EMBEDDED PROGRAMMING LAB

LAB-7 DATE:26-10-2024

PREETHISH K R

1. Write a program to display up counter 00 to FF

Program:

```
#include<lpc17xx.h>
unsigned int delay,count=0,switchcount=0,j;
unsigned int
  000007d0,0x00000070,0x0000007f0,0x0000006f0,0x000000770,0x0000007c0,0x
  00000390,0x000005e0,0x000000790,0x000000710};
#define ALLDISP 0x00180000;
#define DATAPORT 0x00000ff0;
int main(void)
  LPC_PINCON->PINSEL0=0x00000000;
  LPC_PINCON->PINSEL1=0x000000000;
  LPC_GPIO0->FIODIR=0x00180ff0;
  while(1)
       LPC_GPIO0->FIOSET |= ALLDISP;
       LPC GPIO0->FIOCLR=0x00000ff0;
       LPC_GPIO0->FIOSET =disp[switchcount];
       for(j=0;j<3;j++)
       for(delay=0;delay<30000;delay++)
        switchcount++;
       if(switchcount == 0x10)
       {
             switchcount=0;
             LPC GPIO0->FIOCLR=0x00180ff0;
       }
  }
}
```

```
Project
  Target 1
                                                 Source Group 1

startup_LPC17xx.s

system_LPC17xx.c
                                                   #define ALLDISP 0x00180000;
#define DATAPORT 0x00000ff0;
       ± ₹ 7seg.c
                                                    int main (void)
                                                      LPC_PINCON->PINSEL0=0x00000000;
LPC_PINCON->PINSEL1=0x00000000;
LPC_GPIO0->FIODIR=0x00180ff0;
                                                         LPC_GPIOO->FIOSET |= ALLDISP;
LPC_GPIOO->FIOCLR=0x00000fff;
LPC_GPIOO->FIOSET =disp[switchcount];
                                                        for(j=0;j<3;j++)
for(delay=0;delay<30000;delay++)</pre>
                                                          switchcount++;
if(switchcount ==0x10)
                                                            switchcount=0;
LPC_GPIOO->FIOCLR=0x00180ff0;
E Proj... ③ Books {} Fun... | 0 → Tem... |
Build Output
compiling 7seg.c...
linking...
Program Size: Code=1532 RO-data=268 RW-data=84 ZI-data=612 ".\op.axf" - 0 Error(s), 0 Warning(s).
```

Fig 1-program for up counter 00 to FF

2. Write a program to display up counter FF to 00

Program:

```
#include<lpc17xx.h>
int delay,count=0,switchcount=0XF,j;
unsigned int
   disp[16]={0x000003f0,0x00000060,0x0000004f0,0x000000660,0x000006d0,0x
   000007d0,0x00000070,0x0000007f0,0x0000006f0,0x000000770,0x0000007c0,0x
   00000390,0x0000005e0,0x000000790,0x000000710};
#define ALLDISP 0x00180000;
#define DATAPORT 0x00000ff0;
int main(void)
   LPC_PINCON->PINSEL0=0x00000000;
   LPC PINCON->PINSEL1=0x00000000;
   LPC_GPIO0->FIODIR=0x00180ff0;
   while(1)
        LPC_GPIO0->FIOSET |= ALLDISP;
        LPC_GPIO0->FIOCLR=0x00000ff0;
        LPC_GPIO0->FIOSET =disp[switchcount];
        for(j=0;j<3;j++)
        for(delay=0;delay<30000;delay++)
```

```
switchcount--;
                          if(switchcount <0X0)
                                               switchcount=0XF;
                                             LPC_GPIO0->FIOCLR=0x00180ff0;
                          }
         }
}
roject

☐ Target 1

☐ Source Group 1

☐ Startup_LPC17xx.s

☐ Tysesm_LPC17xx.c

☐ Tyses.c
                                             ∄ 7seg.c
                                                         #include<lpc17xx.h>
int delay,count=0,switchcount=0XF,j;
                                                     3 | Hunsigned int disp[16]={0x000003f0,0x00000060,0x000004f0,0x00000660,0x000007d0,0x000007d0,0x000007f0, 5 | 0x000006f0,0x00000770,0x000007c0,0x00000390,0x000005e0,0x00000710};
                                                    #define ALLDISP 0x00180000;
#define DATAPORT 0x00000ff;
                                                         int main(void)
                                                           LPC_PINCON->PINSEL0=0x00000000;
LPC_PINCON->PINSEL1=0x00000000;
LPC_GPIO0->FIODIR=0x00180ff0;
                                                              LPC_GPIOO->FIOSET |= ALLDISP;
LPC_GPIOO->FIOCLR=0x00000ff0;
LPC_GPIOO->FIOSET =disp[switchcount];
                                                               for(j=0;j<3;j++)
for(delay=0;delay<30000;delay++)</pre>
Suild Output

Suild Output

Suild Larget 'Target 1'
Linking...

Program Size: Code=1532 RO-data=268 RW-data=84 ZI-data=612
".\op.axf" - 0 Error(s), 0 Warning(s).
```

Fig 2-program for up counter FF to 00