Progetto Web Server (Arduino Uno + Ethernet Shield)

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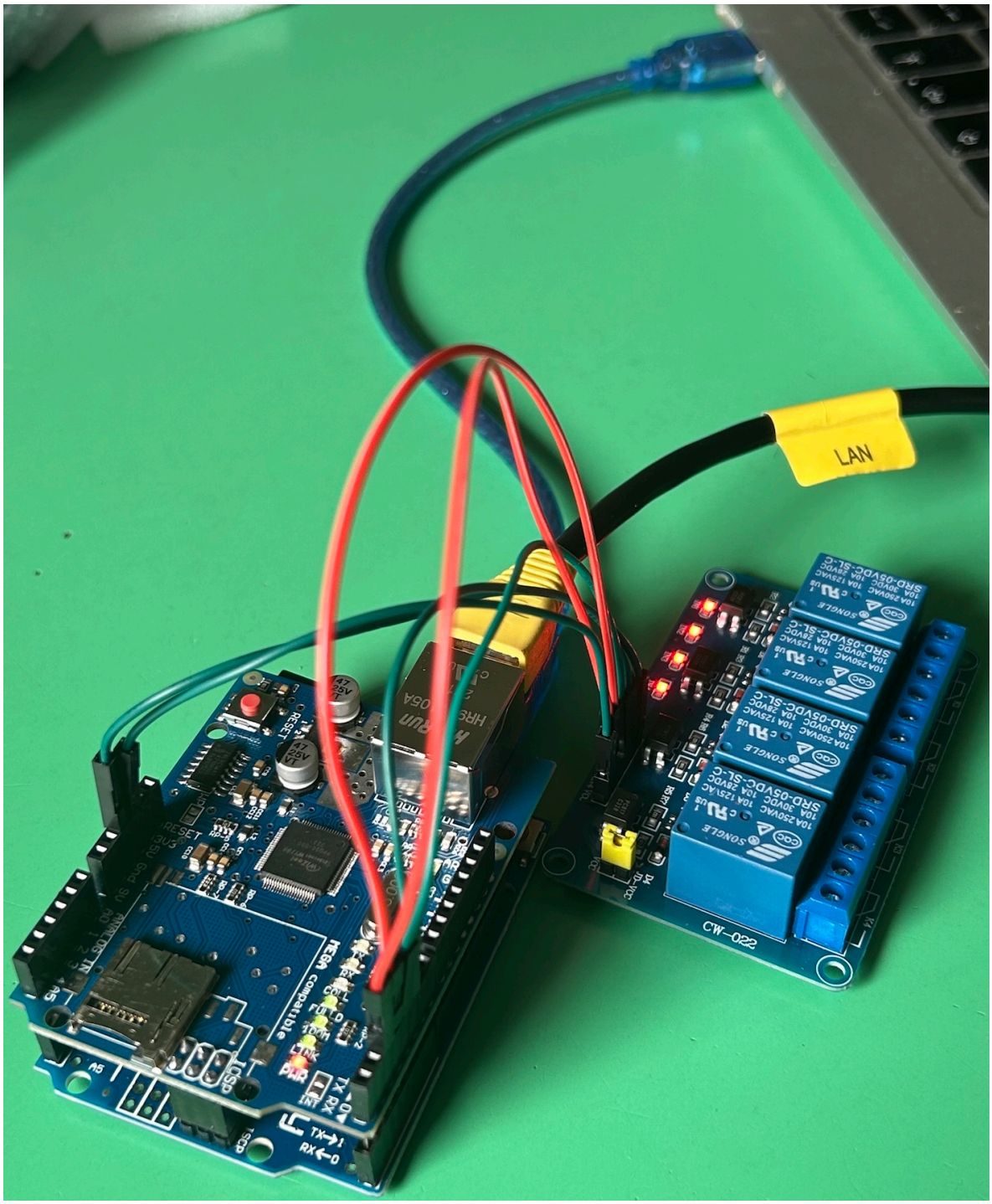
MATERIALE:

