
      };
    }
    if (incomingByte==3)
    {
      i=14;
      Serial.print(Tag);
      // tunggu balasan komputer
      // balasan 1 = masuk
      // balasan 0 = keluar
      char balasan = 'X';
      delay(400);
      if(Serial.available(>0)
      {
        balasan = Serial.read();
      }
      if(balasan == '1'){
        lcd.clear();
        lcd.print("Ok - Masuk");
        delay(500);
```

```

return;
}
else if(balasan == '0')
{
  lcd.clear();
  lcd.print("Ok - Keluar");
  delay(500);
  return;
}
else
{
  lcd.clear();
  lcd.print("Gangguan");
  delay(500);
  return;
}
}
}
return;
}
void Check_SMS()
{
  pos_sms_rx=sms.IsSMSPresent(type_sms);
  if (pos_sms_rx!=0)
  {
    //Read text/number/position of sms
    sms.GetSMS(pos_sms_rx,n,smsbuffer,120);
    sms.DeleteSMS(pos_sms_rx);
  }
  return;
}
void terimaJumlah()
{
  int pos = 0;
  char incoming = 'c';
  Serial.print("check");
  delay(300);
  while(incoming != ' ')

```

```

if(Serial.available()>0)
{
  incoming = Serial.read();
  jumlahSMS[pos] = incoming;
  pos++;
}
}
void listenSMS()
{
  Check_SMS();
  delay(300);
  for(int i=0;i<5;i++){
    if(smsbuffer[i] == kode[i])
      cocokSMS = true;
    else
    {
      cocokSMS = false;
      break;
    }
  }
  smsbuffer[0] = '-';
  if(cocokSMS){
    lcd.clear();
    lcd.print("kirim");
    terimaJumlah();
    sms.SendSMS(n,jumlahSMS);
    delay (250);
    lcd.clear();
    lcd.print("Terkirim");
  }
}
void loop()
{
  if(pass){
    /*if(!started){
      initGSM();
      mySerial.begin(9600);
    } */
    cocokSMS = false;

```



```
mySerial.begin(9600);  
menutag();  
if(waitSMS == 0){  
  lcd.clear();  
  lcd.print("WAIT : sms");  
  initGSM();  
  listenSMS();  
  waitSMS = 20;  
  Serial.end();  
  delay(100);  
  Serial.begin(9600);  
}  
waitSMS--;  
}  
else  
  keypad.getKey();  
}
```

