

Listing Program Arduino

```
/**counter.ino

#include <Wire.h>
#include <LiquidCrystal_I2C.h>

#define I2C_ADDR 0x3F // <<- Add your address here.
#define Rs_pin 0
#define Rw_pin 1
#define En_pin 2
#define BACKLIGHT_PIN 3
#define D4_pin 4
#define D5_pin 5
#define D6_pin 6
#define D7_pin 7

LiquidCrystal_I2C
lcd(I2C_ADDR,En_pin,Rw_pin,Rs_pin,D4_pin,D5_pin,D6_pin,D7_pin);

float kertas;
bool color = false, colorF4 = false, hitam = false, hitamF4 = false;
int counter =0;
int count_hitam = 0;
int count_warna = 0;
int count_hitamF4 = 0;
int count_warnaF4 = 0;
long harga;
int button1,button2;

void setup() {
  // put your setup code here, to run once:
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Serial.begin(9600);
Wire.begin();

lcd.begin (20,4); // <<-- our LCD is a 16x2, change for your LCD if needed
// LCD Backlight ON
lcd.setBacklightPin(BACKLIGHT_PIN,POSITIVE);
lcd.setBacklight(HIGH);

lcd.home (); // go home on LCD
lcd.setCursor (0,0);
lcd.print("Paper Print Counter");
lcd.setCursor (0,1);
lcd.print("->Greyscale : ");lcd.print(count_hitam);
lcd.setCursor (0,2);
lcd.print(" Colors : ");lcd.print(count_warna);
lcd.setCursor (0,3);
lcd.print(counter); lcd.print(" Total : Rp ");lcd.print(harga);

pinMode(8, INPUT_PULLUP);
pinMode(9, INPUT_PULLUP);
}

void loop() {
  // put your main code here, to run repeatedly:
  utama:
  lcd.clear();
  color = false; colorF4 = false; hitam = true; hitamF4 = false;
  harga =
  ((count_hitam*500)+(count_hitamF4*600)+(count_warna*1000)+(count_warnaF
  4*1200));
  lcd.setCursor (0,0);

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lcd.print("Paper Print Counter");
lcd.setCursor (0,1);
lcd.print("->Greys A4:");lcd.print(count_hitam);lcd.print("
F4:");lcd.print(count_hitamF4);
lcd.setCursor (0,2);
lcd.print(" Color A4:");lcd.print(count_warna);lcd.print("
F4:");lcd.print(count_warnaF4);
lcd.setCursor (0,3);
lcd.print(counter); lcd.print(" Total Rp ");lcd.print(harga);
while(1)
{
sensor();
tombol();
harga =
((count_hitam*500)+(count_hitamF4*600)+(count_warna*1000)+(count_warnaF
4*1200));
lcd.setCursor (0,3);
lcd.print(counter); lcd.print(" Total Rp ");lcd.print(harga);
delay(100);
if (button1 == LOW & hitam == true){
color = false; colorF4 = false; hitam = false; hitamF4 = true;
lcd.setCursor (0,0);
lcd.print("Paper Print Counter");
lcd.setCursor (0,1);
lcd.print(" Greys A4:");lcd.print(count_hitam);lcd.print("-
>F4:");lcd.print(count_hitamF4);
lcd.setCursor (0,2);
lcd.print(" Color A4:");lcd.print(count_warna);lcd.print("
F4:");lcd.print(count_warnaF4);
lcd.setCursor (0,3);
lcd.print(counter); lcd.print(" Total Rp ");lcd.print(harga);

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}
else if (button1 == LOW & hitamF4 == true){
    color = true; colorF4 = false; hitam = false; hitamF4 = false;
    lcd.setCursor (0,0);
    lcd.print("Paper Print Counter");
    lcd.setCursor (0,1);
    lcd.print(" Greys A4:");lcd.print(count_hitam);lcd.print("
F4:");lcd.print(count_hitamF4);
    lcd.setCursor (0,2);
    lcd.print("->Color A4:");lcd.print(count_warna);lcd.print("
F4:");lcd.print(count_warnaF4);
    lcd.setCursor (0,3);
    lcd.print(counter); lcd.print(" Total Rp ");lcd.print(harga);
}
else if (button1 == LOW & color == true){
    color = false; colorF4 = true; hitam = false; hitamF4 = false;
    lcd.setCursor (0,0);
    lcd.print("Paper Print Counter");
    lcd.setCursor (0,1);
    lcd.print(" Greys A4:");lcd.print(count_hitam);lcd.print("
F4:");lcd.print(count_hitamF4);
    lcd.setCursor (0,2);
    lcd.print(" Color A4:");lcd.print(count_warna);lcd.print("-
>F4:");lcd.print(count_warnaF4);
    lcd.setCursor (0,3);
    lcd.print(counter); lcd.print(" Total Rp ");lcd.print(harga);
}
else if (button1 == LOW & colorF4 == true){
    color = false; colorF4 = false; hitam = true; hitamF4 = false;
    lcd.setCursor (0,0);
    lcd.print("Paper Print Counter");

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        lcd.setCursor (0,1);
        lcd.print("->Greys A4:");lcd.print(count_hitam);lcd.print("
F4:");lcd.print(count_hitamF4);
        lcd.setCursor (0,2);
        lcd.print(" Color A4:");lcd.print(count_warna);lcd.print("
F4:");lcd.print(count_warnaF4);
        lcd.setCursor (0,3);
        lcd.print(counter); lcd.print(" Total Rp ");lcd.print(harga);
//    goto utama;
    }