- Arduino Uno
- Ethernet Shield
- Modulo 4 relè
- Jumpers



RISULTATO DIGITANDO IL PROPRIO IP SUL WEB BROWSER

Codice per Arduino IDE
I parametri di networking nelle variabili byte sono da modificare seguendo le indicazioni visibili dal proprio prompt dei comandi (Windows+R —> cmd —> digitare 'ipconfig' e poi invio)

```
#include <SPI.h>

#include <Ethernet.h>

int led1 = 2;          //relay1

int led2 = 3;          //relay2

int led3 = 4;          //relay3

int led4 = 5;          //relay4

byte mac[] = { 0xDE, 0xAD, 0xBE, 0xEF, 0xFE, 0xED };   //

indirizzo MAC

byte ip[] = { 169, 254, 61, 10 };                       //il

tuo IP

byte gateway[] = { 10, 100, 30, 254 };                  //
```

```
gateway
byte subnet[] = { 255, 255, 255, 0 };                    //
subnet
EthernetServer server(80);
String readString;

void setup() {
  Serial.begin(9600);
   while (!Serial) {
  }
  pinMode(led1, OUTPUT);
  pinMode(led2, OUTPUT);
  pinMode(led3, OUTPUT);
  pinMode(led4, OUTPUT);

  Ethernet.begin(mac, ip, gateway, subnet);
  server.begin();
  Serial.print("server is at ");
  Serial.println(Ethernet.localIP());
}

void loop() {
  EthernetClient client = server.available();
```

```
  if (client) {
    while (client.connected()) {
      if (client.available()) {
        char c = client.read();
        if (readString.length() < 100) {
          readString += c;
         }
         if (c == '\n') {
           Serial.println(readString);
           client.println("HTTP/1.1 200 OK");
           client.println("Content-Type: text/html");
           client.println();
           client.println("<HTML>");
           client.println("<HEAD>");
           client.println("<meta name='apple-mobile-web-app-
capable' content='yes' />");
           client.println("<meta name='apple-mobile-web-app-
status-bar-style' content='black-translucent' />");
           client.println("<link rel='stylesheet' type='text/
css' href='inserire il proprio foglio css' />");
           client.println("<TITLE>Controllo Dispositivi da
Remoto</TITLE>");
           client.println("</HEAD>");
```

```
            client.println("<BODY>");
            client.println("<H1>Controllo Dispositivi da
Remoto</H1>");
            client.println("<hr />");
            client.println("<br />");
            client.println("<H2>Arduino UNO con Ethernet
Shield</H2>");
            client.println("<br />");
            client.println("<a href=\"/?button1on\"\">Accendi
LED 1</a>");
            client.println("<a href=\"/?button1off\"\">Spegni
LED 1</a><br />");
            client.println("<br />");
            client.println("<br />");
            client.println("<a href=\"/?button2on\"\">Accendi
LED 2</a>");
            client.println("<a href=\"/?button2off\"\">Spegni
LED 2</a><br />");
            client.println("<br />");
            client.println("<br />");
            client.println("<a href=\"/?button3on\"\">Accendi
LED 3</a>");
            client.println("<a href=\"/?button3off\"\">Spegni
```

```
LED 3</a><br />");
            client.println("<br />");
            client.println("<br />");
            client.println("<a href=\"/?button4on\"\">Accendi
LED 4</a>");
            client.println("<a href=\"/?button4off\"\">Spegni
LED 4</a><br />");
            client.println("<br />");
            client.println("<p>Nicholas Fattori classe 3TME</
p>");
            client.println("<br />");
            client.println("</BODY>");
            client.println("</HTML>");
            delay(1);
            client.stop();
            if (readString.indexOf("?button1on") >0){
                digitalWrite(led1, HIGH);
            }
            if (readString.indexOf("?button1off") >0){
                digitalWrite(led1, LOW);
            }
            if (readString.indexOf("?button2on") >0){
                digitalWrite(led2, HIGH);
```

```
            }
            if (readString.indexOf("?button2off") >0){
                digitalWrite(led2, LOW);
            }
            if (readString.indexOf("?button3on") >0){
                digitalWrite(led3, HIGH);
            }
            if (readString.indexOf("?button3off") >0){
                digitalWrite(led3, LOW);
            }
            if (readString.indexOf("?button4on") >0){
                digitalWrite(led4, HIGH);
            }
            if (readString.indexOf("?button4off") >0){
                digitalWrite(led4, LOW);
            }
             readString="";
          }
        }
    }
}
}
```