

LAMPIRAN

Program Pada Hardware

```
#include <ESP8266WiFi.h>
#include <WiFiClient.h>
const char* server = "monitoringarus.id";
const char* ssid = "iPhone";
const char* password = "25052013";
const char* SensorID= "ESP001";
const int sensorIn = A0;
int mVperAmp =80;
WiFiClient client;
double Voltage = 0;
double VRMS = 0;
double AmpsRMS = 0;

void setup() {
  Serial.begin(115200);
  delay(10);
  WiFi.begin(ssid, password);
  Serial.println();
  Serial.println();
  Serial.print("Connecting to ");
  Serial.print(ssid);
  WiFi.begin(ssid, password);
  while (WiFi.status() != WL_CONNECTED) {
    delay(500);
    Serial.print(".");
  }
  Serial.println();
```

```

Serial.println("WiFi Connected");
}
void loop() {
Voltage = getVPP();
VRMS = ((Voltage/ 2.0) * 234375);
AmpsRMS = (VRMS / 4000000) * mVperAmp;
if (client.connect(server,80)){
Serial.print("Posting data");
Serial.print("Nilai Arus : ");
Serial.println(AmpsRMS);
client.println("GET
/index123.php?AmpsRMS="+String(AmpsRMS)+"&&SensorID="+String(Senso
rID)+" HTTP/1.1");
client.println("HOST: monitoringarus.id");
client.println("Connection: close");
client.println();
while (client.connected())&&!client.connected()) delay(1);
while (client.connected() || client.available()){
char c = client.read();
Serial.print(c);
}
client.stop();
Serial.println();
}
delay(1000);
}
float getVPP()
{
float result;

```

```
int readValue;          //value read from the sensor
int maxValue = 0;      // store max value here
int minValue = 1024;   // store min value here
uint32_t start_time = millis();
while((millis()-start_time) < 1000) //sample for 1 Sec
{
    readValue = analogRead(sensorIn);
    if (readValue > maxValue)
    {
        maxValue = readValue;
    }
    if (readValue < minValue)
    {
        minValue = readValue;
    }
}
result = ((maxValue - minValue) * 5.0)/1024.0;
return result;
}
```

Program Pada Server (index.php)

```
<?php
```

```
// Ubah parameter koneksi berikut sesuai servermu:
```

```
$db_amb = mysqli_connect("localhost", "mony5825_dwi_verdi", "verdy123",  
"mony5825_arduino");
```

```
if (!$db_amb) die("Gagal terkoneksi ke DB Utama. Error : " .  
mysqli_connect_error());
```

```
$AmpsRMS = $_REQUEST['AmpsRMS'];
```

```
$IP = $_SERVER['REMOTE_ADDR'];
```

```
$SensorID = $_REQUEST['SensorID'];
```

```
if (!empty($AmpsRMS) && !empty($IP) && !empty($SensorID)) {
```

```
    $s = "insert into tes2 (ip, SensorID, arus, waktu) values('$IP', '$SensorID',  
'$AmpsRMS', now())";
```

```
    $r = mysqli_query($db_amb, $s);
```

```
    echo "OK";
```

```
}
```

```
else print "ERR";
```

```
?>
```

Program Pada Server (graph.php)

```
<?php

// content="text/plain; charset=utf-8"
require_once ('/jpgraph/jpgraph.php');
require_once ('/jpgraph/jpgraph_line.php');

if (isset($_GET["json"])) {
    $json = $_GET["json"];
    $arr = json_decode($json);
    $arr = json_decode($json, true);

    $datay1 = array($arr["A"]["Value"], $arr["B"]["Value"], $arr["C"]["Value"],
    $arr["D"]["Value"], $arr["E"]["Value"]);
} else {
    $datay1 = array(0, 0, 0, 0, 0);
}

// Setup the graph
$graph = new Graph(960, 500);
$graph->SetScale("textlin");

$theme_class = new UniversalTheme;

$graph->SetTheme($theme_class);
$graph->img->SetAntiAliasing(false);
$graph->title->Set('Grafik');
$graph->SetBox(false);
```

```

$graph->img->SetAntiAliasing();

$graph->yaxis->HideZeroLabel();
$graph->yaxis->HideLine(false);
$graph->yaxis->HideTicks(false, false);

$graph->xgrid->Show();
$graph->xgrid->SetLineStyle("solid");
if (isset($_GET["json"])) {
    $graph->xaxis->SetTickLabels(array($arr["A"]["Waktu"], $arr["B"]["Waktu"],
    $arr["C"]["Waktu"], $arr["D"]["Waktu"], $arr["E"]["Waktu"]));
} else {
    $graph->xaxis->SetTickLabels(array('A', 'B', 'C', 'D', 'E'));
}

$graph->xgrid->SetColor('#E3E3E3');

// Create the first line
$p1 = new LinePlot($datay1);
$graph->Add($p1);
$p1->SetColor("#6495ED");
$p1->SetLegend('Arus');

$graph->legend->SetFrameWeight(1);

// Output line
$graph->Stroke();

