

Lampiran 1 Listing Program

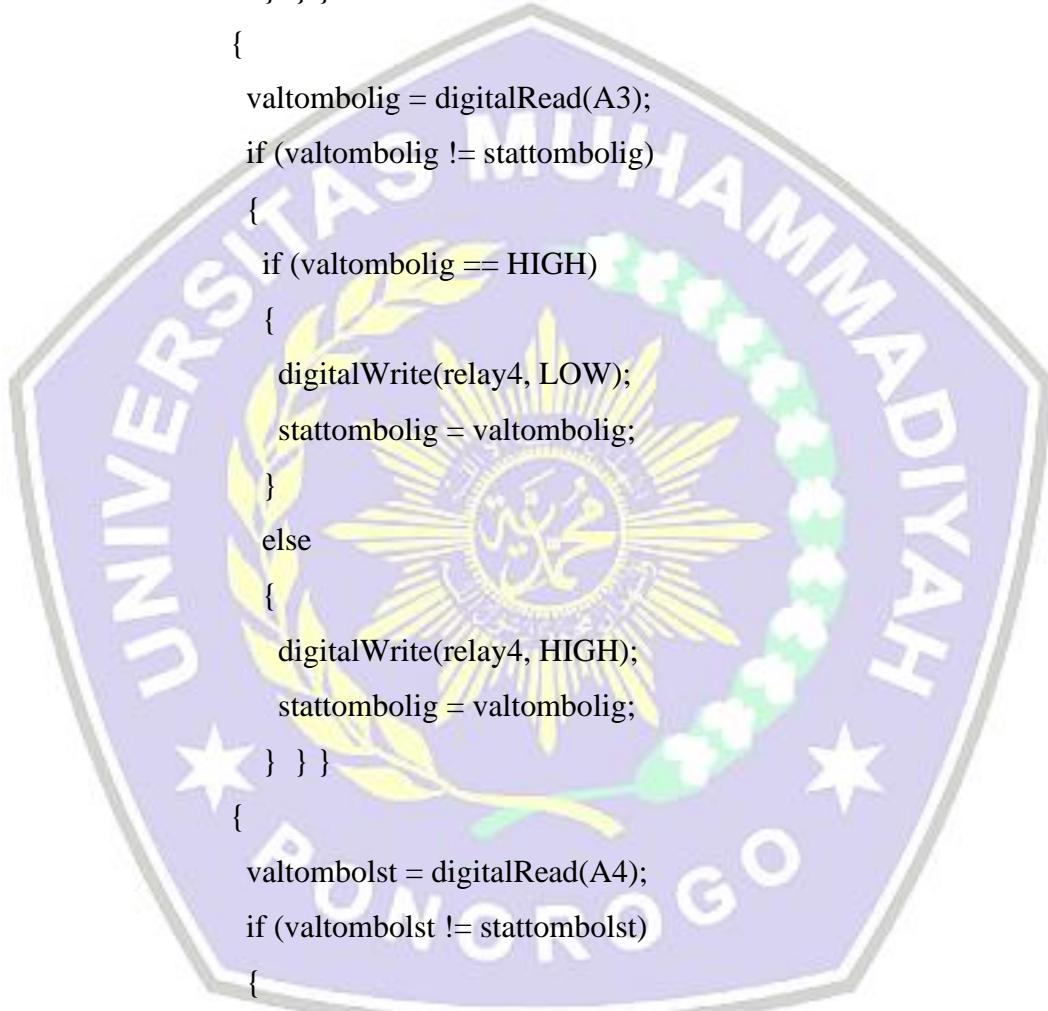
a. Proses baca kondisi sensor bluetooth

```
while (BT.available())
{
    delay(10);
    char c = BT.read();
    perintah += c;
}
```

b. Kondisi baca relay, LCD, dan sikroniasi manual *control* mobil

```
{
    valtombolstg = digitalRead(A1);
    if (valtombolstg != stattombolstg)
    {
        if (valtombolstg == HIGH)
        {
            digitalWrite(relay2, LOW);
            stattombolstg = valtombolstg;
        }
        else
        {
            digitalWrite(relay2, HIGH);
            stattombolstg = valtombolstg;
        } } }

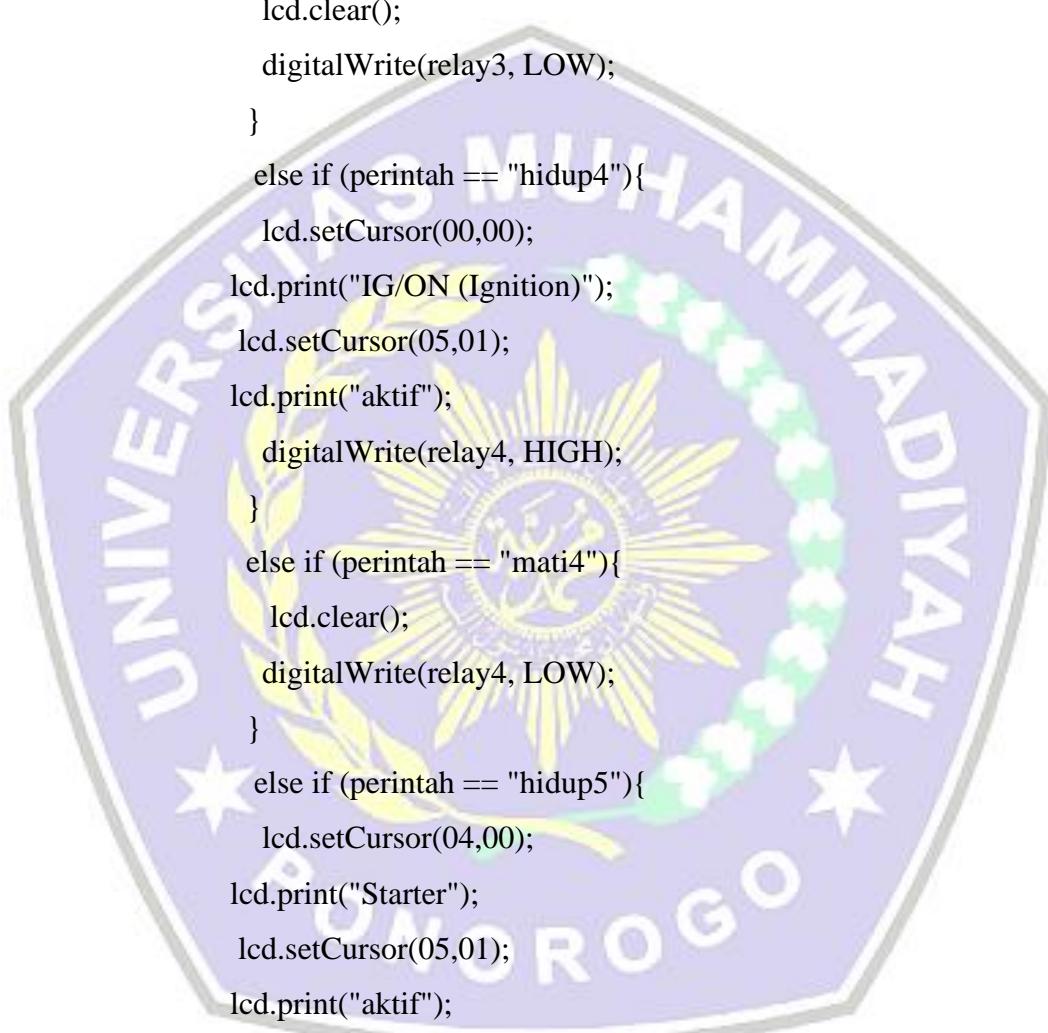
{
    valtombolacc = digitalRead(A2);
    if (valtombolacc != stattombolacc)
    {
        if (valtombolacc == HIGH)
        {
            digitalWrite(relay3, LOW);
```



```
stattombolacc = valtombolacc;
}
else
{
{
    digitalWrite(relay3, HIGH);
    stattombolacc = valtombolacc;
} } }
{
    valtombolig = digitalRead(A3);
    if (valtombolig != stattombolig)
    {
        if (valtombolig == HIGH)
        {
            digitalWrite(relay4, LOW);
            stattombolig = valtombolig;
        }
        else
        {
            digitalWrite(relay4, HIGH);
            stattombolig = valtombolig;
        } } }
{
    valtombolst = digitalRead(A4);
    if (valtombolst != stattombolst)
    {
        if (valtombolst == HIGH)
        {
