**Write and execute C program to display a number in seven segment LED in LPC2148 kit**

**Date:**

**Aim:** To write and execute C program to display a number in seven segment LED in LPC2148 kit

**Apparatus Required:**

Keil uVision5 Software

Philips Flah Programmer

LPC 2148 kit

**Program:**

//SEVEN SEGMENT LED DISPLAY INTERFACE IN C

/\* Program to Count 0-9 and Display it in 7 segment Display (MUX) DS4

\* Display Select DS3 ==> "P0.13" Enable --> '0', Disable --> '1'

\* Display Select DS4 ==> "P0.12" Enable --> '0', Disable --> '1'

\*/

/\* Segment Connection Display 1 & 2 Enable --> '1', Disable --> '0'

\*--------------------------------------------------------------------

\* MSB LSB

\* Dp G F E D C B A

\* P0.23 P0.22 P0.21 P0.20 P0.19 P0.18 P0.17 P0.16

\* 0 0 0 0 0 1 1 0 --> 6 => '1'

\*---------------------------------------------------------------------\*/

#include <LPC214X.H>

#define DS3 1<<13 // P0.13

#define DS4 1<<12 // P0.12

#define SEG\_CODE 0xFF<<16 // Segment Data from P0.16 to P0.23

unsigned char const seg\_dat[]={0x3F, 0x6, 0x5B, 0x4F, 0x66, 0x6D, 0x7D, 0x7, 0x7F, 0x67};

void delayms(int n)

{

int i,j;

for(i=0;i<n;i++)

{for(j=0;j<5035;j++) //5035 for 60Mhz \*\* 1007 for 12Mhz

{;}

}

}

int main (void)

{

unsigned char count;

PINSEL0 = 0; // Configure Port0 as General Purpose IO => P0.0 to P0.15

PINSEL1 = 0; // Configure Port0 as General Purpose IO => P0.16 to P0.31

IODIR0 = SEG\_CODE | DS3 | DS4; //Configure Segment data & Select signal as output

IOSET0 = SEG\_CODE | DS3 ; //Disable DS3 display

IOCLR0 = DS4; //Enable DS4 Display

count = 0; //Initialize Count

//Display Count value

IOCLR0 = SEG\_CODE;

IOSET0 = seg\_dat[count]<<16;

while(1)

{

delayms(1000); //1 sec delay

count++; //Increment count

if(count>9) count=0; //Limit 0-9

//Display Count value

IOCLR0 = SEG\_CODE;

IOSET0 = seg\_dat[count]<<16;

}

}

**Output:** 7-Segment display counting from 0 to 9

**Result:**

Thus C program, was written and executed to display a number in seven segment LED in LPC2148 kit