**STRONG MAN (TECHNITES)**

1. Arduino Uno
2. Shield made to directly fit on any Uno
3. 16 LED strips to be controlled-> 2x TLC5916 LED Drivers
4. Communication between TLC and Uno using SPI

|  |  |  |  |
| --- | --- | --- | --- |
| Uno PIN no | Purpose | TLC Pin No | Purpose |
| D11 | MOSI | 2 | SDI |
| D13 | SCLK | 3 | CLK |
| Any DPIN | OE’ | 13 | OE’ |
| Any DPIN | SS | 4 | LE(ED1) |

* 1. Both TLCs have SS and OE’ lines parallel SDO of first goes to SDI of second
  2. SPI.h is used, default bitOrder MSB first
  3. While writing the values, LE (SS on Arduino) must be pulled LOW, and high as soon as it is finished

void setValue(word value)

{

digitalWrite(ss, LOW);

SPI.transfer16(value); // send value (0~255)

digitalWrite(ss, HIGH);

}

* 1. SPI.transfer writes 8 bits to the register, in MSB first order (i.e. 1-> 00000001), if LSB is first (using SPI.setBitOrder(LSBFIRST)), then 1->10000000
  2. SPI.transfer16 is used for 16 bit values