Arduino Tutorials

How to use an LCD display

8-Digit Seven Segment Display with MAX7219

Available Languages

Introduction

In this tutorial we will show you how to use the 8-Digit seven segment display with MAX-7219 IC. with the Arduino uno board.

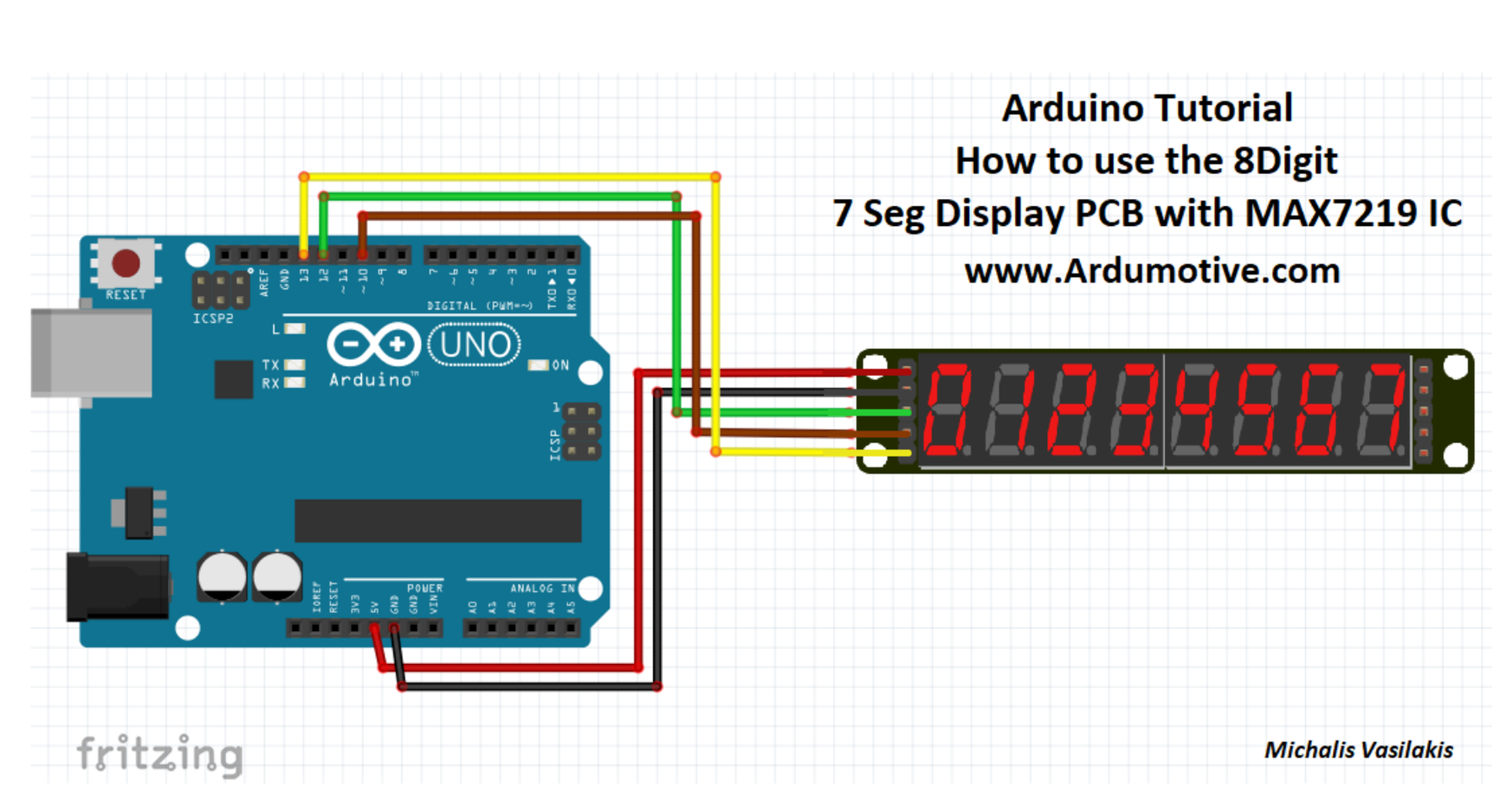
Let's get started!

What you will need - Hardware

For this tutorial you will need:

- Arduino uno
- 8-Digit Seven Segment Display Module

The Circuit



The connections are easy, see the image above with breadboard circuit schematic.

- Vcc to Arduino 5V Pin
- GND to Arduino GND
- DIN to Arduino pin 12
- CS to Arduino pin 10
- CLK to Arduino pin 13

The code

```
//We always have to include the library
#include "LedControl.h"

/*
 Now we need a LedControl to work with.
 ***** These pin numbers will probably not work with your hardware *****
 pin 12 is connected to the DataIn
 pin 13 is connected to the CLK
 pin 10 is connected to LOAD
 We have only a single MAX72XX.
 */
LedControl lc=LedControl(12,13,10,1);

/* we always wait a bit between updates of the display */
unsigned long delaytime=250;

void setup() {
  /*
   The MAX72XX is in power-saving mode on startup,
   we have to do a wakeup call
   */
  lc.shutdown(0,false);
  /* Set the brightness to a medium values */
  lc.setIntensity(0,8);
  /* and clear the display */
  lc.clearDisplay(0);
}


/*
 This method will display the characters for the
 word "Arduino" one after the other on digit 0.
 */
void writeArduinoOn7Segment() {
  lc.setChar(0,0,'a',false);
  delay(delaytime);
  lc.setRow(0,0,0x05);
  delay(delaytime);
  lc.setChar(0,0,'d',false);
  delay(delaytime);
  lc.setRow(0,0,0x1c);
  delay(delaytime);
  lc.setRow(0,0,B00010000);
  delay(delaytime);
  lc.setRow(0,0,0x15);
  delay(delaytime);
  lc.setRow(0,0,0x1D);
  delay(delaytime);
  lc.clearDisplay(0);
  delay(delaytime);
}

/*
  This method will scroll all the hexa-decimal
 numbers and letters on the display. You will need at least
 four 7-Segment digits. otherwise it won't really look that good.
 */
void scrollDigits() {
  for(int i=0;i<13;i++) {
    lc.setDigit(0,3,i,false);
    lc.setDigit(0,2,i+1,false);
    lc.setDigit(0,1,i+2,false);
    lc.setDigit(0,0,i+3,false);
    delay(delaytime);
  }
  lc.clearDisplay(0);
  delay(delaytime);
}

void loop() {
  writeArduinoOn7Segment();
  scrollDigits();
}
```

Download the code from here and open it with Arduino IDE.

lcdemo7segment.zip
Download File

Well done!

You have successfully completed one more Arduino "How to" tutorial and you learned how to use the 8-Digit Seven Segment Display with MAX7219.

I hope you liked this, let me know in the comments.