**//C Program to implement up-counting using SysTick**

#include "LPC17xx.h"

uint32\_t x;

int main(void)

{

SysTick->CTRL |= 1 << 2; //Select CPU Clock

SysTick->CTRL |= 1 << 0; //Enable SysTick

SysTick->CTRL |= 1 << 1; //Enable SysTick Interrupts

//SysTick->CTRL |=(1<<0)|(1<<1)|(1<<2);// in one line

SysTick->LOAD = 999999; //100MHz clock, 1ms = 100000 counts

LPC\_GPIO0->FIODIR = 0xffffffff; //Configure Port0 as output mode

while(1)

{

LPC\_GPIO0->FIOPIN = x;

}

}

void SysTick\_Handler(void)

{

SysTick->CTRL &= ~(1<<16);//Clear System Tick counter flag

x++;

}

**Logic:**

If System Clock = 100 MHz and for 100ms

LOAD = (100,000000/1000)\*100 - 1

**//C Program to implement up-counting and monitor the value and take some action by comparing the**

**value using SysTick**

#include "LPC17xx.h"

uint32\_t x=0,y;

int main(void)

{

SysTick->CTRL |= 1 << 2; //Select CPU Clock

SysTick->CTRL |= 1 << 0; //Enable SysTick

SysTick->CTRL |= 1 << 1; //Enable SysTick Interrupts

//SysTick->CTRL |=(1<<0)|(1<<1)|(1<<2);// in one line

SysTick->LOAD = 999999; //100MHz clock, 1ms = 100000 counts

LPC\_GPIO0->FIODIR = 0xffffffff; //Configure Port0 as output mode

LPC\_GPIO1->FIODIR = 0xffffffff; //Configure Port1 as output mode

while(1)

{

//do nothing

}

}

void SysTick\_Handler(void)

{

SysTick->CTRL &= ~(1<<16);//Clear System Tick counter flag

x++;

LPC\_GPIO0->FIOPIN = x;

switch(x)

{

case (0x05):

LPC\_GPIO1->FIOSET =(1<<0);

break;

case (0x0a):

LPC\_GPIO1->FIOSET =(1<<8);

break;

case (0x0f):

LPC\_GPIO1->FIOSET =(1<<16);

break;

case (0x15):

LPC\_GPIO1->FIOSET =(1<<24);

break;

case (0x1a):

LPC\_GPIO1->FIOSET =(1<<31);

break;

}}