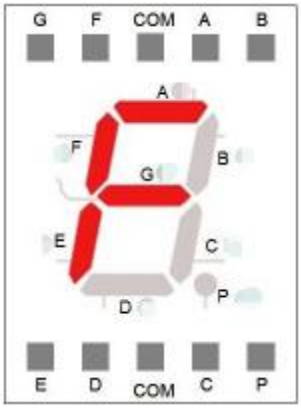
1 digit LED Segment Displays

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



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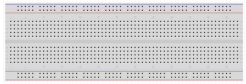
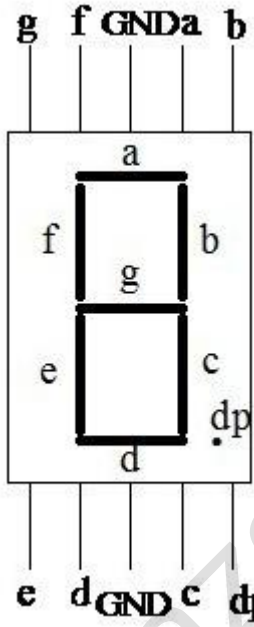
Hardware required

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

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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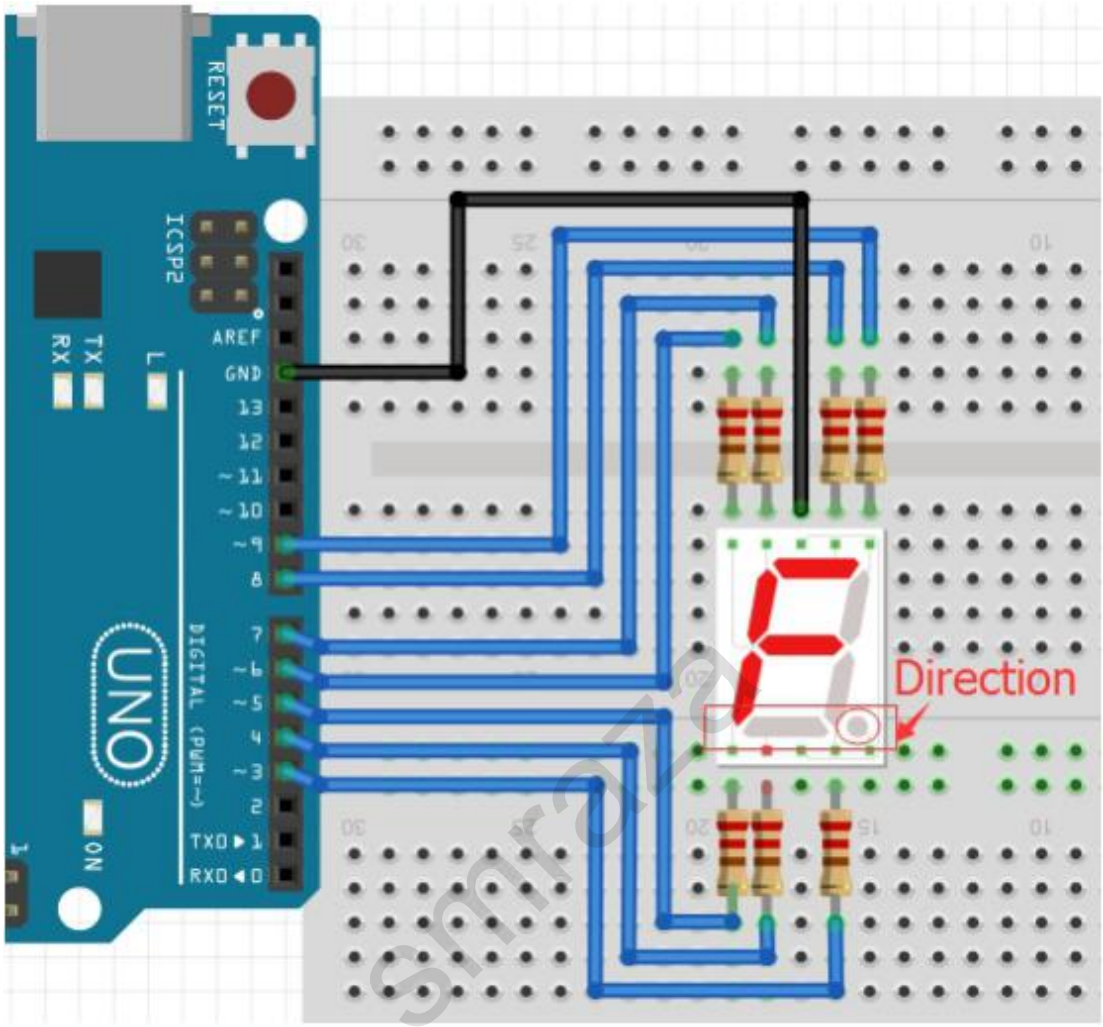
Connection diagram