```

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else if (button2 == LOW && color == true){
    goto warna;
}
else if (button2 == LOW && colorF4 == true){
    goto warnaF4;
}
else if (button2 == LOW && hitam == true){
    goto black;
}
else if (button2 == LOW && hitamF4 == true){
    goto blackF4;
}
}

```

warna:

```

lcd.clear();
while(1)
{
    lcd.setCursor (0,0);
    lcd.print("Menu Paper A4 Color ");

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```

lcd.setCursor (0,1);
lcd.print("Harga : Rp 1000,-");
lcd.setCursor (0,3);
lcd.print("1-> RESET 2-> BACK");
tombol();
if (button1 == LOW ){
    count_hitam = 0; count_warna = 0; count_hitamF4 = 0; count_warnaF4 = 0;
    counter = 0;
    goto utama;
}
else if (button2 == LOW ){
    goto utama;
}
}
warnaF4:
lcd.clear();
while(1)
{
    lcd.setCursor (0,0);
    lcd.print("Menu Paper F4 Color");
    lcd.setCursor (0,1);
    lcd.print("Harga : Rp 1200,-");
    lcd.setCursor (0,3);
    lcd.print("1-> RESET 2-> BACK");
    tombol();
    if (button1 == LOW ){
        count_hitam = 0; count_warna = 0; count_hitamF4 = 0; count_warnaF4 = 0;
        counter = 0;
        goto utama;
    }
    else if (button2 == LOW ){

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        goto utama;
    }
}
black:
lcd.clear();
while(1)
{
    lcd.setCursor (0,0);
    lcd.print("Menu Paper A4");
    lcd.setCursor (0,1);
    lcd.print("Greyscale");
    lcd.setCursor (0,2);
    lcd.print("Harga : Rp 500,-");
    lcd.setCursor (0,3);
    lcd.print("1-> RESET 2-> BACK");
    tombol();
    if (button1 == LOW ){
        count_hitam = 0; count_warna = 0; count_hitamF4 = 0; count_warnaF4 = 0;
        counter = 0;
        goto utama;
    }
    else if (button2 == LOW ){
        goto utama;
    }
}
blackF4:
lcd.clear();
while(1)
{
    lcd.setCursor (0,0);
    lcd.print("Menu Paper F4");

```

```
lcd.setCursor (0,1);
lcd.print("Greyscale");
lcd.setCursor (0,2);
lcd.print("Harga : Rp 600,-");
lcd.setCursor (0,3);
lcd.print("1-> RESET 2-> BACK");
tombol();
if (button1 == LOW ){
    count_hitam = 0; count_warna = 0; count_hitamF4 = 0; count_warnaF4 = 0;
    counter = 0;
    goto utama;
}
else if (button2 == LOW ){
    goto utama;
}
}
// menu();
}
```

Listing Program Arduino

```
/** ** menu_display.ino
```

```
void sensor(){
  kertas = analogRead(A0);
  Serial.println(kertas);

  if(kertas <40){
    counter=counter+1;
    if(color==true){
      count_warna=count_warna+1;
      lcd.setCursor (0,2);
      lcd.print("->Color A4:");lcd.print(count_warna);lcd.print("
F4:");lcd.print(count_warnaF4);
    }
    else if(colorF4 == true){
      count_warnaF4=count_warnaF4+1;
      lcd.setCursor (0,2);
      lcd.print(" Color A4:");lcd.print(count_warna);lcd.print("-
>F4:");lcd.print(count_warnaF4);
    }
    else if(hitam == true){
      count_hitam=count_hitam+1;
      lcd.setCursor (0,1);
      lcd.print("->Greys A4:");lcd.print(count_hitam);lcd.print("
F4:");lcd.print(count_hitamF4);
    }
    else if(hitamF4 == true){
      count_hitamF4=count_hitamF4+1;
      lcd.setCursor (0,1);
```

```
    lcd.print(" Greys A4:");lcd.print(count_hitam);lcd.print("-  
>F4:");lcd.print(count_hitamF4);  
  
    }  
    do{  
        lcd.setCursor (0,3);  
        lcd.print(counter);  
        kertas = analogRead(A0);  
    }  
    while(kertas<40);  
    }  
}
```