

Lampiran

Deklarasi Pin Relay

```
#include <SoftwareSerial.h>

SoftwareSerial GPRS(7, 8);          //7 = TX,
8 = RX

char inchar; //Akan menahan data dari serial
port

int relay1 = 9;
int relay2 = 10;
int relay3 = 11;
int relay4 = 12;
```

Deklarasi Pin/ Pengenalan Pin Relay yang Digunakan

```
void setup(){
    // prepare the digital output pins
    pinMode(relay1, OUTPUT);
    pinMode(relay2, OUTPUT);
    pinMode(relay3, OUTPUT);
    pinMode(relay4, OUTPUT);
    digitalWrite(relay1, HIGH);
    digitalWrite(relay2, HIGH);
    digitalWrite(relay3, HIGH);
```

```
digitalWrite(relay4, HIGH);
```

Menyeting Pin Relay

```
//Initialize GSM module serial port for  
communication.
```

```
GPRS.begin(19200); // the  
GPRS baud rate
```

```
Serial.begin(19200); // the  
Serial port of Arduino baud rate.
```

```
Serial.println("Sistem siap !");
```

```
Serial.println("Kirim Perintah SMS ?");
```

```
delay(2000); // give time for GSM module to  
register on network etc.
```

Bahasa Yang Digunakan dalam Program (AT-Comand)

```
GPRS.println("AT+CMGF=1"); // set SMS mode  
to text
```

```
delay(200);
```

```
GPRS.println("AT+CNMI=2,2,0,0"); // set  
module to send SMS data to serial out upon  
receipt
```

```
delay(200);
```

```
}
```

Void loop (untuk mengecek kode sms)

```
void loop() {  
    //If #a1b1c1d1 comes as sms, all led's  
    should light up.  
    if(GPRS.available() >0){  
        inchar=GPRS.read();  
        if (inchar=='#'){  
            delay(10);  
            inchar=GPRS.read();  
            //first led  
            if (inchar=='a'){  
                delay(10);  
                inchar=GPRS.read();  
                if (inchar=='1'){  
                    digitalWrite(relay1, LOW);  
                    Serial.println("Relay 1 ON");  
                }  
                else if (inchar=='0'){  
                    digitalWrite(relay1, HIGH);  
                    Serial.println("Relay 1 OFF");  
                }  
                delay(10);  
            }  
            //Second led
```

```
else if (inchar=='b'){
    inchar=GPRS.read();
    if (inchar=='1'){
        digitalWrite(relay2, LOW);
        Serial.println("Relay 2 ON");
    }
    else if (inchar=='0'){
        digitalWrite(relay2, HIGH);
        Serial.println("Relay 2 OFF");
    }
    delay(10);
}
// Third led
else if (inchar=='c'){
    inchar=GPRS.read();
    if (inchar=='1'){
        digitalWrite(relay3, LOW);
        Serial.println("Relay 3 ON");
    }
    else if (inchar=='0'){
        digitalWrite(relay3, HIGH);
        Serial.println("Relay 3 OFF");
    }
    else if (inchar=='e'){
```

```
    inchar=GPRS.read();
    if (inchar=='k'){
        //Serial.println("Cek status");
        cek();
    }
}
delay(10);
}
//Fourth led
else if (inchar=='d'){
    //delay(10);
    inchar=GPRS.read();
    if (inchar=='1'){
        digitalWrite(relay4, LOW);
        Serial.println("Relay 4 ON");
    }
    else if (inchar=='0'){
        digitalWrite(relay4, HIGH);
        Serial.println("Relay 4 OFF");
    }
    delay(10);
}
GPRS.println("AT+CMGD=1,4"); // delete
```

all SMS

```

        //Serial.println("Pesan Terhapus !");
// delete all SMS
    }
}
}

```

Void cek (untuk mengirim sms)

```

void cek(){
    GPRS.print("AT+CMGF=1\r"); //sending SMS in
text mode
    delay(1000);
    GPRS.print("AT+CMGS=\"+6283845878399\"\r");
// phone number
    delay(1000);
    Serial.println("");
    GPRS.println(" .::CEK STATUS::.");
    Serial.println(" .::CEK STATUS::.");
    if(!digitalRead(relay1)){
        Serial.println("Status Relay 1 :
Menyala");
        GPRS.println("Status Relay 1 : Menyala");
    }
    else{
        Serial.println("Status Relay 1 : Mati");
        GPRS.println("Status Relay 1 : Mati");
    }
}

```

```
    }  
    if(!digitalRead(relay2)){  
        Serial.println("Status Relay 2 :  
Menyala");  
        GPRS.println("Status Relay 2 : Menyala");  
    }  
    else{  
        Serial.println("Status Relay 2 : Mati");  
        GPRS.println("Status Relay 2 : Mati");  
    }  
    if(!digitalRead(relay3)){  
        Serial.println("Status Relay 3 :  
Menyala");  
        GPRS.println("Status Relay 3 : Menyala");  
    }  
    else{  
        Serial.println("Status Relay 3 : Mati");  
        GPRS.println("Status Relay 3 : Mati");  
    }  
    if(!digitalRead(relay4)){  
        Serial.println("Status Relay 4 :  
Menyala");  
        GPRS.println("Status Relay 4 : Menyala");  
    }  
}
```

```
else{
    Serial.println("Status Relay 4 : Mati");
    GPRS.println("Status Relay 4 : Mati");
}
Serial.println("   -==:~::~::~::~::~::~==");
GPRS.println("   -==:~::~::~::~::~::~==");
Serial.println("");
delay(1000);
GPRS.write(0x1A); //send a Ctrl+Z(end of
the message)
delay(1000);
Serial.println("SMS Terkirim..");
}
```