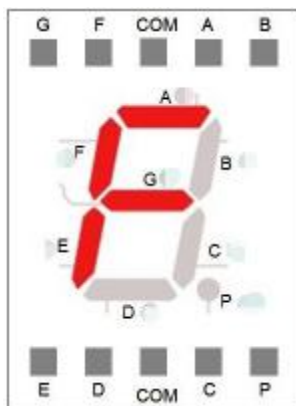# 1 digit LED Segment Displays

★ **Overview**

This experiment is similar to the LED experiment, the same is the control of LED, but the experiment can achieve time counting function.

★ **Pin definition**
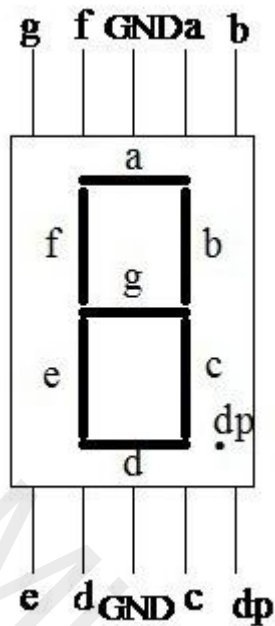

★ **Hardware required**

Material diagram	Material name	Number
	1 digit LED Segment Displays	1
	220/330Ω resistor	7
	USB Cable	1
	UNO R3	1
	Breadboard	1
	Jumper wires	Several

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# Component Introduction

★ Seven segment display

Below is the seven-segment pin diagram.

0-9 ten digits correspond with each segment are as follows (the following table applies common cathode seven segment display device, if you are using a common anode, the table should be replaced every 1 0 0 should all replaced by 1):

Display digital	dp	a	b	c	d	e	f	g
0	0	1	1	1	1	1	1	0
1	0	0	1	1	0	0	0	0
2	0	1	1	0	1	1	0	1
3	0	1	1	1	1	0	0	1
4	0	0	1	1	0	0	1	1
5	0	1	0	1	1	0	1	1
6	0	1	0	1	1	1	1	1
7	0	1	1	1	0	0	0	0
8	0	1	1	1	1	1	1	1
9	0	1	1	1	1	0	1	1

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★ **Connection diagram**
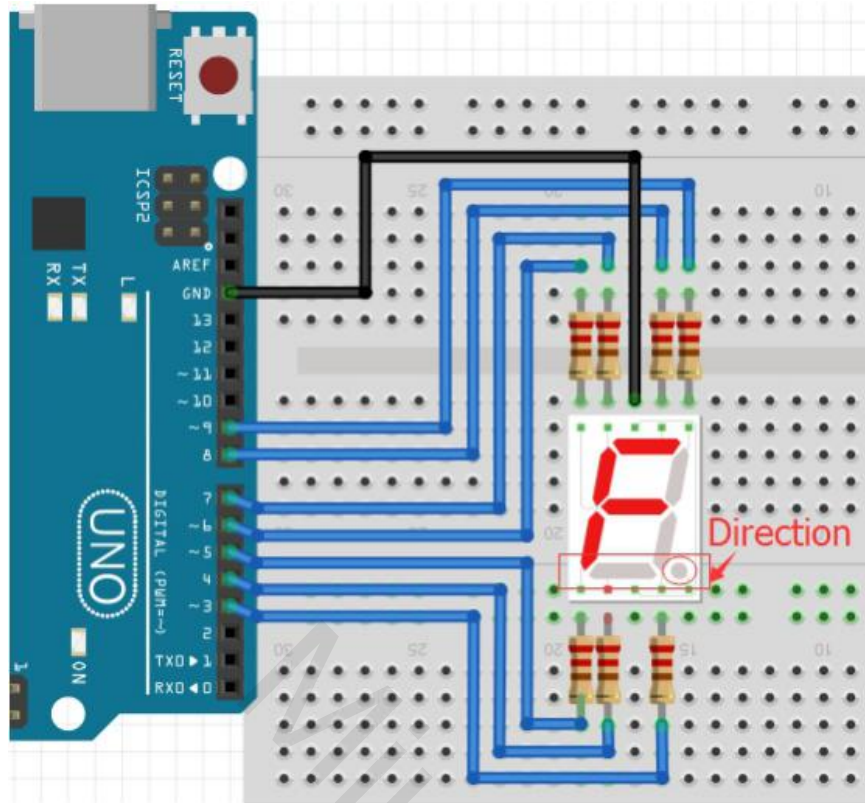
Note： Pay attention to the direction of digital tube.

