#include <REGX51.H>

// ---------------------???????---------------------

code char SEG\_table[] = {0x3f, 0x06, 0x5b, 0x4f, 0x66, //0~4

0x6d, 0x7c, 0x07, 0x7f, 0x67}; //5~9

char xi = 5, div\_t0;

bit countdown\_active = 0; // Flag to indicate if countdown is active

#define T0Val (65536 - 46080)

sbit P2\_5\_Button = P2^5; // Define a variable to track the button state

// ---------------------?????---------------------

void main(void)

{

xi = 5;

P2\_5 = 0xFF;

P0 = SEG\_table[xi];

TMOD = 0x01; //??T0?????

TH0 = T0Val / 256; //??????

TL0 = T0Val % 256;

ET0 = 1; //??T0??

EA = 1; //???????

TR0 = 0; //????

while (1)

{

if (P2\_5\_Button && !countdown\_active)

{

countdown\_active = 1;

xi = 5; // Reset the counter to 5

P0 = SEG\_table[xi];

TR0 = 1; // Start countdown

}

}

}

// ---------------------???????---------------------

void T0\_isr(void) interrupt 1

{

TH0 = T0Val / 256; //?????

TL0 = T0Val % 256;

div\_t0++;

if (div\_t0 >= 10) //20 \* 50ms = 1s

{

div\_t0 = 0;

if (xi > 0)

{

xi--; //??

P0 = SEG\_table[xi]; //??????

}

if (xi == 0)

{

TR0 = 0; // Stop countdown when xi reaches zero

countdown\_active = 0; // Reset countdown flag

}

}

}