            digitalWrite(relay5, LOW);
            stattombolst = valtombolst;
        }
        else
        {
```



```
digitalWrite(relay5, HIGH);
stattombolst = valtombolst;
} } }
{
Serial.println(perintah);
if (perintah == "hidup1"){
lcd.clear();
lcd.setCursor(02,00);
lcd.print("Central Lock");
lcd.setCursor(05,01);
lcd.print("aktif");
digitalWrite(relay1, HIGH);
digitalWrite(relay6, HIGH);
}
else if (perintah == "mati1"){
lcd.clear();
digitalWrite(relay1, LOW);
digitalWrite(relay6, LOW);
}
else if (perintah == "hidup2"){
lcd.setCursor(02,00);
lcd.print(" Kunci Stang");
lcd.setCursor(05,01);
lcd.print("aktif");
digitalWrite(relay2, HIGH);
}
else if (perintah == "mati2"){
lcd.clear();
digitalWrite(relay2, LOW);
}
else if (perintah == "hidup3"){
lcd.setCursor(00,00);
```



```
lcd.print("ACC (Accesories)");
lcd.setCursor(05,01);
lcd.print("aktif");
digitalWrite(relay3, HIGH);
}
else if (perintah == "mati3"){
lcd.clear();
digitalWrite(relay3, LOW);
}
else if (perintah == "hidup4"){
lcd.setCursor(00,00);
lcd.print("IG/ON (Ignition)");
lcd.setCursor(05,01);
lcd.print("aktif");
digitalWrite(relay4, HIGH);
}
else if (perintah == "mati4"){
lcd.clear();
digitalWrite(relay4, LOW);
}
else if (perintah == "hidup5"){
lcd.setCursor(04,00);
lcd.print("Starter");
lcd.setCursor(05,01);
lcd.print("aktif");
digitalWrite(relay5, HIGH);
}
else if (perintah == "mati5"){
lcd.clear();
digitalWrite(relay5, LOW);
}
```

```
