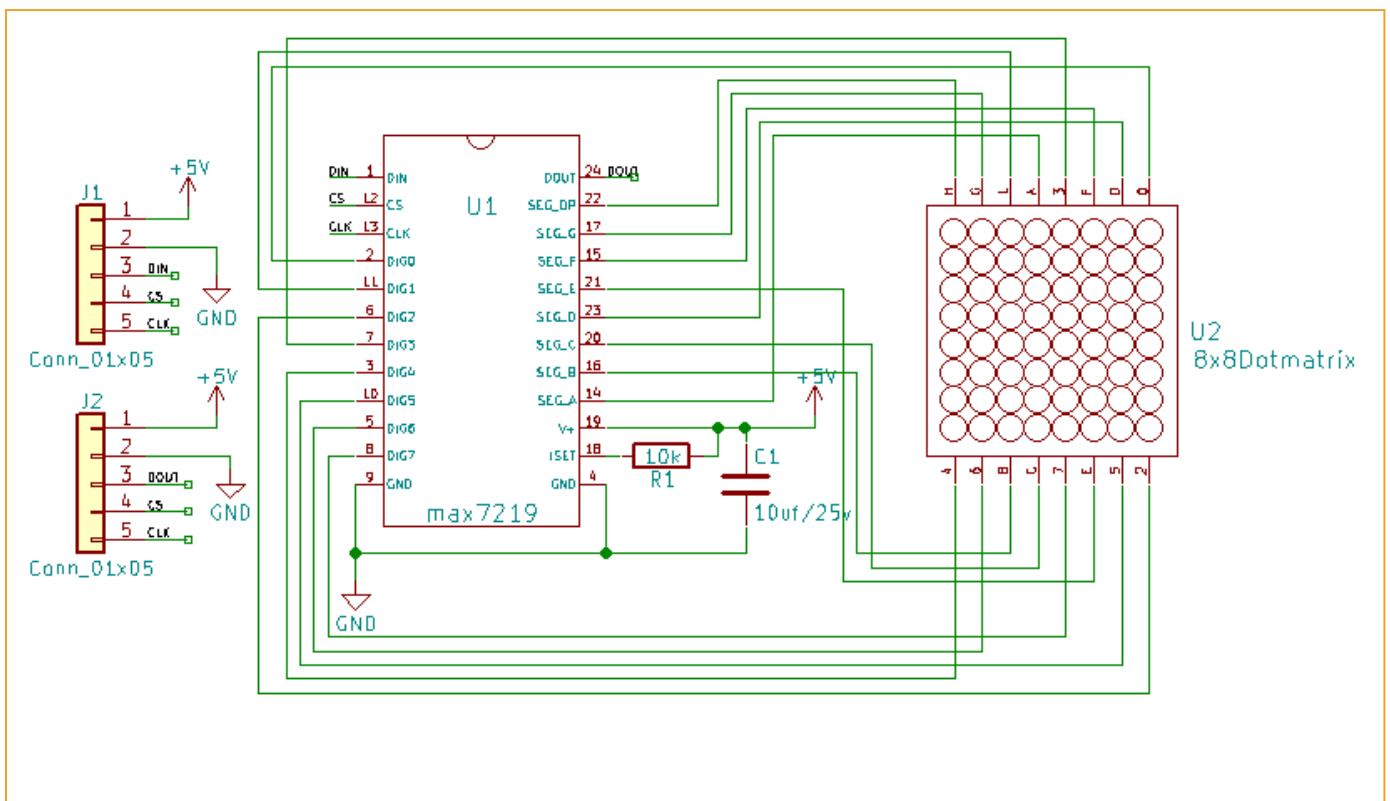# 8x8 Dot-matrix with max7219

Introduction

Remember the heart-running 8*8 dot-matrix experiment you did before? Many small partners will feel that the socket is used up and other functions can be used? Now use the MAX7219 driver module.
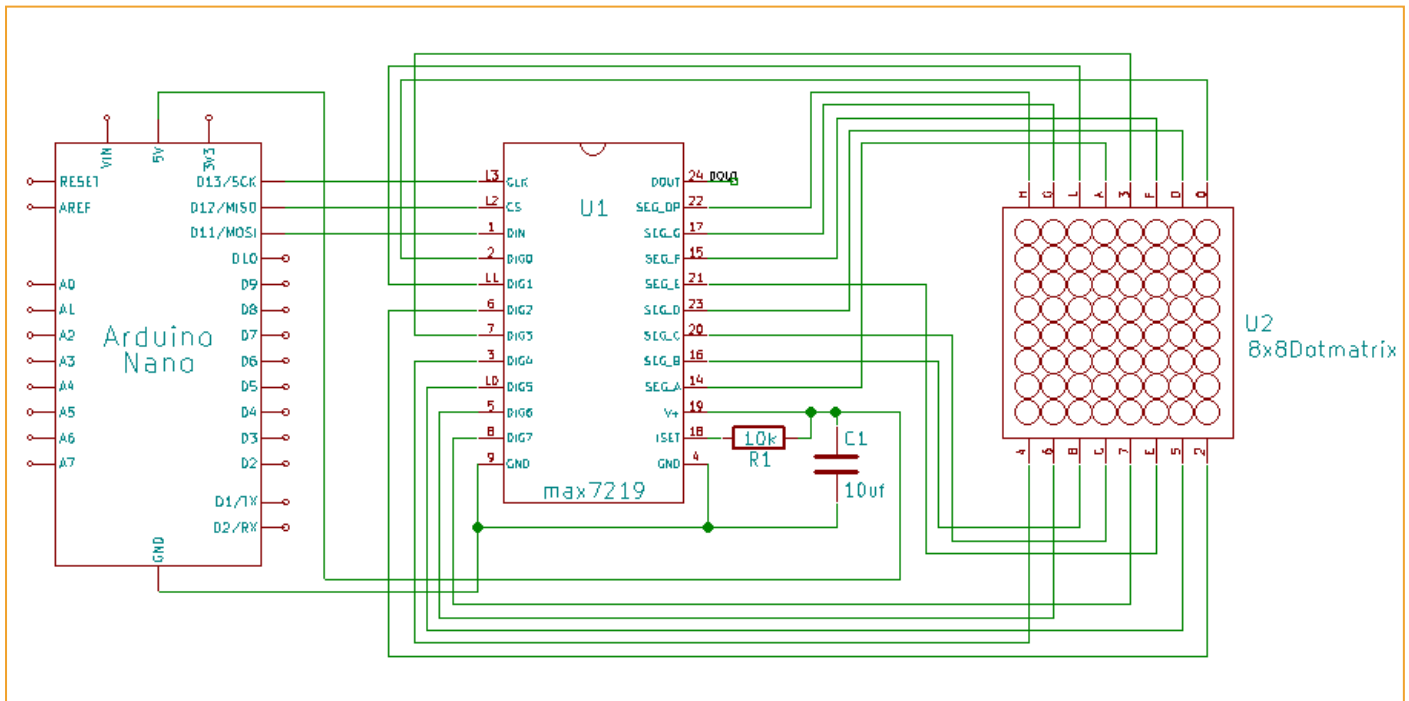
MAX7219 Module schematic diagram

This This figure shows the appearance of the MAX7219 and the 8x8 LED dot matrix and their connections. The MAX7219 receives data via the DIN, CLK, and CS pins and outputs the data to an 8×8 LED dot matrix for display.
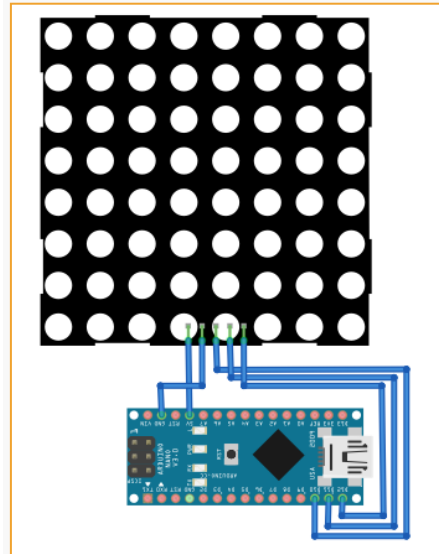
Component List

◆ Arduino Nano R3 Mainboard

◆ Breadboard

◆ USB cable

◆ MAX7219 *1

◆ Several jumper wires

Schematic Diagram

Wiring of Circuit

Arduino Nano	8x8 Dot-matrix
5V	VCC
GND	GND
D10	DIN
D11	CS
D12	CLK

Code

```cpp
#include "MaxMatrix.h"
#include "mouths.h"
#include "gestures.h"
#define PIN_DIN    10   //max 7219
#define PIN_CS     11
#define PIN_CLK    12
MaxMatrix ledmatrix = MaxMatrix(PIN_DIN, PIN_CS, PIN_CLK, 1); //PIN
10=DIN, PIN 11=CS, PIN 12=CLK

void setup() {
   Serial.begin(9600);
   // set up Matrix display
   ledmatrix.init();
   ledmatrix.setIntensity(1);
   ledmatrix.writeFull(neutral);//display
   delay(1000);
   ledmatrix.writeFull(smile);
   delay(1000);
}

void loop() {
   ledmatrix.writeFull(Tears); //display
   delay(500);
   //ledmatrix.clearMatrix();
   //delay(500);          //Clear screen
}
```

Experiment Result