Requirements

Must：

1. Digital I/O – switch 开关
2. Digital I/O – interrupt-based debouncing 开关除颤
3. Digital I/O – LED 二极管
4. Analog Input 信号输入
5. Analog Output (PWM) – hardware-based; OR software-based “bit-banging” 控制LCD屏幕亮度（？）
6. Serial I/O – hardware based; polling OR interrupt mediated （？）
7. LCD – simple text display; OR: bit-mapped graphics, including sprites, line or pixel art 显示文字
8. Timers – other than debouncing or PWM 计算时间，显示在LCD屏幕上

Could:

1. LED matrix display built from first principles;
2. music synthesis tool;
3. signal processing tool;
4. distributed computing application
5. Serial I/O – SPI or I2C, hardware-based; OR via bespoke code –“bit banging”

Temperature sensor 监控温度

To-Do

1. Pwm
2. 温度 精度有待提高