

List Coding dan Program

```
#include <Servo.h>

#include <Wire.h>

#include <LiquidCrystal_I2C.h>

Servo myservo;

#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);

#define S0 8

#define S1 9

#define S2 10

#define S3 11

#define sensorOut 12

int frequency = 0;

int red = 0;
```

```
int green = 0;

int blue = 0;

String inputString = "";

int count1=0,count2=0,count3=0;

//button

int buttonPin = 2;      // membuat variabel buttonPin untuk pin 2

int buttonPin1=3;

int buttonState = 0;    // variabel untuk posisi awal button agar dibaca LOW

int buttonstate1=0;

int buttonPin2=4;

int buttonstate2=0;

void setup() {

  Serial.begin(9600);

  Wire.begin();

  pinMode(S0, OUTPUT);

  pinMode(S1, OUTPUT);

  pinMode(S2, OUTPUT);

  pinMode(S3, OUTPUT);

  pinMode(sensorOut, INPUT);

  // Setting frequency-scaling to 20%

  digitalWrite(S0,HIGH);

  digitalWrite(S1,LOW); //LOW
```

```

myservo.attach(7);

myservo.write(90);

lcd.begin (16,2); // <<-- our LCD is a 16x2, change for your LCD if needed

// LCD Backlight ON

//lcd.setBacklightPin(BACKLIGHT_PIN,POSITIVE);

//lcd.setBacklight(HIGH);

pinMode (BACKLIGHT_PIN,OUTPUT);

digitalWrite (BACKLIGHT_PIN,HIGH);

lcd.home (); // go home on LCD

lcd.setCursor (0,0);

lcd.print(" Money Counter ");

lcd.setCursor (0,1);

lcd.print("== POLSRI ==");

delay(1000);

// button

pinMode(buttonPin, INPUT);

pinMode (buttonPin1, INPUT);

}

void loop() {

color();

lcd.clear();

lcd.setCursor (0,0);

lcd.print(" Pecahan Uang");

lcd.setCursor (0,1);

lcd.print("100=");lcd.print(count1);lcd.print(" 50=");lcd.print(count2);lcd.print("
10=");lcd.print(count3);

```

```
//100 = 34,26,35
```

```
//50 = 55,27,56
```

```
//10 = 49,31,52
```

```
//20 = 57,32,57
```

```
if (red >30 && red <50 & green>23 && green<50 & blue>30 && blue<50){
```

```
myservo.write(45);
```

```
count1=count1+1;
```

```
Serial.print("seratus ribu rupiah");
```

```
delay(3500);
```

```
}
```

```
else if (red >40 && red <61 & green>20 && green<65 & blue>50 && blue<90){
```

```
myservo.write(90);
```

```
count2=count2+1;
```

```
Serial.print("Lima Puluh Ribu Rupiah");
```

```
delay(3300);
```

```
}
```

```
else if (red >62 && red <170 & green>30 && green<150 & blue>62 && blue<150){
```

```
myservo.write(139);
```

```
count3=count3+1;
```

```
Serial.print("sepuluh ribu rupiah");
```

```
delay(3800);
```

```
}
```

```
button();
```

```
}
```

```
void color(){
```

```
digitalWrite(S2, LOW);
```

```
digitalWrite(S3, LOW);
```

```
frequency=pulseIn(sensorOut, LOW);
```

```
red=frequency;
```

```
Serial.print("R=");
```

```
Serial.print(red);
```

```
Serial.print(" ");
```

```
delay (100);
```

```
digitalWrite(S2, HIGH);
```

```
digitalWrite(S3,HIGH);
```

```
frequency=pulseIn(sensorOut, LOW);
```

```
green=frequency;
```

```
Serial.print("G=");
```

```
Serial.print(green);
```

```
Serial.print(" ");
```

```
delay(100);
```

```
digitalWrite(S2, LOW);
```

```
digitalWrite(S3, HIGH);
```

```
frequency =pulseIn(sensorOut, LOW);
```

```
blue=frequency;
```

```
Serial.print("B=");
```

```
Serial.print(blue);
```

```
Serial.println(" ");
```

```
    delay(100);
}

void button() {
    buttonState = digitalRead(buttonPin); // membuat variabel buttonState untuk mengambil
    buttonstate1 = digitalRead(buttonPin1); // nilai dari buttonPin
    buttonstate2 = digitalRead(buttonPin2);

    if (buttonState == HIGH) { // Jika nilai buttonPin = HIGH
        myservo.write(139);
    }
    else if (buttonstate1 == HIGH){ // Jika tidak
        myservo.write(90);
    }
    else if (buttonstate2 == HIGH){ // Jika tidak
        myservo.write(45);
    }
}
```