

```

1  #include <lpc214x.h>
2  #define LED_OFF (IO0SET = 1U << 31)
3  #define LED_ON (IO0CLR = 1U << 31)
4
5  #define PLOCK 0x00000400 // Bit mask for checking PLL lock status
6
7  void systeminit(void);
8  void delay_ms(unsigned int t);
9
10 int main(){
11     unsigned int no_clk = 100, no_aclk = 100;
12     IO0DIR |= (1U<<31) | (0xFF<<16) | (1U<<30);
13     LED_ON;
14     delay_ms(500);
15     LED_OFF;
16     systeminit();
17     do{
18         IO0CLR = 0xF<<16; IO0SET |= 1<<16; delay_ms(10); if(--no_clk ==0) break;
19         IO0CLR = 0xF<<16; IO0SET |= 1<<17; delay_ms(10); if(--no_clk ==0) break;
20         IO0CLR = 0xF<<16; IO0SET |= 1<<18; delay_ms(10); if(--no_clk ==0) break;
21         IO0CLR = 0xF<<16; IO0SET |= 1<<19; delay_ms(10); if(--no_clk ==0) break;
22     }while(1);
23     do{
24         IO0CLR = 0xF<<16; IO0SET |= 1<<19; delay_ms(10); if(--no_aclk ==0) break;
25         IO0CLR = 0xF<<16; IO0SET |= 1<<18; delay_ms(10); if(--no_aclk ==0) break;
26         IO0CLR = 0xF<<16; IO0SET |= 1<<17; delay_ms(10); if(--no_aclk ==0) break;
27         IO0CLR = 0xF<<16; IO0SET |= 1<<16; delay_ms(10); if(--no_aclk ==0) break;
28     }while(1);
29     IO0CLR = 0xFF<<16;
30     while(1)
31 }
32
33
34 void delay_ms(unsigned int t){
35     unsigned int i,j;
36     for(i=0; i<t; i++)
37         for(j=0; j<10000; j++);
38 }
39
40
41 void systeminit(void) {
42     PLL0CON = 0x01; // Enable the PLL (PLLE = 1)
43     PLL0CFG = 0x24; // Set the multiplier and divider values (M=5, P=2)
44     PLL0FEED = 0xAA; // Sequence to update PLL registers
45     PLL0FEED = 0x55;
46
47     while (!(PLLOSTAT & PLOCK)); // Wait for the PLL to achieve lock
48
49     PLL0CON = 0x03; // Connect the PLL (PLLE = 1 and PLLC = 1)
50     PLL0FEED = 0xAA; // Sequence to update PLL registers after connecting
51     PLL0FEED = 0x55;
52
53     VPBDIV = 0x01; // Set PCLK = CCLK (PCLK = 60 MHz if CCLK is 60 MHz)
54 }
55

```