```

Program Pada Server (outputlab1.php)

```
?>
<html>
<head>

<style type="text/css">
ul, li{
margin: 0;
padding: 0;
list-style-type: none;
}

ul.utama li{
display: inline-block;
width: 150px;
height: 30px;
background: #666;
text-align: center;
}
ul li:hover{
background: #333;
}

ul.utama a{
color: #fff;
text-decoration: none;
line-height: 30px;
}
```



```
ul.sub{
  display: none;
}
ul.utama li:hover ul.sub{
  display: block;
  position: absolute;
}
ul.sub li{
  display: block;
  margin-top: 1px;
}
</style>
</head>
<body>

<ul class="utama">
  <li><a href="#">Riwayat Data</a>

  <ul class="sub">
    <li><a href="halaman detik.php">per 1 detik</a></li>
    <li><a href="halaman5menit.php">per 5 menit</a></li>
    <li><a href="halaman10menit.php">per 10 menit</a></li>
  </ul>

</li>

<li><a href=" ../index.php">Motor 2</a></li>
<li><a href="outputlab1.php">Motor 1</a></li>
```

```
</ul>
</li>

</ul>

</body>
</html>

<html>
  <head>
    <title>Tugas Akhir</title>
    <script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.2.0/jquery.min.js"></script>

    <script>
      var waktu = null;
      var arus = null;

      var refresher = setInterval(refresh, 1000);
      setInterval(function () {
        clearInterval(refresher);
      }, 1800000);

      function refresh() {

        var xmlHttp = new XMLHttpRequest();
        xmlHttp.onreadystatechange = function () {
```

```

if (xmlHttp.readyState === 4 && xmlHttp.status === 200)
    var json = xmlHttp.responseText,
        obj = JSON.parse(json);

document.getElementById("waktu").innerHTML = obj.Waktu;
document.getElementById("arus").innerHTML = obj.Value;

waktu = obj.Waktu;
arus = obj.Value;
};
xmlHttp.open("GET", "output-data.php", true); // true for asynchronous
xmlHttp.send(null);
}

var graphics = setInterval(getGraphics, 1000);
setInterval(function () {
    clearInterval(graphics);
}, 1800000);

var vals = [ {"Waktu": "" + waktu + "", "Value": "" + arus + ""}, {"Waktu": 0,
"Value": 0}, {"Waktu": 0, "Value": 0}, {"Waktu": 0, "Value": 0}, {"Waktu": 0,
"Value": 0}];

function getGraphics() {
    var json = '{"A":' + vals[0] + ', "B":' + vals[1] + ', "C":' + vals[2] + ',
"D":' + vals[3] + ', "E": ' + vals[4] + '}';
    document.getElementById("graphs").src = "graph.php?json=" + json;

vals[5] = vals[4];

```

```
vals[4] = vals[3];
```

```
vals[3] = vals[2];
```

```
vals[2] = vals[1];
```

```
vals[1] = vals[0];
```

```
vals[0] = '{"Waktu":"' + waktu + "', "Value":"' + arus + "'}';
```

```
}
```

```
</script>
```

```
</head>
```

```
<body>
```

```
<center><h1>Monitoring Arus Motor 1</h1>
```

```
<table border="5" cellspacing="5" cellpadding="4">
```

```
<tr><td>Waktu</td><td>Nilai Arus (A)</td></tr>
```

```
<tr>
```

```
<td id="waktu">1</td>
```

```
<td id="arus">A</td>
```

```
</tr>
```

```
</table>
```

```
<img id="graphs" src ="graph.php" />
```

```
</center>
```

```
</body>
```

```
</html>
```

