//LED FLASHING

#include <at89c51xd2.h>

void my\_delay() {

TMOD = 0x01; // Timer0 Mode 1 (16-bit Timer)

TL0 = 0x00; // Set initial timer values

TH0 = 0x00;

TR0 = 1; // Start Timer 0

while (TF0 == 0); // Wait for Timer 0 to overflow

TF0 = 0; // Clear the overflow flag

TR0 = 0; // Stop Timer 0

}

void main(void) {

P1 = 0x00; // Initialize P1 as output (LED OFF)

while (1) {

P1 = 0xFF; // Turn LED ON

my\_delay();

P1 = 0x00; // Turn LED OFF

my\_delay();

}

}

//Hexadecimal counter

#include <reg51.h>

void delay() {

TMOD = 0x01; // Timer0 Mode 1 (16-bit Timer)

TL0 = 0x00; // Set initial timer values

TH0 = 0x00;

TR0 = 1; // Start Timer 0

while (TF0 == 0); // Wait for Timer 0 to overflow

TF0 = 0; // Clear the overflow flag

TR0 = 0; // Stop Timer 0

}

void main() {

unsigned char i;

while (1) {

for (i = 0; i < 16; i++) { // Hexadecimal count from 0x0 to 0xF

P2 = i; // Output value on P2

delay();

}

}

}

//BCD Counter

#include <reg51.h>

void delay() {

TMOD = 0x01; // Timer0 Mode 1 (16-bit Timer)

TL0 = 0x00; // Set initial timer values

TH0 = 0x00;

TR0 = 1; // Start Timer 0

while (TF0 == 0); // Wait for Timer 0 to overflow

TF0 = 0; // Clear the overflow flag

TR0 = 0; // Stop Timer 0

}

void main() {

unsigned char i;

while (1) {

for (i = 0; i < 10; i++) { // BCD count from 0 to 9

P2 = i; // Output value on P2

delay();

}

}

}