

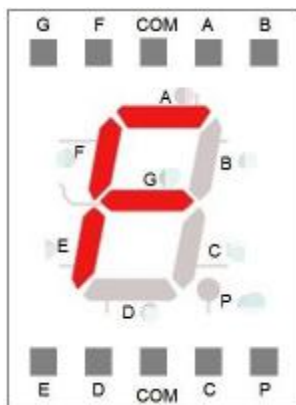
# 1 digit LED Segment Displays

## Overview





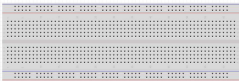



This experiment is similar to the LED experiment, the same is the control of LED, but the experiment can achieve time counting function.

## Pin definition



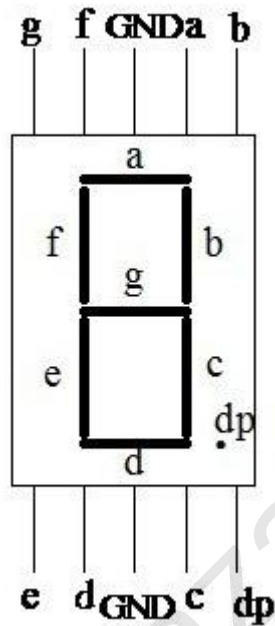
## Hardware required

Material diagram	Material name	Number
	1 digit LED Segment Displays	1
	220/330Ω resistor	7
	USB Cable	1
	MEGA 2560	1
	Breadboard	1
	Jumper wires	Several

## Component Introduction

### Seven segment display

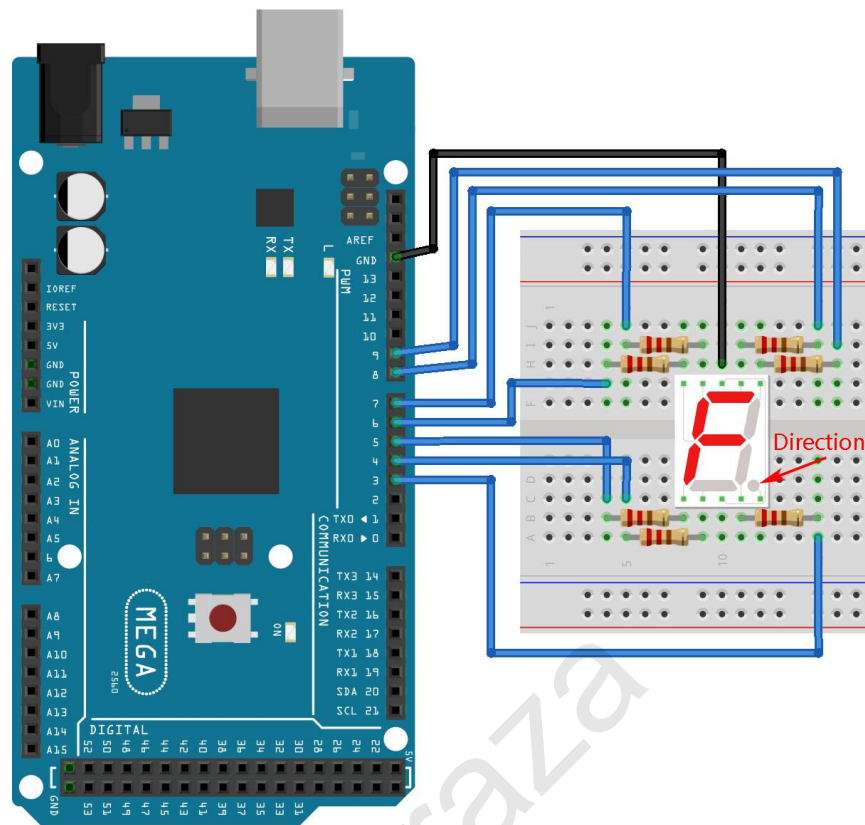
Below is the seven-segment pin diagram.



