

DAFTAR PUSTAKA

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LAMPIRAN

```
#include <Ethernet.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x3F,2,1,0,4,5,6,7,3, POSITIVE);
#include <TinyGPS++.h>
#include <SoftwareSerial.h>
#include <Wire.h>

#if defined(ARDUINO) && ARDUINO >= 100
#define printByte(args) write(args);
#else
#define printByte(args) print(args,BYTE);
#endif

int sensornambah; // sensor tambah
int sensorkurang; // sensor kurang
int nambah=8; // pin sensor masuk
int kurang=9; // pin sensor keluar
int jumlah=0;
int kosong=20;

int buzzer=5; //signal buzzer di pin 5 arduino
static const int RXPin = A0, TXPin = A1; //pin tx dan rx modul gps
static const uint32_t GPSBaud = 9600; //serial print
String latt,lon;
TinyGPSPlus gps;
SoftwareSerial ss(RXPin, TXPin);
byte mac[] = { 0x00, 0xAA, 0xBB, 0xCC, 0xDE, 0x01 }; // reserved mac address
EthernetClient client;
String data;

void setup() {
```

```

//Inisialisasi LCD setting jumlah penumpang awal = 0 dan kuota Tersedia = 20
lcd.begin(20, 4);
ss.begin(GPSBaud);
lcd.backlight();
pinMode(7, OUTPUT); //pin led merah
pinMode(6, OUTPUT); //pin led hijau
pinMode(nambah, INPUT);
pinMode(kurang, INPUT);
pinMode(buzzer, OUTPUT);
digitalWrite(6, LOW); //led hijau
digitalWrite(7, LOW); //led merah
digitalWrite(nambah, HIGH);
digitalWrite(kurang, HIGH);
if (Ethernet.begin(mac) == 0) {
Serial.println("Failed to configure Ethernet using DHCP");
}
data = "";
}

void loop() {
lcd.setCursor(0,0);
lcd.print("Jumlah Penumpang: "); //tampilan jumlah penumpang pada lcd baris 0
lcd.print(jumlah);
lcd.setCursor(0,1);
lcd.print("Kuota Penumpang : "); //tampilan kuota penumpang pada lcd baris 1
lcd.print(kosong);
lcd.setCursor(0, 2);
lcd.print("Lat: "); //tampilan titik koordinat lattitude pada lcd baris 2
lcd.print(latt);
lcd.setCursor(0,3);
lcd.print("Lon: "); //tampilan titik koordinat longitude pada lcd baris 3

```

```

lcd.print(lon);
sensornambah = digitalRead(nambah);
sensorkurang = digitalRead(kurang);
data = "jumlah=";
data.concat(jumlah);
data.concat("&kosong=");
data.concat(kosong);
data.concat("&latt=");
data.concat(latt);
data.concat("&lon=");
data.concat(lon);

//titik koordinat gps
smartDelay(1);
if(gps.location.isValid())
{
    latt=String(gps.location.lat(),6);
    lon=String(gps.location.lng(),6);
    smartDelay(0);
}
else
{
    latt="Null";
    lon="Null";
    smartDelay(0);
}

if (jumlah == 9){
    lcd.setCursor(19,0);
    lcd.print(" ");
}

```

```

if (kosong == 9){
    lcd.setCursor(19,1);
    lcd.print(" ");
}
if (sensorkurang==LOW){ //coding sensor kurang on
    sensornambah==HIGH;
    lcd.setCursor(18, 0);
    lcd.print(jumlah--);
    lcd.setCursor(18,1);
    lcd.print(kosong++);
    delay(1000);
}
if (sensornambah==LOW){ //coding sensor tambah on
    sensorkurang==HIGH;
    lcd.setCursor(18, 0);
    lcd.print(jumlah++);
    lcd.setCursor(18,1);
    lcd.print(kosong--);
    delay(1000);
}
if (jumlah <= 0) { // tampilan lcd jika jumlah penumpang dalam bus = 0
    kosong=20;
    jumlah=0;
    lcd.setCursor(18,1);
    lcd.print(kosong);
    lcd.setCursor(18,0);
    lcd.print(jumlah);
    digitalWrite(6, HIGH); //led hijau
    digitalWrite(7, LOW); //led merah
}

```

```

    }
    if (jumlah >= 20) { // tampilan lcd jika jumlah penumpang overlimits
        kosong=0;
        lcd.setCursor(18,1);
        lcd.print(kosong);
        digitalWrite(6, LOW); //led hijau mati
        digitalWrite(7, HIGH); //led merah nyala
    }
    if (jumlah > 20) {
        digitalWrite(5,HIGH); //buzzer on
        digitalWrite(6, LOW); //led hijau mati
        digitalWrite(7, HIGH); //led merah nyala
    }
    if (jumlah <= 20) {
        digitalWrite(5,LOW);
        delay(5);
    }
    if (client.connect("www.arysetiadi.hol.es",80)) { //address webserver
        client.println("POST /add.php HTTP/1.1"); // path to the add.php file
        client.println("Host: arysetiadi.hol.es");
        client.println("Content-Type: application/x-www-form-urlencoded");
        client.print("Content-Length: ");
        client.println(data.length());
        client.println();
        client.print(data);
    }
    if (client.connected()) {
        client.stop(); // disconnect dari server
    }
    delay(1); // waktu delay
}

