LAMPIRAN 1

PROGRAM INTEL GALILEO

```
#include <SPI.h>
#include <Ethernet.h>
#include <Servo.h>
byte mac[] = {0x98, 0x4F, 0xEE, 0x05, 0x76, 0x82};
//IPAddressip(10, 30, 29, 50);//IP PoliteknikNegeri Padang
IPAddressip(192, 168, 100, 8);//IP router indihome
//IPAddresssubnet(255, 255, 255, 0);
//byte subnet[]={255, 255, 255, 0};
//byte gateway[]={10, 30, 29, 1};
EthernetServerserver(80);
//**********variable*****************
Servo tilt;
Servo pan;
intpanpos = 90;
inttiltpos = 115;
int steps=5;
int in1 = 6;
int in2 = 7;
int in3 = 8;
int in4 = 9;
intenA = 5;
intenB = 10;
unsigned char count=0;
byte brightness1=0;
byte brightness2=0;
String HTTP_req;
boolean statusL1, statusL2=false;
unsigned char lstat=255;
//*********************************
void setup() {
Serial.begin(115200);
Serial.println("Waiting...");
delay(5000);
Serial.println("Setting up");
 //Ethernet.begin(mac, ip, subnet, gateway);
Ethernet.begin(mac, ip);
Serial.print("IP: ");
Serial.println(Ethernet.localIP());
server.begin();
//*******pin setting**********
pinMode(in1, OUTPUT);
pinMode(in2, OUTPUT);
pinMode(in3, OUTPUT);
pinMode(in4, OUTPUT);
pinMode(enA, OUTPUT);
pinMode(enB, OUTPUT);
digitalWrite(in1,HIGH);
```

```
digitalWrite(in2,LOW);
digitalWrite(in3,HIGH);
digitalWrite(in4,LOW);
pan.attach(3);
tilt.attach(11);
}
void loop()
{
analogWrite(enA,brightness1);
analogWrite(enB,brightness2);
if(analogRead(A0)<960){
delay(1000);
if(count==0)
   {
     brightness1=255;
     brightness2=255;
   }
if(count!=255)
   {
count++;
Serial.println(count);
   }
}
if(analogRead(A1)<960){
delay(1000);
if(count!=0)
   {
count--;
Serial.println(count);
if(count==0)
     {
       brightness1=0;
       brightness2=0;
     }
   }
}
EthernetClient client = server.available();
if (client) {
booleancurrentLineIsBlank = true;
while (client.connected()) {
if (client.available()) {
char c = client.read();
HTTP_req += c;
if (c == '\n' &&currentLineIsBlank) {
client.println("HTTP/1.1 200 OK");
client.println("Content-Type: text/html");
client.println("Connection: close");
client.println();
client.println("<!DOCTYPE html>");
client.println("<html>");
client.println("<head>");
client.println("<meta charset=\"utf-8\">");
client.println("<meta    name=\"viewport\"    content=\"width=device-
width, initial-scale=1\">");
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```
client.println("<link                                rel=\"stylesheet\"
href=\"https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap
.min.css\">");
client.println("<script
src=\"https://ajax.googleapis.com/ajax/libs/jquery/3.2.0/jquery.min.
js\"></script>");
client.println("<script
src=\"https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/js/bootstrap.m
in.js\"></script>");
client.println("<style               type=\"text/css\">body{background:
url(\"http://www.medtecheurope.org/sites/default/files/images/positi
on_paper/websitebg-bl_compr.png\")center center fixed;}</style>");
client.println("<title>SistemPintar</title>");
client.println("</head>");
client.println("<body>");
client.println("<div class=\"container\">");
client.println("<h1
align=\"center\">SistemPintarPengontrolanLampudan  IP  Camera  Melalui
Web Berbasis Intel Galileo</h1><br>");
client.println("</div>");
client.println("<div class=\"container\" align=\"center\">");
client.println("<row>");
//********Live Video************
client.println("<div class=\"col-sm-6\" >");
client.println("<h4>Live IP Camera</h4>");
client.println("<iframesrc=\"http://192.168.1.103:8081/video.cgi\"
height=\"260\"              width=\"450\"                          semaless
scrolling=\"no\"></iframe><br>");
client.println("<form method=get name=servo>");
servo();
client.println("<input  type=submit name=up value=UP class=\"btnbtn-
success btn-xs\">");
client.println("<input        type=submit        name=left        value=LEFT
class=\"btnbtn-success btn-xs\">");
client.println("<input        type=submit        name=right        value=RIGHT
class=\"btnbtn-success btn-xs\">");
client.println("<input        type=submit        name=down        value=DOWN
class=\"btnbtn-success btn-xs\"><br><br>");
client.println("<a         href=\"http://192.168.1.103:8081/video.cgi\"
class=\"btnbtn-info btn-xs\">Full Screen</a>");
client.println("<a href=\"?reset.servo\" class=\"btnbtn-warning btn-
xs\">Reset</a>");
client.println("</form>");
client.println("</div>");
//******kontrollampu**********
client.println("<div class=\"col-sm-6\">");
client.println("<h4>KontrolLampu</h4>");
client.println("<table  class=\"table  table-bordered\"  style=\"text-
align:center;\">");
client.println("<thead>");
client.println("<tr class=\"info\">");
client.println("<th>Status</th>");
client.println("<th>Kontrol</th>");
client.println("<th>Kecerahan</th>");
```

```
client.println("</tr>");
client.println("</thead>");
client.println("<tbody>");

//*******************************************
client.println("<form method=get name=lampu1>");
kontrollampu();