perintah="";
}
```

c. Program keseluruhan

```
#include <Button.h>
#include <LiquidCrystal.h>
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);
#include <SoftwareSerial.h>
SoftwareSerial BT(0,1);
```

```
int relay1 = 6;
int relay2 = 7;
int relay3 = 8;
int relay4 = 9;
int relay5 = 10;
int relay6 = 13;

int stattombolstg = 0; // A1
int stattombolacc = 0; // A2
int stattombolig = 0; // A3
int stattombolst = 0; // A4

int valtombolstg = 0;
int valtombolacc = 0;
int valtombolig = 0;
int valtombolst = 0;
```

```
String perintah;
```

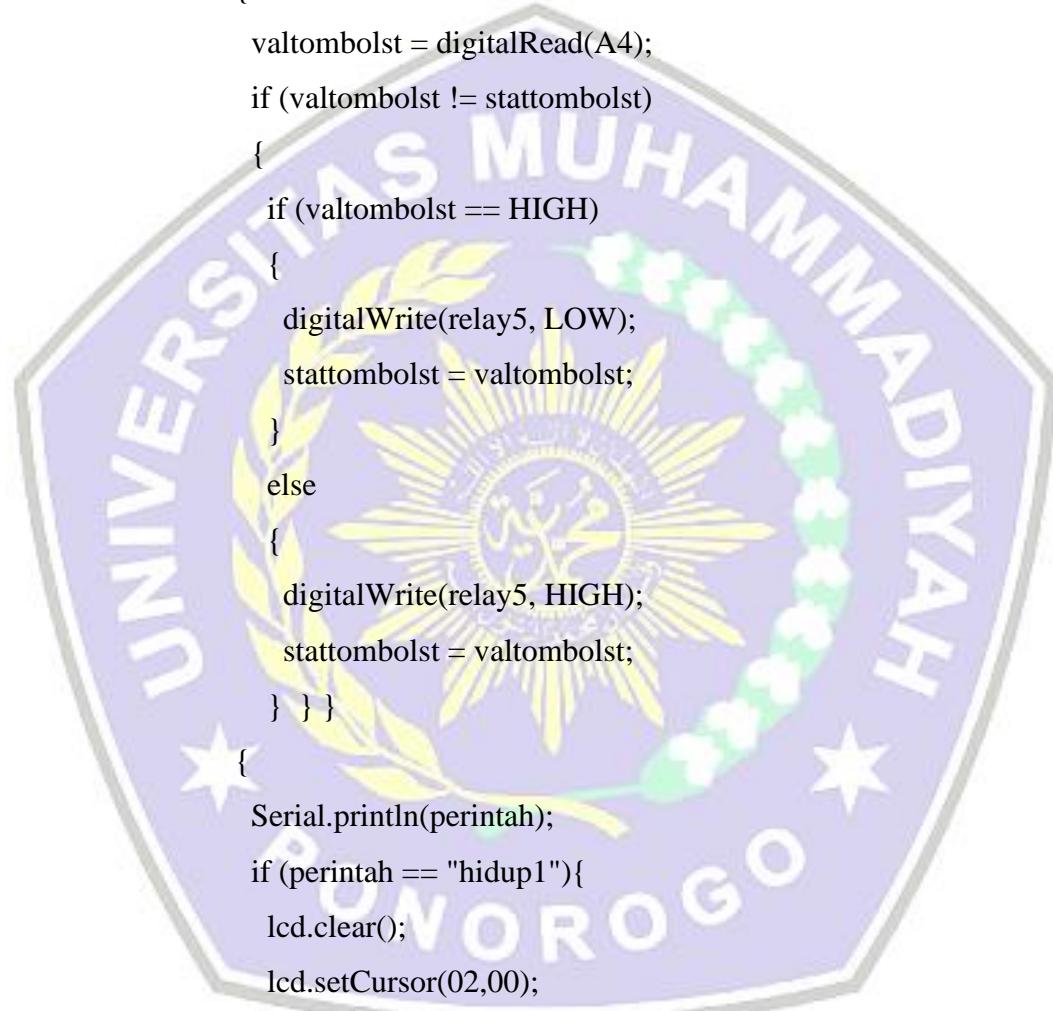
```
void setup() {
```

```
// put your setup code here, to run once:  
BT.begin(9600);  
Serial.begin(9600);  
lcd.begin(16,2);  
pinMode(relay1, OUTPUT);  
pinMode(relay2, OUTPUT);  
pinMode(relay3, OUTPUT);  
pinMode(relay4, OUTPUT);  
pinMode(relay5, OUTPUT);  
pinMode(relay6, OUTPUT);  
  
lcd.setCursor(01,00);  
lcd.print(" Welcome to ");  
lcd.setCursor(01,01);  
lcd.print("Emergency Key");  
  
digitalWrite(A1, HIGH);  
digitalWrite(A2, HIGH);  
digitalWrite(A3, HIGH);  
digitalWrite(A4, HIGH);  
}  
void loop() {  
while (BT.available())  
{  
delay(10);  
char c = BT.read();  
perintah += c;  
}  
{  
valtombolstg = digitalRead(A1);  
if (valtombolstg != stattombolstg)  
{
```

```
if (valtombolstg == HIGH)
{
    digitalWrite(relay2, LOW);
    stattombolstg = valtombolstg;
}
else
{
    digitalWrite(relay2, HIGH);
