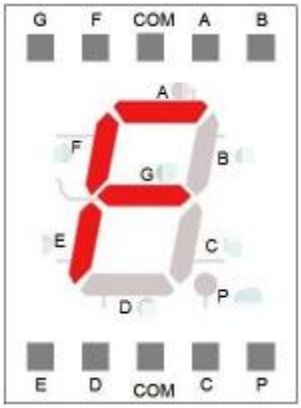
1 digit LED Segment Displays

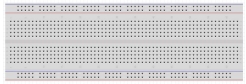
Overview

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



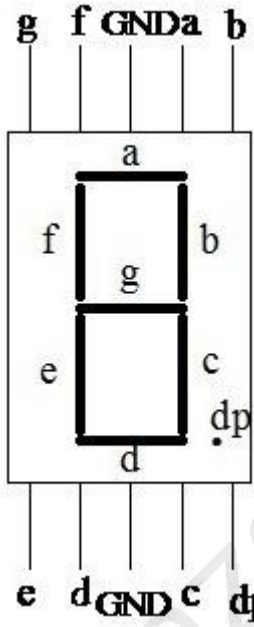
Hardware required

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

Component Introduction

Seven segment display

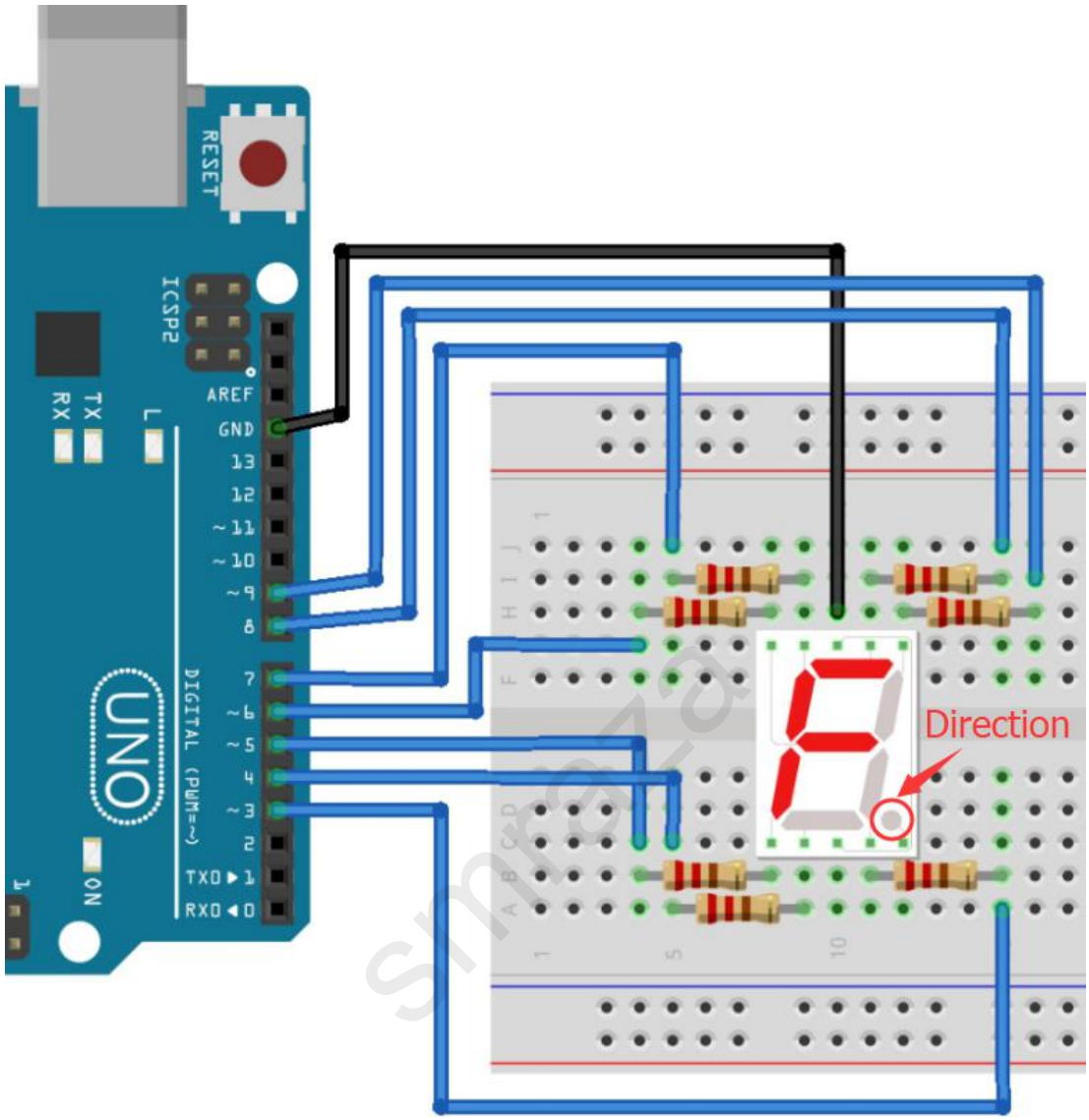
Below is the seven-segment pin diagram.



