

APPENDIX

SETUP WIFI

```
1. #include "ThingSpeak.h" //library platform thingspeak
2. #include <ESP8266WiFi.h> //library platform thingspeak
3. #include <Servo.h>
4. const char* ssid = "zenfone"; //setting nama wifi router
5. const char* password = "kadalnaiksapi"; //password wifi router
6.
7. unsigned long channel = 1391084; //ID channel project pada Thingspeak
8. const char * myWriteAPIKey = "PK4UYDHRE46GC7X6";
9. const char * myReadAPIKey = "HMGR6QEWV5VCHFEI";
10. WiFiClient client;
```

VOID SETUP

```
11. void setup()
12. {
13.   Serial.begin(115200);
14.   servoKu.attach(D8);
15.   pinMode(sensorIR,INPUT);
16.
17.   Serial.println();
18.   Serial.println();
19.   Serial.print("Connecting to ");
20.   Serial.println(ssid);
21.
22.   WiFi.begin(ssid, password); //menghubungkan dengan wifi router
23.
24.   while (WiFi.status() != WL_CONNECTED) { //Cek koneksi Wifi.
25.     delay(500);
26.     Serial.print(".");
27.   }
28.
29.   Serial.println("");
30.   Serial.println("WiFi connected");
31.   Serial.println("IP address: ");
32.   Serial.println(WiFi.localIP());
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33. Serial.print("Netmask: ");
34. Serial.println(WiFi.subnetMask());
35. Serial.print("Gateway: ");
36. Serial.println(WiFi.gatewayIP());
37. ThingSpeak.begin(client);
38. }

```

READ LAST DATA THINGSPEAK

```

39. int  organic_value      = ThingSpeak.readFloatField(channel, 1,
    myReadAPIKey);
40. int  nonorganic_value   = ThingSpeak.readFloatField(channel, 2,
    myReadAPIKey);
41.
42. servoKu.write(90);
43. delay(1000);
44. int sensorIRVal = digitalRead(sensorIR);

```

READ OBSTACLE AND UPDATE VALUE

```

45. if(sensorIRVal==0){
46.   Serial.println("Trash Coming");
47.
48.
49.   // membaca sensor LDR jika tembus cahaya maka terdeteksi sampah
    plastik, jika tidak maka sampah organik
50.   if(digitalRead(D7)==LOW)
51.   {
52.     Serial.println("Bright");
53.     delay(2000);
54.     for(angle = 90; angle < 170; angle++)
55.     {
56.       servoKu.write(angle);
57.       delay(15);
58.     }
59.     int update_nonorganic = nonorganic_value+1;
60.     Serial.println(update_nonorganic);
61.     ThingSpeak.writeField(channel, 2, update_nonorganic,
    myWriteAPIKey);
62.   }
63.   else
64.   {
65.     Serial.println("Dark");
66.     delay(2000);
67.     // now scan back from 180 to 0 degrees

```

```

68.     for(angle = 90; angle > 10; angle--)
69.     {
70.         servoKu.write(angle);
71.         delay(15);
72.     }
73.     int update_organic = organic_value+1;
74.     Serial.println(update_organic);
75.     ThingSpeak.writeField(channel, 1, update_organic,
myWriteAPIKey);
76. }
77.
78. }
79. delay(1000);
80. }

```







2.83% PLAGIARISM
APPROXIMATELY

Report #13388599

CHAPTER 1 INTRODUCTION Background Waste production in Indonesia is very large and is considered normal if people throw garbage so that it is considered endless. Bad impacts will be felt if residents are lacking in education on how to properly dispose of waste. The amount of garbage mixed together causes unpleasant odors and diseases to the surroundings if not disposed of in its place. This main problem also spurs on the problem of residents who are not educated about waste disposal. There is still a lack of public awareness and concern for environmental cleanliness. The waste problem is still a serious problem for the government. Lack of information technology waste management by cleaning officers which causes slow waste handling. Information about the condition of the bin volume can help prevent trash accumulation and disease transmission. Therefore, by ordering early detection tools about volume conditions the trash can send information that the trash is full for immediately placed quickly. Based on the described problem,