    stattombolstg = valtombolstg;
} } }

{
    valtombolacc = digitalRead(A2);
    if (valtombolacc != stattombolacc)
    {
        if (valtombolacc == HIGH)
        {
            digitalWrite(relay3, LOW);
            stattombolacc = valtombolacc;
        }
        else
        {
            digitalWrite(relay3, HIGH);
            stattombolacc = valtombolacc;
        } } }

{
    valtombolig = digitalRead(A3);
    if (valtombolig != stattombolig)
    {
        if (valtombolig == HIGH)
        {
            digitalWrite(relay4, LOW);
            stattombolig = valtombolig;
```



```
    }
else
{
    digitalWrite(relay4, HIGH);
    stattombolig = valtombolig;
} } }

{
    valtombolst = digitalRead(A4);
if (valtombolst != stattombolst)
{
    if (valtombolst == HIGH)
    {
        digitalWrite(relay5, LOW);
        stattombolst = valtombolst;
    }
else
{
    digitalWrite(relay5, HIGH);
    stattombolst = valtombolst;
} } }

{
Serial.println(perintah);
if (perintah == "hidup1"){
    lcd.clear();
    lcd.setCursor(02,00);
    lcd.print("Central Lock");
    lcd.setCursor(05,01);
    lcd.print("aktif");
    digitalWrite(relay1, HIGH);
    digitalWrite(relay6, HIGH);
}
else if (perintah == "mati1"){

}
```



```
lcd.clear();
digitalWrite(relay1, LOW);
digitalWrite(relay6, LOW);
}
else if (perintah == "hidup2"){
lcd.setCursor(02,00);
lcd.print(" Kunci Stang");
lcd.setCursor(05,01);
lcd.print("aktif");