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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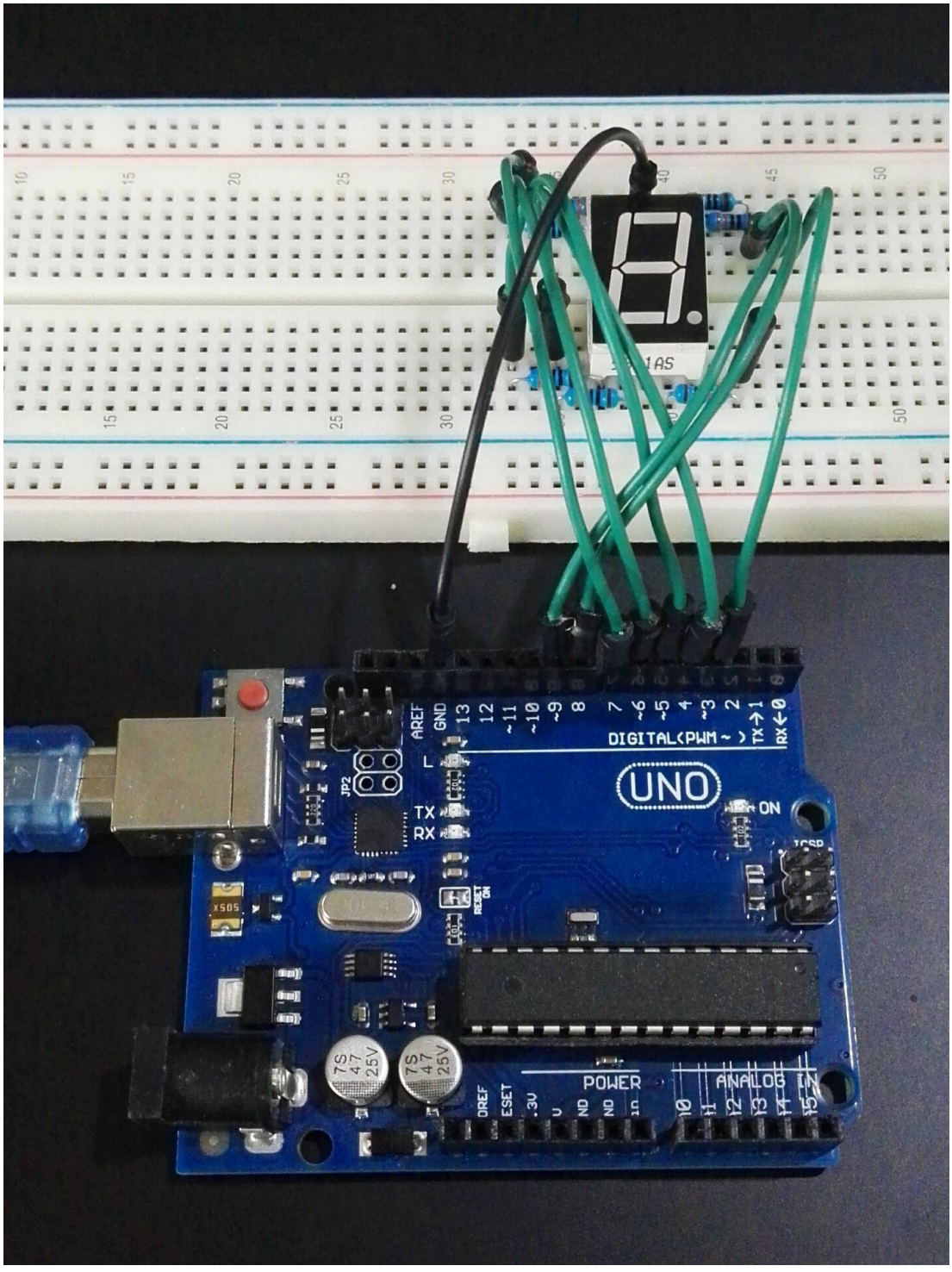
Example picture



Language reference

array

Application effect

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

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