

## Project 2: LED blinking

Dear all, now let's begin our second project of Raspberry Pi Starter Kit with Keyes robot. First, enter the project 2 file, same way as in project 1. In this project, we need to use Wiring Pi library (see attachment for detailed installation). Also, we will begin to learn about a simple Nano editor for checking and editing our C file. Of course, you can use Vim, a powerful editor.

As below picture shows, enter Nano command to view blink C file. C file detailed content see picture 2. We can see "pinMode (6,OUTPUT);" statement, which means to set pin 6 as "output". Well, let's see which pin is pin 6. First, enter ctrl + x to exit Nano editing interface; then input gpio readall command to check, as below picture. We need to use Wiring Pi library for this project, so check the two columns of WPI; the number on it means pin number. Find pin 6; 0V means GND lead. For LED, you only need this two pins. Connection see picture 3. enter sudo command to execute the program. You will see the LED blinking. Enter ctrl + c to end the execution.

```
pi@raspberrypi: ~/树莓派基础套件程序资料/第二课 LED闪烁 $ ls
blink.c
pi@raspberrypi: ~/树莓派基础套件程序资料/第二课 LED闪烁 $ nano blink.c
pi@raspberrypi: ~/树莓派基础套件程序资料/第二课 LED闪烁 $ gpio readall
```

BCM	wPi	Name	Mode	V	Physical	V	Mode	Name	wPi	BCM
		3.3v			1    2			5v		
2	8	SDA.1	ALTO	1	3    4			5V		
3	9	SCL.1	ALTO	1	5    6			0v		
4	7	GPIO. 7	IN	1	7    8	1	ALTO	TxD	15	14
		0v			9    10	1	ALTO	RxD	16	15
17	0	GPIO. 0	IN	0	11    12	0	IN	GPIO. 1	1	18
27	2	GPIO. 2	IN	0	13    14			0v		
22	3	GPIO. 3	IN	0	15    16	0	IN	GPIO. 4	4	23
		3.3v			17    18	0	IN	GPIO. 5	5	24
10	12	MOSI	ALTO	0	19    20			0v		
9	13	MISO	ALTO	0	21    22	1	OUT	GPIO. 6	6	25
11	14	SCLK	ALTO	0	23    24	1	ALTO	CE0	10	8
		0v			25    26	1	ALTO	CE1	11	7
28	17	GPIO.17	IN	0	51    52	0	IN	GPIO.18	18	29
30	19	GPIO.19	IN	0	53    54	0	IN	GPIO.20	20	31

```
pi@raspberrypi: ~/树莓派基础套件程序资料/第二课 LED闪烁 $ gcc -Wall -o blink blink.c -lwiringPi
pi@raspberrypi: ~/树莓派基础套件程序资料/第二课 LED闪烁 $ ls
blink blink.c
pi@raspberrypi: ~/树莓派基础套件程序资料/第二课 LED闪烁 $ sudo ./blink
^Cpi@raspberrypi: ~/树莓派基础套件程序资料/第二课 LED闪烁 $
```

Pic. 1

```
pi@raspberrypi: ~/... LED...
GNU nano 2.2.6 File: blink.c

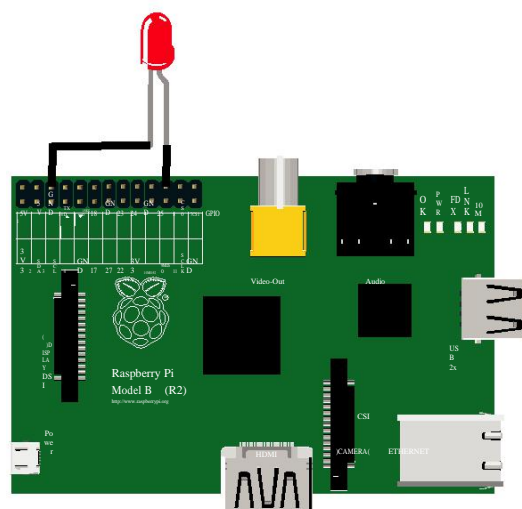
#include <wiringPi.h>
int main()
{ wiringPiSetup();
  pinMode(6, OUTPUT);

  for(;;)
  {
    digitalWrite(6, HIGH);
    delay(1000);
    digitalWrite(6, LOW);
    delay(1000);
  }
}
```

[ Read 15 lines ]

^G Get Help	^O WriteOut	^R Read File	^Y Prev Page	^K Cut Text	^C Cur Pos
^X Exit	^J Justify	^W Where Is	^V Next Page	^U UnCut Text	^T To Spell

Pic. 2



Pic 3