digitalWrite(relay2, HIGH);
}
else if (perintah == "mati2"){
lcd.clear();
digitalWrite(relay2, LOW);
}
else if (perintah == "hidup3"){
lcd.setCursor(00,00);
lcd.print("ACC (Accesories)");
lcd.setCursor(05,01);
lcd.print("aktif");
digitalWrite(relay3, HIGH);
}
else if (perintah == "mati3"){
lcd.clear();
digitalWrite(relay3, LOW);
}
else if (perintah == "hidup4"){
lcd.setCursor(00,00);
lcd.print("IG/ON (Ignition)");
lcd.setCursor(05,01);
lcd.print("aktif");
digitalWrite(relay4, HIGH);
```

```

    }

else if (perintah == "mati4"){

lcd.clear();

digitalWrite(relay4, LOW);

}

else if (perintah == "hidup5"){

lcd.setCursor(04,00);

lcd.print("Starter");

lcd.setCursor(05,01);

lcd.print("aktif");



digitalWrite(relay5, HIGH);

}

else if (perintah == "mati5"){

lcd.clear();

digitalWrite(relay5, LOW);

}

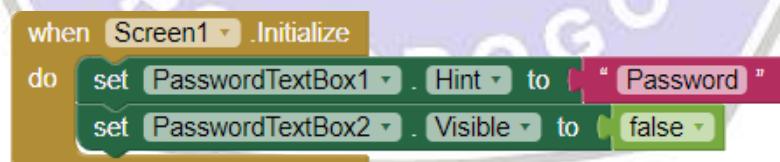
perintah="";

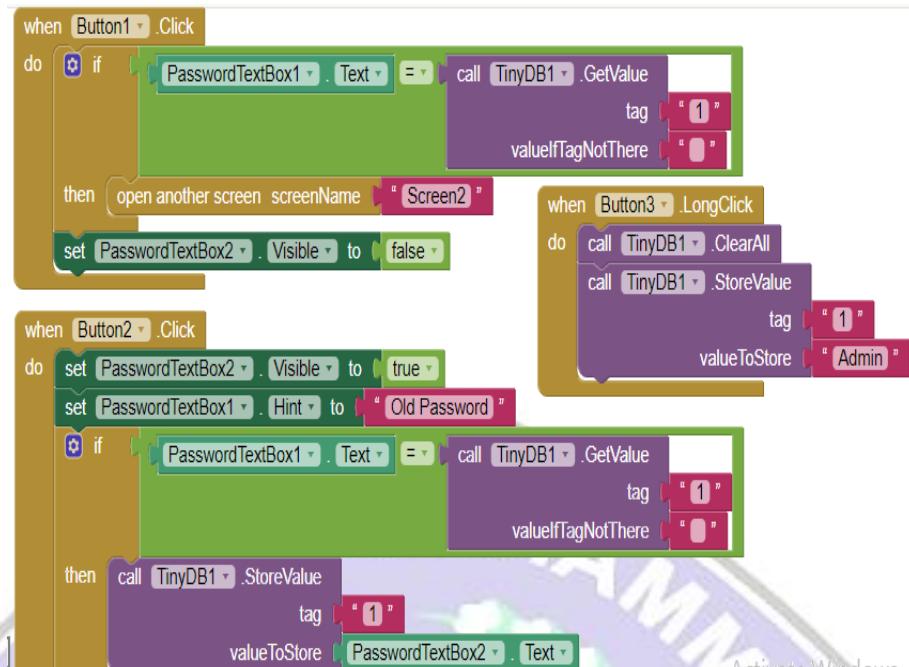
}

}

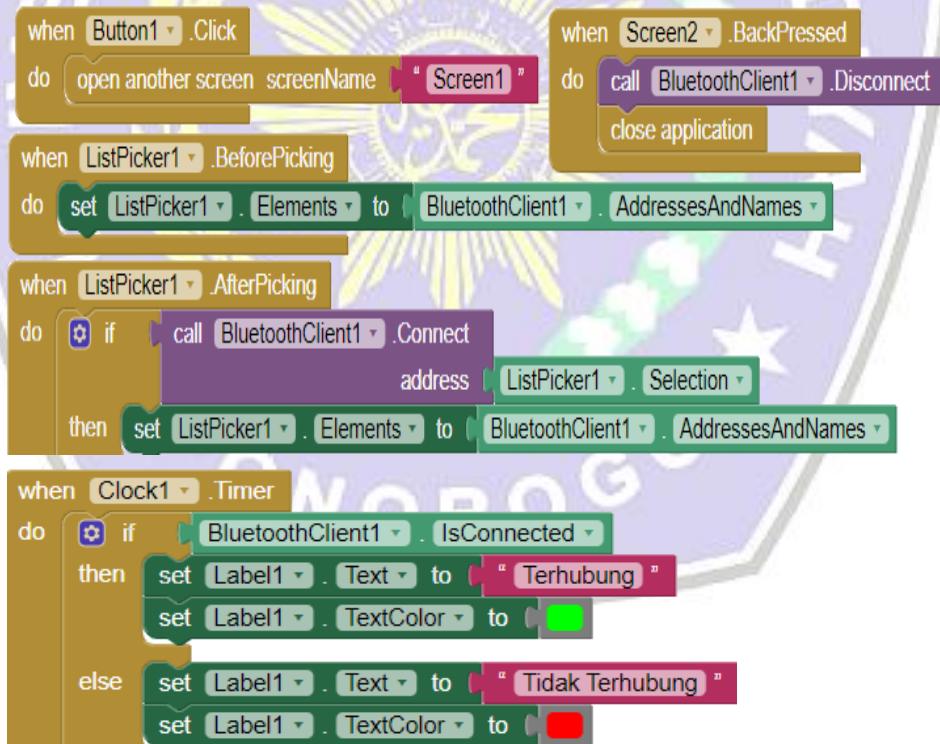
```

d. Kondisi baca log in aplikasi kunci darurat mobil





e. Kondisi baca screen 2 aplikasi kunci darurat mobil



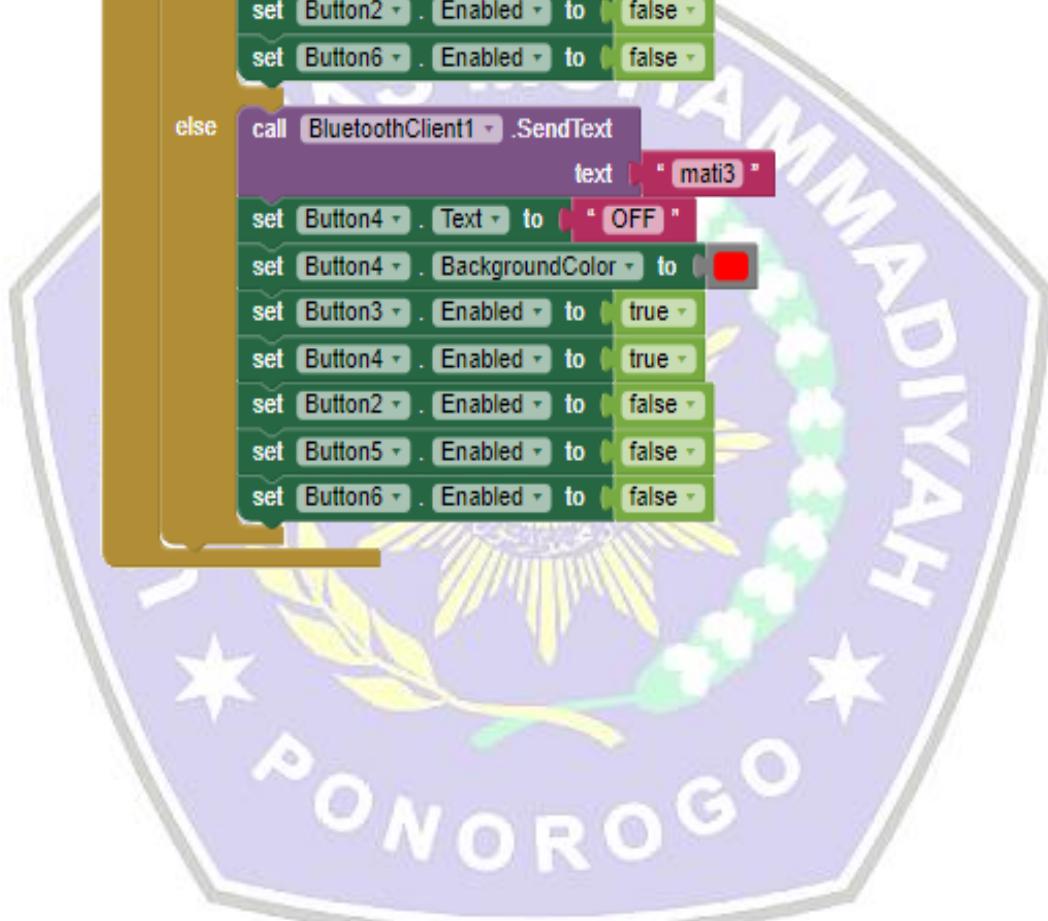
```

when Button2 .TouchUp
do
    call BluetoothClient1 .SendText
        text " mati1 "
    set Button2 .Text to " OFF "
    set Button2 .BackgroundColor to black

when Button2 .TouchDown
do
    call BluetoothClient1 .SendText
        text " hidup1 "
    set Button2 .Text to " lock / unlock "