Connection:

UNO R3	SEG
D3	->C
D4	->D
D5	->E
D6	->G
D7	->F
D8	->A
D9	->B
GND	->COM

★ Sample code

Note: sample code under the **Sample code** folder
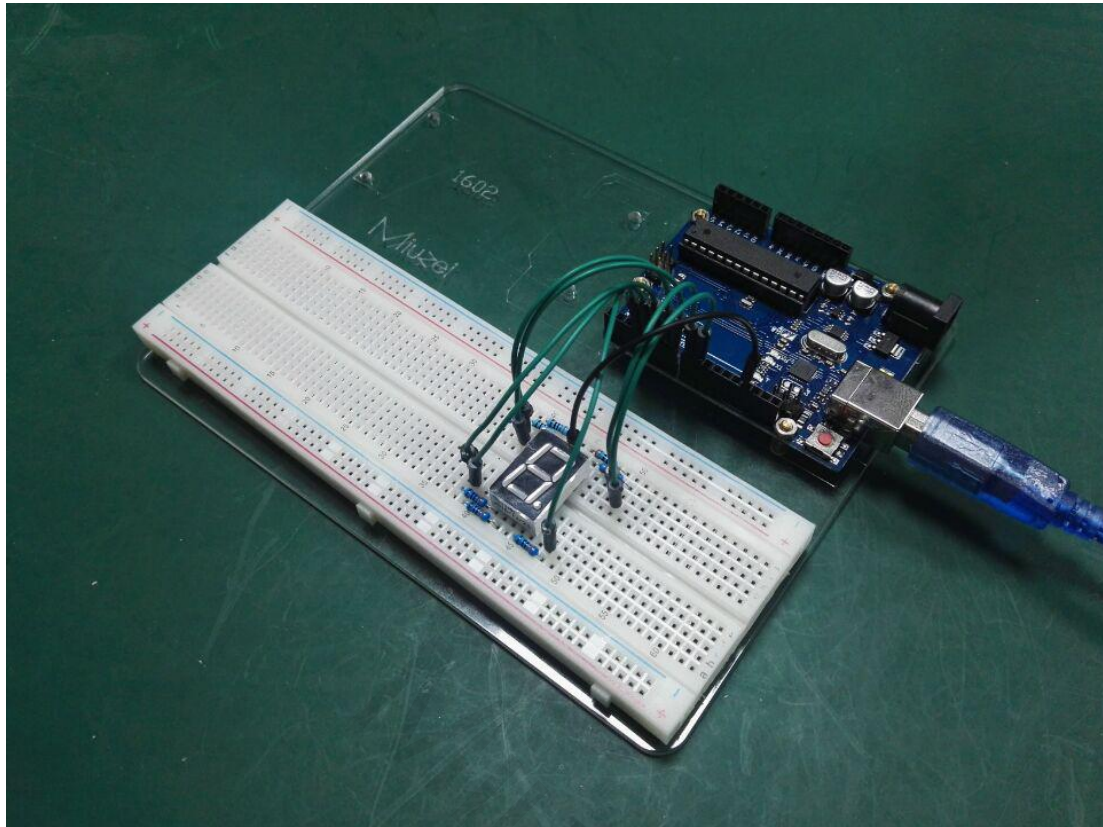
```
int a[10][10]={
    {0,0,0,1,1,1,0,1,1,1}, //0
    {0,0,0,1,0,0,0,0,0,1}, //1
    {0,0,0,0,1,1,1,0,1,1}, //2
    {0,0,0,1,1,0,1,0,1,1}, //3
    {0,0,0,1,0,0,1,1,0,1}, //4
    {0,0,0,1,1,0,1,1,1,0}, //5
    {0,0,0,1,1,1,1,1,1,0}, //6
    {0,0,0,1,0,0,0,0,1,1}, //7
    {0,0,0,1,1,1,1,1,1,1}, //8
    {0,0,0,1,1,0,1,1,1,1},}; //9
void setup()
{
    for (int i=3;i<=9;i++)
    {
        pinMode(i,OUTPUT);
    }
}
void printf(int v)
{
    for (int i=3;i<=9;i++)
    {
        digitalWrite(i,a[v][i]);
    }
}
void loop()
{
    for (int i=0;i<=9;i++)
    {
        printf(i);
        delay(400);
    }
}
```

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★ **Example picture**

★ **Language reference**

[array](#)

★ **Application effect**

You will see the number on the digital tube increased from 0 to 9.

About Miuzei:

Miuzei found in 2011 , which is a professional manufacturer and exporter that concerned with open-source hardware research & product development, We have more than hundred engineers devote to developing open source hardware like Arduino, Raspberry pi ,3d printers , robots.

Miuzei committed to make more creative open source products and provide richer knowledge for enthusiasts worldwide.   No matter what your ideas are, we provide various mechanical parts and electronic modules to turn your ideas into success.

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