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

## Connection diagram



Note : Pay attention to the direction of digital tube.

Connection:

Arduino	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

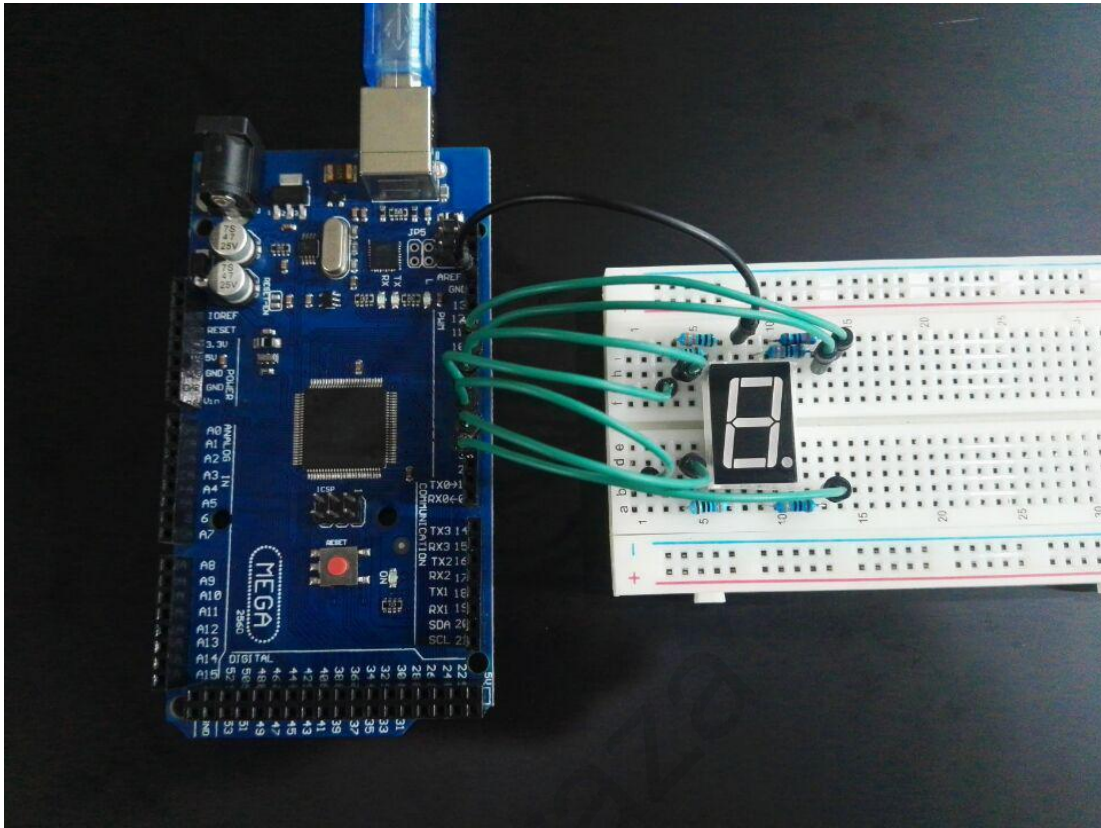
```
int a[10][10]={
    {0,0,0,1,1,1,0,1,1,1}, //0
    {0,0,0,1,0,0,0,0,0,1}, //1
    {0,0,0,0,1,1,1,0,1,1}, //2
    {0,0,0,1,1,0,1,0,1,1}, //3
    {0,0,0,1,0,0,1,1,0,1}, //4
    {0,0,0,1,1,0,1,1,1,0}, //5
    {0,0,0,1,1,1,1,1,1,0}, //6
    {0,0,0,1,0,0,0,0,1,1}, //7
    {0,0,0,1,1,1,1,1,1,1}, //8
    {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);
    }
}
```

## Example picture



## Language reference

[array](#)

## Application effect

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

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