    set Button2 .BackgroundColor to green
    set Button3 .Enabled to true
    set Button2 .Enabled to true
    set Button4 .Enabled to false
    set Button5 .Enabled to false
    set Button6 .Enabled to false

when Button3 .Click
do
    if compare texts [ Button3 .Text = " OFF " ]
        then
            call BluetoothClient1 .SendText
                text " hidup2 "
            set Button3 .Text to " ON "
            set Button3 .BackgroundColor to green
            set Button4 .Enabled to true
            set Button3 .Enabled to true
            set Button2 .Enabled to true
            set Button5 .Enabled to false
            set Button6 .Enabled to false
        else
            call BluetoothClient1 .SendText
                text " mati2 "
            set Button3 .Text to " OFF "
            set Button3 .BackgroundColor to black
            set Button2 .Enabled to true
            set Button3 .Enabled to true
            set Button4 .Enabled to true
            set Button5 .Enabled to false
            set Button6 .Enabled to false

```



```
when Button4 .Click
do if compare texts [Button4 .Text = " OFF "]
then call [BluetoothClient1 .SendText]
text hidup3
set [Button4 .Text to " ON "]
set [Button4 .BackgroundColor to green]
set [Button5 .Enabled to true]
set [Button4 .Enabled to true]
set [Button3 .Enabled to false]
set [Button2 .Enabled to false]
set [Button6 .Enabled to false]