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:

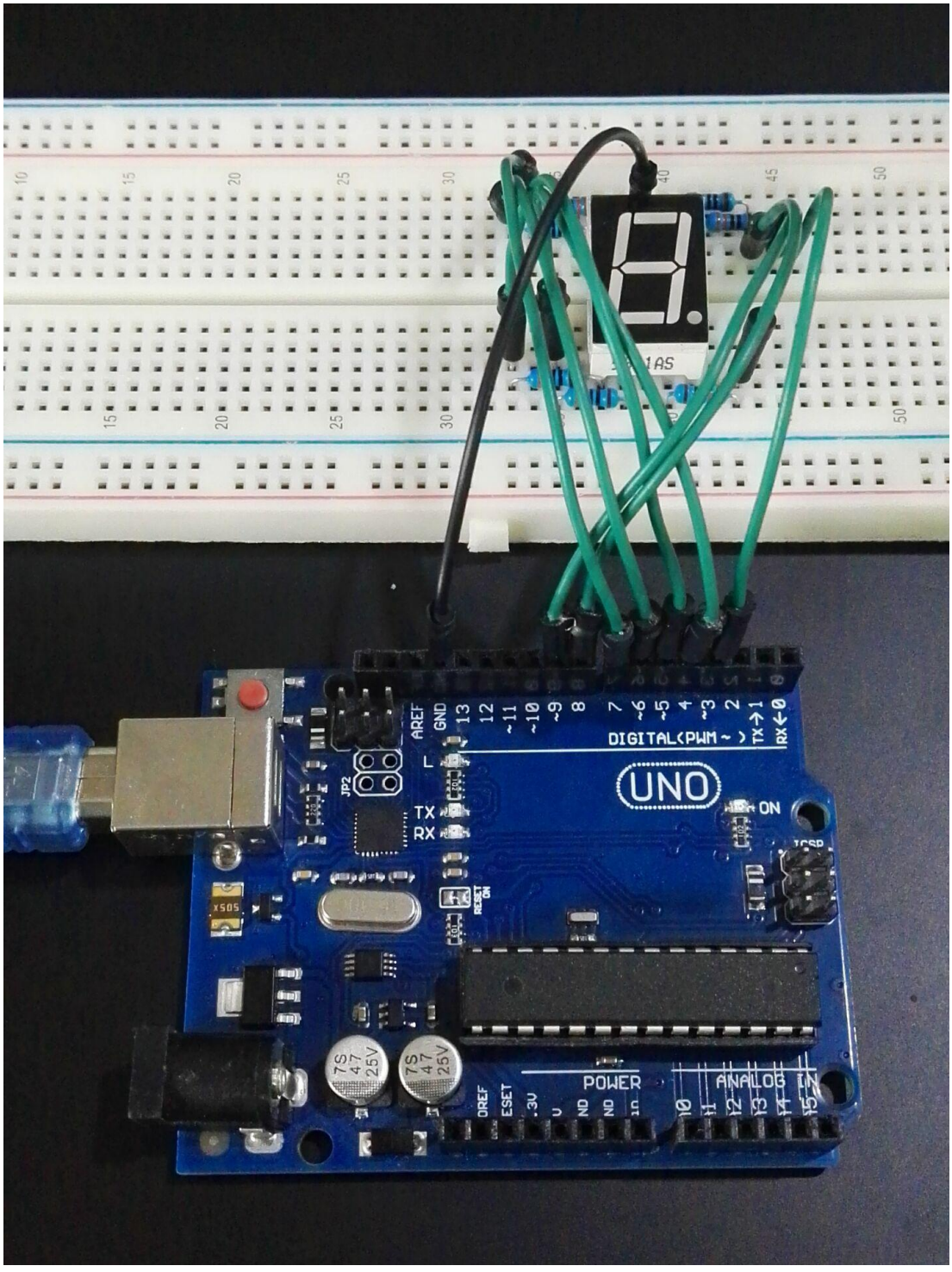
UNO R3	SEG
D3	->C
D4	->D
D5	->E
D6	->G
D7	->F
D8	->A
D9	->B
GND	->COM

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);
    }
}
```

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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Amazon DE store: http://www.amazon.de/shops/AVEAJYX3AHG8Q
Amazon FR store: http://www.amazon.fr/shops/AVEAJYX3AHG8Q
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