LAMPIRAN

Lampiran 1 Dokumentasi Penelitian










33.9


34.8

Lampiran - 2 Listing Program Arduino

```
#include <TinyGPS++.h>
#include <SoftwareSerial.h>
#include <ESP8266WiFi.h>
#include <DallasTemperature.h>
#include <OneWire.h>

#define ONE_WIRE_BUS (2)
OneWire
oneWire(ONE_WIRE_BUS);

DallasTemperature
sensors(&oneWire);
static const int RXPin = D1, TXPin =
D2;
static const uint32_t GPSBaud =
9600;

TinyGPSPlus gps;
SoftwareSerial ss(RXPin, TXPin);

const char *ssid = "tory";
const char *password = "etos2015";

WiFiServer server(80);

//void displayInfo();

void setup()
{
  Serial.begin(9600);
  Serial.println();
  ss.begin(GPSBaud);
  sensors.begin();

  Serial.println();
  Serial.print("Menghubungkan ke
jaringan... ");
  Serial.println(ssid);

  WiFi.begin(ssid, password);

  while (WiFi.status() !=
WL_CONNECTED)
    delay(300);
  Serial.print(".");
  Serial.println("");
  Serial.println("Jaringan WiFi
terkoneksi");

  server.begin();
  Serial.println("Koneksi Server
dimulai");

  Serial.print("alamat IP yang untuk
pengaksesan: ");

  Serial.print("http://");

  Serial.print(WiFi.localIP());
```

```
  Serial.println("/");
}
void checkGPS(){
  if (gps.charsProcessed() < 10)
  {
    Serial.println(F("No GPS
detected: check wiring."));
     //Blynk.virtualWrite(V4, "GPS
ERROR");  // Value Display widget
on V4 if GPS not detected
  }
}
void loop()
{

  WiFiClient client =
server.available();
  if (!client)
  {
    return;
  }

  Serial.println("Koneksi Baru");
  while (!client.available())
  {
    delay(500);
  }

  while (ss.available() > 0)
  {
    if (gps.encode(ss.read()))
    {
      displayInfo();
    }
  }

  if (client)
  {

    while (client.connected())
    {
      if (client.available())
      {
        // Menuliskan dalam format
HTML
        client.println("HTTP/1.1 200
OK");
        client.println("Content-Type:
text/html");
        client.println("Connection:
close");
        client.println();

        // Halaman web menampilkan
suhu dan kelembaban
        client.println("<!DOCTYPE
HTML>");
        client.println("<html>");
//masukkan html yang di vsc di
Esp/broker
        client.println("<head>");
```

```
        client.println("<meta
charset='utf-8' />");
        client.println("<meta http-
equiv='refresh' content='2' />");

client.println("<title>MONITORING
SUHU TUBUH DAN LOKASI
PENDAKI GUNUNG</title>");
        client.println("<meta
content='width=device-width, initial-
scale=1.0, maximum-scale=1.0, user-
scalable=0' name='viewport' />");
        client.println("<meta
name='viewport'
content='width=device-width' />");

        client.println("<link
href='https://fonts.googleapis.com/cs
s?family=Roboto:400,700,300|Mater
ial+Icons' rel='stylesheet'>");
        client.println("<link
rel='stylesheet'
href='https://maxcdn.bootstrapcdn.co
m/bootstrap/3.3.7/css/bootstrap.min.
css' integrity='sha384-
BVYiiSIFeK1dGmJRAkycuHAHRg
32OmUcww7on3RYdg4Va+PmSTs
z/K68vbdEjh4u'
crossorigin='anonymous'>");
        client.println("<link
rel='stylesheet'
href='https://cdnjs.cloudflare.com/aja
x/libs/font-
awesome/4.7.0/css/fontawesome.min
.css'>");

        client.println("<style
type='text/css'>th, td {text-align:
center;} ");
        client.println(".card {display:
inline-block; position: relative;width:
100%;margin: 25px 0;box-shadow: 0
1px 4px 0 rgba(0, 0, 0, 0.14);border-
radius: 3px;color: rgba(0, 0, 0,
0.87);background: #fff;}");
        client.println(".card .card-
content {padding: 15px 20px;}.card
.card-content .category {margin-
bottom: 0;}.card .card-header {box-
shadow: 0 10px 30px -12px rgba(0,
0, 0, 0.42), 0 4px 25px 0px rgba(0, 0,
0, 0.12), 0 8px 10px -5px rgba(0, 0,
0, 0.2);margin: -20px 15px 0;border-
radius: 3px;padding:
15px;background-color:
#999999;}");
        client.println(".card .card-
header .title {color: #FFFFFF;}");
        client.println(".card .card-
header .category {margin-bottom: 0;
color: rgba(255, 255, 255, 0.62);}");
```

```
client.println(".card .card-header.card-chart { padding: 0;min-height: 160px;}");
client.println(".card .card-footer {margin: 0 20px 10px;padding-top: 10px;border-top: 1px solid #eeeeee;}");
client.println(".card .card-footer .content {display: block;}");
client.println(".card .card-footer div {    display: inline-block;}");
client.println(".card .card-footer .author { color: #999999;}");
client.println(".card .card-footer .stats {line-height: 22px;color: #999999;font-size: 12px;}");
client.println(".card .card-footer .stats .material-icons {position: relative;top: 4px;font-size: 16px;}");
client.println(".card .card-footer h6 {color: #999999;}");
client.println(".card [data-background-color='purple'] {background: linear-gradient(60deg, #ab47bc, #8e24aa);box-shadow: 0 12px 20px -10px rgba(156, 39, 176, 0.28), 0 4px 20px 0px rgba(0, 0, 0, 0.12), 0 7px 8px -5px rgba(156, 39, 176, 0.2);}");
client.println(".card [data-background-color='blue'] {background: linear-gradient(60deg, #26c6da, #00acc1); box-shadow: 0 12px 20px -10px rgba(0, 188, 212, 0.28), 0 4px 20px 0px rgba(0, 0, 0, 0.12), 0 7px 8px -5px rgba(0, 188, 212, 0.2);}");