else call [BluetoothClient1 .SendText]
text mati3
set [Button4 .Text to " OFF "]
set [Button4 .BackgroundColor to red]
set [Button3 .Enabled to true]
set [Button4 .Enabled to true]
set [Button2 .Enabled to false]
set [Button5 .Enabled to false]
set [Button6 .Enabled to false]
```

```

when Button5 .Click
do if compare texts [Button5 .Text = " OFF "]
then call BluetoothClient1 .SendText
    text " hidup4 "
    set Button5 .Text to " ON "
    set Button5 .BackgroundColor to green
    set Button6 .Enabled to true
    set Button5 .Enabled to true
    set Button2 .Enabled to false
    set Button3 .Enabled to false
    set Button4 .Enabled to false
else call BluetoothClient1 .SendText
    text " mati4 "
    set Button5 .Text to " OFF "
    set Button5 .BackgroundColor to red
    set Button4 .Enabled to true
    set Button5 .Enabled to true
    set Button3 .Enabled to false
    set Button2 .Enabled to false
    set Button6 .Enabled to false

when Button6 .TouchUp
do call BluetoothClient1 .SendText
    text " mati5 "
    set Button6 .Text to " OFF "
    set Button6 .BackgroundColor to red
    set Button5 .Enabled to true
    set Button6 .Enabled to true
    set Button4 .Enabled to false
    set Button3 .Enabled to false
    set Button2 .Enabled to false

when Button6 .TouchDown
do call BluetoothClient1 .SendText
    text " hidup5 "
    set Button6 .Text to " ON "
    set Button6 .BackgroundColor to green

```