```

```

<?php
    include("connect.php");
    $link=Connection();
    $result=mysql_query("SELECT * FROM `tempLog` ORDER BY
`timeStamp` DESC LIMIT 1",$link);

    $sas=mysql_query("SELECT*FROM tempLog ORDER BY timeStamp DESC
LIMIT 1");
    if($sas!==FALSE){
        while($stes = mysql_fetch_array($sas)) {
            $a = $stes["latt"];
            $b = $stes["lon"];
        }
    }
?>

<html>
<head>
<title>SKRIPSI</title>
<meta http-equiv="refresh" content="30">
<style type='text/css'>
    #peta {
        width: 50%;
        height: 400px;
    }
</style>
<script type="text/javascript"
src="http://maps.google.com/maps/api/js?sensor=false"></script>
<script type="text/javascript">
    (function() {
        window.onload = function() {
            var map;
            var locations = [
                <?php
                    include "koneksi.php";
                    $query=mysql_query("SELECT*FROM tempLog ORDER BY timeStamp
DESC LIMIT 1");
                    while($data=mysql_fetch_array($query)){ //lokasi marker di looping dari
database
                ?>
                ['<?php echo $data["timeStamp"];?>', <?php echo $data["latt"];?>, <?php
echo $data["lon"];?>],
                <?php
            }
        ?>
    ];

```

```

var options = {
    center: new google.maps.LatLng(<?php echo $a;?> , <?php echo $b;?>),
    zoom: 14, //ini zoom
    mapTypeId: google.maps.MapTypeId.ROADMAP
};
var map = new google.maps.Map(document.getElementById('peta'), options);
var infowindow = new google.maps.InfoWindow();
var marker, i;
for (i = 0; i < locations.length; i++) {
    marker = new google.maps.Marker({
        position: new google.maps.LatLng(locations[i][1], locations[i][2]),
        map: map,
        icon: 'http://icons.iconarchive.com/icons/fasticon/happy-bus/48/bus-orange-
icon.png'
    });
    google.maps.event.addListener(marker, 'click', (function(marker, i) {
        return function() {
            infowindow.setContent('Busway Disini');
            infowindow.open(map, marker);
        }
    })(marker, i));
}
})();
</script>
</head>

<body>
<h1><center>Percobaan Skripsi</center></h1>

<table border="1" align=center cellspacing="1" cellpadding="1">
<tr>
<th>&nbsp;Waktu&nbsp;</th>
<th>&nbsp;Jumlah Penumpang&nbsp;</th>
<th>&nbsp;Sisa Penumpang&nbsp;</th>
<th>&nbsp;Latitude&nbsp;</th>
<th>&nbsp;Longitude&nbsp;</th>
</tr>

<?php
    if($result!==FALSE){
        while($row = mysql_fetch_array($result)) {
            printf("<tr><td> &nbsp;%s </td><td> &nbsp;%s&nbsp;&nbsp;&nbsp;</td><td> &nbsp;%s&nbsp;&nbsp;&nbsp;</td><td> &nbsp;%s&nbsp;&nbsp;&nbsp;</td><td> &nbsp;%s&nbsp;&nbsp;&nbsp;</td></tr>",
                $row["timeStamp"], $row["jumlah"], $row["sisa"], $row["latt"],
                $row["lon"]);
        }
        mysql_free_result($result);
    }
}

```



```

        mysql_close();
    }
?>

</center></table>
</body>
<h1></h1>
<h1></h1>
    <body><center>
        <div id="peta">
        </div>
    </center></body>

</html>

<html>
    <head>
        <title></title>
        <style type='text/css'>
            #peta {
                width: 50%;
                height: 400px;
            }
        </style>
        <script type="text/javascript"
src="http://maps.google.com/maps/api/js?sensor=false"></script>
        <script type="text/javascript">
            (function() {
                window.onload = function() {
                    var map;
                    var locations = [
                        <?php
                            include "koneksi.php";
                            $query=mysql_query("SELECT*FROM tempLog ORDER BY timeStamp
DESC");
                            while($data=mysql_fetch_array($query)){ //lokasi marker di looping dari
database
                                ?>
                                    ['<?php echo $data["timeStamp"];?>', <?php echo $data["latt"];?>, <?php
echo $data["lon"];?>],
                                <?php
                                    }
                                ?>
                            ];
                    var options = {
                        zoom: 5, //ini zoom
                        center: new google.maps.LatLng(-7.8008, 110.380643), //tengah peta
                        mapTypeId: google.maps.MapTypeId.ROADMAP

```

```

    };
    var map = new google.maps.Map(document.getElementById('peta'), options);
    var infowindow = new google.maps.InfoWindow();
    var marker, i;
    for (i = 0; i < locations.length; i++) {
        marker = new google.maps.Marker({
            position: new google.maps.LatLng(locations[i][1], locations[i][2]),
            map: map,
        });
        google.maps.event.addListener(marker, 'click', (function(marker, i) {
            return function() {
                infowindow.setContent(locations[i][0]);
                infowindow.open(map, marker);
            }
        })(marker, i));
    }
    });
    })();
</script>
</head>
<body>
    <div id="peta">
    </div>
</body>

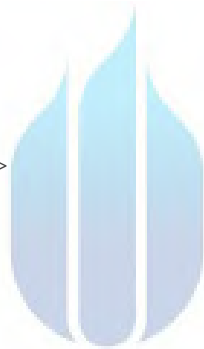
</html>

<?php
$server="mysql.idhostinger.com";
$user="u111604414_ino";
$password="mercubuana";
$db="u111604414_ino";

error_reporting(E_ALL ^ E_DEPRECATED);
$conn = mysql_connect($server, $user, $password);
mysql_select_db($db);

?>

```



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