

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
disp[16]={0x000003f0,0x00000060,0x000004f0,0x00000660,0x000006d0,0x
000007d0,0x00000070,0x000007f0,0x000006f0,0x00000770,0x000007c0,0x
00000390,0x000005e0,0x00000790,0x00000710};

#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 ==0x10)
        {
            switchcount=0;
            LPC_GPIO0->FIOCLR=0x00180ff0;
        }
    }
}
```

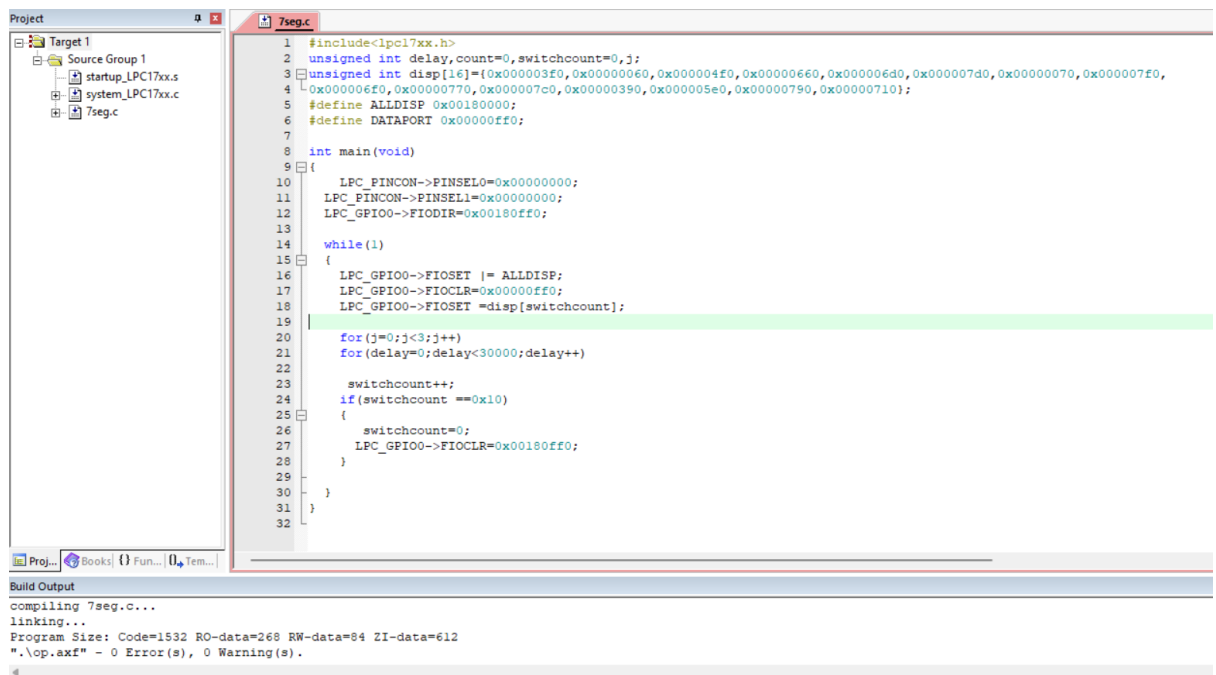


Fig 1-program for up counter 00 to FF

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]={0x000003f0,0x00000060,0x000004f0,0x00000660,0x000006d0,0x000007d0,0x00000070,0x000007f0,0x000006f0,0x00000770,0x000007c0,0x00000390,0x000005e0,0x00000790,0x00000710};
```

```
#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;
}
}
}

```

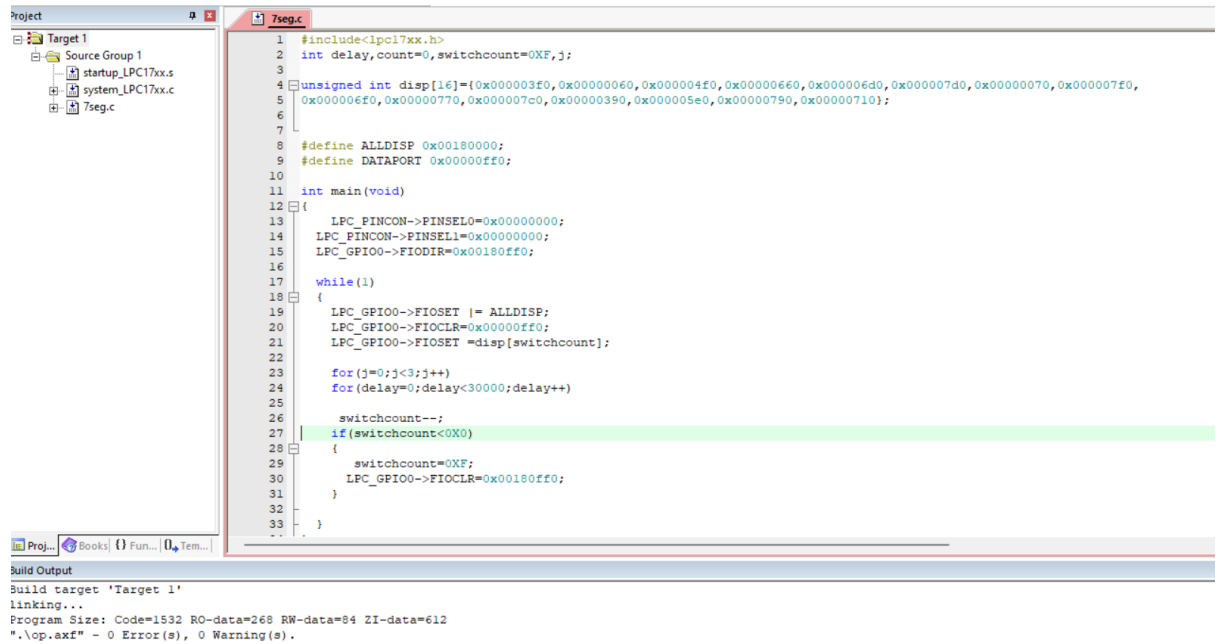


Fig 2-program for up counter FF to 00