client.println("<tr>");
client.println("<td>");
if (statusL1 == false) {
client.println("<b>MATI</b>");
                        } else {
client.println("<b>HIDUP</b>");
                        }
client.println("</td>");
client.println("<td>");
client.println("<a   href=\"?lampu1on\"   class=\"btnbtn-success   btn-
xs\">ON</a>");
client.println("<a   href=\"?lampu1off\"   class=\"btnbtn-danger   btn-
xs\">OFF</a>");
client.println("</td>");
client.println("<td>");
client.println("<a    href=\"?lampu1kurang\"    class=\"btnbtn-warning
btn-xs\">-</a>");
client.println("<a   href=\"?lampu1tambah\"   class=\"btnbtn-info   btn-
xs\">+</a>");
client.println("</td>");
client.println("</tr>");
client.println("</form>");

//*********************************************
client.println("<form method=get name=lampu2>");
client.println("<tr>");
client.println("<td>");
//startuslampu 2
if (statusL2 == false) {
client.println("<b>MATI</b>");
                        } else {
client.println("<b>HIDUP</b>");
                        }
client.println("</td>");
client.println("<td>");
client.println("<a   href=\"?lampu2on\"   class=\"btnbtn-success   btn-
xs\">ON</a>");
client.println("<a   href=\"?lampu2off\"   class=\"btnbtn-danger   btn-
xs\">OFF</a>");
client.println("</td>");
client.println("<td>");
client.println("<a    href=\"?lampu2kurang\"    class=\"btnbtn-warning
btn-xs\">-</a>");
client.println("<a   href=\"?lampu2tambah\"   class=\"btnbtn-info   btn-
xs\">+</a>");
client.println("</td>");
client.println("</form>");
```

```
client.println("</tr>");
client.println("</tbody>");
client.println("</table>");
//****************************************
client.println("<div class=\"panel panel-default\">");
client.println("<div                                     class=\"panel-
heading\"><label>Create</label></div>");
client.println("<div                                     class=\"panel-
body\"><label>WalditoFebriRamadhan
(1311071004)</label></div></div>");
client.println("</div>");
client.println("</row>");
client.println("</div>");
client.println();
client.println("</body>");
client.println("</html>");
Serial.print(HTTP_req);
HTTP_req = "";
break;
                    }
if (c == '\n') {
currentLineIsBlank = true;
                    }
else if (c != '\r') {
currentLineIsBlank = false;
                    }
              }
          }
delay(1);
client.stop();
      }
}
voidkontrollampu(){
//*******ruangan 1************************
if (HTTP_req.indexOf("lampu1on") >0){
        brightness1=255;
        statusL1=true;
    }
if (HTTP_req.indexOf("lampu1off") >0){
        brightness1=0;
        statusL1=false;
    }
//***********ruangan 2*********************
if (HTTP_req.indexOf("lampu2on") >0){
        brightness2=255;
        statusL2=true;
    }
if (HTTP_req.indexOf("lampu2off") >0){
        brightness2=0;
        statusL2=false;
    }
//*********kecerahan 1*********************
if (HTTP_req.indexOf("lampu1kurang") >0){
if(brightness1!=0)
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                {
                   brightness1 = brightness1-15;
                }
                statusL1=true;
         }
    if (HTTP_req.indexOf("lampu1tambah") >0){
    if(brightness1!=255)
                {
                   brightness1 = brightness1+15;
                }
                statusL1=true;
         }
    //**********kecerahan 2**********************
    if (HTTP_req.indexOf("lampu2kurang") >0){
    if(brightness2!=0)
                {
                   brightness2 = brightness2-15;
                }
                statusL2=true;
         }
    if (HTTP_req.indexOf("lampu2tambah") >0){
    if(brightness2!=255)
                {
                   brightness2 = brightness2+15;
                }
                statusL2=true;
         }
    }
    void servo(){
         //servo
    if (HTTP_req.indexOf("up=UP") >0){
    tiltpos = tilt.read();
    if (tiltpos>= 0 &&tiltpos< 180){
    tilt.write(tiltpos + 10);
    steps = steps + 1;
    Serial.println("derjat : ");
    Serial.print(tiltpos);
    Serial.println("derjat");
          }
        }
    if (HTTP_req.indexOf("down=DOWN") >0){
    tiltpos = tilt.read();
    if (tiltpos>= 0 &&tiltpos< 180)
         {
    tilt.write(tiltpos - 10);
    steps = steps - 1;
    Serial.println("derjat : ");
    Serial.print(tiltpos);
    Serial.println("derjat");
          }
        }
    if (HTTP_req.indexOf("right=RIGHT") >0){
    panpos = pan.read();
    if (panpos>= 0 &&panpos< 180)
```

```
        {
pan.write(panpos + 10);
steps = steps + 1;
Serial.println("derjat : ");
Serial.print(panpos);
Serial.println("derjat");
        }
    }
if (HTTP_req.indexOf("left=LEFT") >0){
panpos = pan.read();
if (panpos>= 0 &&panpos< 180)
        {
pan.write(panpos - 10);
steps = steps - 1;
Serial.println("derjat : ");
Serial.print(panpos);
Serial.println("derjat");
        }
    }
if (HTTP_req.indexOf("reset.servo") >0){
tilt.write(115);
pan.write(90);
    }
}
```