client.println(".card [data-background-color='green'] {background: linear-gradient(60deg, #66bb6a, #43a047);box-shadow: 0 12px 20px -10px rgba(76, 175, 80, 0.28), 0 4px 20px 0px rgba(0, 0, 0, 0.12), 0 7px 8px -5px rgba(76, 175, 80, 0.2);}");
client.println(".card [data-background-color='orange'] {background: linear-gradient(60deg, #ffa726, #fb8c00);box-shadow: 0 12px 20px -10px rgba(255, 152, 0, 0.28), 0 4px 20px 0px rgba(0, 0, 0, 0.12), 0 7px 8px -5px rgba(255, 152, 0, 0.2);}");
client.println(".card [data-background-color='red'] {background: linear-gradient(60deg, #ef5350, #e53935);box-shadow: 0 12px 20px -10px rgba(244, 67, 54, 0.28), 0 4px 20px 0px rgba(0, 0, 0, 0.12), 0 7px 8px -5px rgba(244, 67, 54, 0.2);}");
```

```
client.println(".card [data-background-color] {color: #FFFFFF;}");
client.println(".card [data-background-color] a {color: #FFFFFF;}");
client.println(".card-stats .title { margin: 0;}");
client.println(".card-stats .card-header {float: left;text-align: center;}");
client.println(".card-stats .card-header i {font-size: 36px;line-height: 56px;width: 56px;height: 56px;}");
client.println(".card-stats .card-content {text-align: right;padding-top: 10px;} ");
client.println("</style>");
client.println("</head>");
client.println("<body> ");
client.println("<br> ");
client.println("<div class='wrapper'><div class='content'><div class='container-fluid'><div class='row'><center><div><h1 class='title'>MONITORING SUHU TUBUH DAN LOKASI PENDAKI GUNUNG</h1></div></center><br></div>");

client.println("</span></h3></div><div class='card-footer'><div class='stats'></div></div></div></div><div class='col-lg-3 col-md-3 col-sm-3'><div class='card card-stats'><div class='card-header' data-background-color='orange'> <i class='material-icons'>local_drink</i></div><div class='card-content'><p class='category'>Suhu Tubuh</p><h3 class='title'><span>");

client.println(sensors.getTempCByIndex(0));
    client.print("°C"); ////ini yang saya ketik langsung untuk tampil di web kak

client.println("</span></h3></div><div class='card-footer'><div class='stats'></div></div></div></div><div class='col-lg-3 col-md-3 col-sm-3'><div class='card card-stats'><div class='card-header' data-background-color='orange'><i class='material-icons'>report</i></div><div class='card-content'><p
```

```
class='category'>Latitude</p><h3
class='title'> <span>");
      client.println(gps.location.lat());

client.println("</span></h3></div><
div class='card-footer'><div
class='stats'></div></div></div></di
v><div class='col-lg-3 col-md-3 col-
sm-3'><div class='card card-
stats'><div class='card-header' data-
background-color='orange'><i
class='material-
icons'>notifications_active</i></div
><div class='card-content'><p
class='category'>Longitude</p><h3
class='title'> <span>");

client.println(gps.location.lng());

client.println("</span></h3></div><
div class='card-footer'><div
class='stats'></div></div></div></di
v></div><div
class='row'><center><br></div></di
v></div><footer class='footer'><div
class='container-
fluid'></div></footer></div>");

client.println("</body></html>");
      break;
    }
      char c = client.read();
      boolean blank_line = true;
      if (c == '\n')
      {
       // Saat mulai membaca baris
baru
        blank_line = true;
      }
      else if (c != '\r')
      {
       // Ketika menemukan karakter
pada baris saat ini
        blank_line = false;
      }
    }
  }
  // Menutup koneksi klien
  delay(500);
    sensors.requestTemperatures();
// Send the command to get
temperatures

Serial.print(sensors.getTempCByInd
ex(0));   // Why "byIndex"? You can
have more than one IC on the same
bus. 0 refers to the first IC on the
wire
  Serial.println("°C");
//  delay(500);
}
```

```
void displayInfo()
{
  {
    if (gps.location.isValid())
    {
      float latitude =
(gps.location.lat()); //Storing the Lat.
and Lon.
      float longitude =
(gps.location.lng());
      Serial.print("LAT:  ");
      Serial.println(latitude, 6); // float
to x decimal places
      Serial.print("LONG: ");
      Serial.println(longitude, 6);
    }
  }
}
```

Lampiran - 3 Listing program *user interface* situs web

```
<!DOCTYPE html>
<html lang="en">
   <style>
      .fcc-btn {
      background-color: #199319;
      color: white;
      padding: 15px 25px;
      text-decoration: none;
   }
   </style>
   <head>
      <link rel="icon" type="image/x-
icon" href="assets/favicon.ico" />
   </head>
   <body>
      <table align="center"
style="width: 500px; height:
300px;padding-top: 100px;">
         <tr>
            <td colspan="2">
               <h2 style="text-align:
center;">Monitoring Suhu Badan
dan Lokasi Pendaki Gunung
Menggunakan Wireless Network
Dengan Protokol MQTT</h2>
            </td>
         </tr>
         <tr>
            <td align="center">
               <a class="fcc-btn"
href=http://192.168.215.158/
               > User 1</a>
            </td>
            <td align="center">
               <a class="fcc-btn"
href=http://192.168.215.158/
               "> User 2</a>
            </td>
   </body>
</html>
```