Program Pada Server (halaman detik.php)

```
<html>
<head>
<style type="text/css">
  ul, li{
    margin: 0;
    padding: 0;
    list-style-type: none;
  }
  ul.utama li{
    display: inline-block;
    width: 150px;
    height: 30px;
    background: #666;
    text-align: center;
  }
  ul li:hover{
    background: #333;
  }

  ul.utama a{
    color: #fff;
    text-decoration: none;
    line-height: 30px;
  }
  ul.sub{
    display: none;
  }
```

```
ul.utama li:hover ul.sub{
  display: block;
  position: absolute;
}
ul.sub li{
  display: block;
  margin-top: 1px;
}
</style>
</head>
<body>
<ul class="utama">
  <li><a href="#">Riwayat Data</a>
  <ul class="sub">
    <li><a href="halaman detik.php">per 1 detik</a></li>
    <li><a href="halaman5menit.php">per 5 menit</a></li>
    <li><a href="halaman10menit.php">per 10 menit</a></li>
  </ul>
</li>
  <li><a href=" ../index.php">Motor 2</a></li>
  <li><a href="outputlab1.php">Motor 1</a></li>
</ul>
</li>
</ul>
</body>
</html>

<html xmlns="http://www.w3.org/1999/xhtml">
```

```
<head>
<style type="text/css">
#content
{
    width: 500px;
    margin: 50 500px;
    font-family:Arial, Helvetica, sans-serif;
}
.page
{
float: right;
margin: -8;
padding: 0;
}
.page li
{
    list-style: none;
    display:inline-block;
}
.page li a, .current
{
display: block;
padding: 5px;
text-decoration: none;
color: #8A8A8A;
}
.current
{
```

```
        font-weight:bold;
        color: #000;
    }
```

```
.button
```

```
{
padding: 5px 15px;
text-decoration: none;
background: #333;
color: #F3F3F3;
font-size: 13PX;
border-radius: 2PX;
margin: 0 3PX;
display: block;
float: left;
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<div id="content">
```

```
<?php
```

```
$url=$_SERVER['REQUEST_URI'];
```

```
header("Refresh: 60; URL=$url");
```

```
$query1=mysqli_connect("localhost","mony5825_dwi_verdi","verdy123","mony5825_arduino");
```

```
mysqli_select_db($query1,"mony5825_arduino") or die (mysqli_error());
```

```
$start=0;
```

```
$limit=10;
```



```

if(isset($_GET['id']))
{
    $id=$_GET['id'];
    $start=(($id-1)*$limit);
}
else{$id=1;}

// $string='2017-04-07%';

$query=mysqli_query($query1,"select * from tes2 WHERE waktu LIMIT $start,
$limit");

// $query=mysqli_query($query1,"select * from tes WHERE waktu LIKE
'".$string."");

echo "<h2>Tabel Nilai Arus Motor 1</h2>";

echo "<table border=2>"/>"<ul>"/>";

echo "<tr>
    <th>Riwayat Waktu</th>
    <th>Nilai Arus (A)</th>
</tr>";

while($query2=mysqli_fetch_array($query))
{
    echo "<tr>
        <td>".$query2['waktu'].</td>
        <td>".$query2['arus'].</td>
    </tr>";
}

echo "</table><br>"/>"<ul>"/>";

$rows=mysqli_num_rows(mysqli_query($query1,"select * from tes"));
$total=ceil($rows/$limit);

$max_id=mysqli_query($query1,"select max(id) from tes");

echo "<a href='?id=1' class='button'>FIRST</a>";

```

```
if($id>1)
{
    echo "<a href='?id=".( $id-1)." class='button'>PREVIOUS</a>";
}
if($id!=$total)
{
    echo "<a href='?id=".( $id+1)." class='button'>NEXT</a>";
    echo "<a href='?id=".$total." class='button'>LAST</a>";
}
echo "<ul class='page'>";
echo "Page&nbsp;&nbsp;&nbsp;";
    for($i=1;$i<=$total;$i++)
    {
        if($i==$id) { echo "<li class='current'>".$i."</li>"; }
        else if ($i==$id++){ echo "<li>".$i."</li>";}
        else if ($i==$id--){ echo "<li>".$i."</li>";}
        else {}
    }

echo "</ul>";
?>
</div>
</body>
</html>
```