**Seven segment display:**

#include<lpc21xx.h>

int delay1();

void delay()

{

int i;

for(i=0;i<2000000;i++);

}

main()

{

int j;

int b[10]={0x003f0000,0x0006000,0x005b0000,0x004f0000,0x00660000,0x006d0000,0x007d0000,0x00700000,0x007f0000,0x006f0000};

for(j=0;j<10;j++)

{

IO0DIR=0x10FF0000;

IO0SET=0x10000000;

IO0SET=b[j];

delay1();

}

}

int delay1()

{ int i;

int a[10]={0x003f0000,0x0006000,0x005b0000,0x004f0000,0x00660000,0x006d0000,0x007d0000,0x00700000,0x007f0000,0x006f0000};

for(i=0;i<10;i++)

{

IO0DIR=0x20FF0000;

IO0SET=0x20000000;

IO0SET=a[i];

delay();

IO0CLR=a[i];

delay();

}

}

**LCD**

#include<lpc21xx.h>

void command(unsigned int);

void data(unsigned int);

void delay(unsigned int);

int main()

{

unsigned char message[]= {"hello"};

unsigned int c[]={0x20,0x28,0x01,0x06,0x0e,0x80};

unsigned int i,j;

IO0DIR=0x000000fc;

for(i=0;i<6;i++)

{

command(c[i]);

delay(2000);

}

while(1)

{

command(0xc0);

delay(2000);

for(j=0;j<5;j++)

{

data(message[j]);

delay(2000);

}

delay(2000);

command(0x14.);

delay(2000);

}

}

void command(unsigned int x)

{

unsigned int y;

y=x;

y=y & 0xf0;

IO0CLR=0x000000fc;

IO0CLR=0x00000004;

IO0SET=y;

IO0SET=0x00000008;

delay(2000);

IO0CLR=0x00000008;

y=x;

y=y & 0x0f;

y=y<<4;

IO0CLR=0x00000004;

IO0SET=y;

IO0SET=0x00000008;

delay(2000);

IO0CLR=0x00000008;

}

void data(unsigned int a)

{

unsigned int b;

b=a;

b=b & 0xf0;

IO0CLR=0x000000fc;

IO0SET=0x00000004;

IO0SET=b;

IO0SET=0x00000008;

delay(100);

IO0CLR=0x00000008;

b=a;

b=b& 0x0f;

b=b<<4;

IO0CLR=0x000000fc;

IO0SET=0x00000004;

IO0SET=b;

IO0SET=0x00000008;

delay(100);

IO0CLR=0x00000008;

}

void delay(unsigned int x)

{

unsigned int i;

for(i=0;i<2000;i++);

}

**Stepper motor**

#include<lpc21xx.h>

void delay(unsigned int);

int main()

{

unsigned int x;

PINSEL2=0x00100000;

IO0DIR=0xf0000000;

IO1DIR=0x00000000;

x=IOPIN1;

x=x & 0x00f00000;

while(1)

{ if(x==0x00100000)

{

IO0SET=0x10000000;

delay(20000);

IO0CLR=0x10000000;

delay(20000);

IO0SET=0x20000000;

delay(20000);

IO0CLR=0x20000000;

delay(20000);

IO0SET=0x40000000;

delay(20000);

IO0CLR=0x40000000;

delay(20000);

IO0SET=0x80000000;

delay(20000);

IO0CLR=0x80000000;

delay(20000);

}

else

{

IO0SET=0x80000000;

delay(20000);

IO0CLR=0x80000000;

delay(20000);

IO0SET=0x40000000;

delay(20000);

IO0CLR=0x40000000;

delay(20000);

IO0SET=0x20000000;

delay(20000);

IO0CLR=0x20000000;

delay(20000);

IO0SET=0x10000000;

delay(20000);

IO0CLR=0x10000000;

delay(20000);

}

}

}

void delay(unsigned int x)

{

unsigned int i;

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

}

**LED**

#include<LPC21xx.h>

void delay();

main()

{

IO0DIR=0x000f0000;

while(1)

{ IO0CLR=0x00010000;

delay(200000);

IO0SET=0x00010000;

delay(2000000);

IO0CLR=0x00020000;

delay(200000);

IO0SET=0x00020000;

delay(200000);

IO0CLR=0x00040000;

delay(200000);

IO0SET=0x00040000;

delay(200000);

IO0CLR=0x00080000;

delay(200000);

IO0SET=0x00080000;

delay(200000);

IO0CLR=0x00080000;

delay(200000);

IO0SET=0x00080000;

delay(200000);

IO0CLR=0x00040000;

delay(200000);

IO0SET=0x00040000;

delay(200000);

IO0CLR=0x00020000;

delay(200000);

IO0SET=0x00020000;

delay(200000);

IO0CLR=0x00010000;

delay(200000);

IO0SET=0x00010000;

delay(200000);

} }

void delay(int x)

{

unsigned int i;

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

}

**Buzzer**

#include<lpc21xx.h>

void delay(int);

int main()

{

IO0DIR=0x00000020;

while(1)

{

IO0SET=0x00000020;

delay(20000);

IO0CLR=0x00000020;

delay(20000);

}

}

void delay(int x)

{

int i;

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

}

**DC motor**

#include<lpc21xx.h>

void delay(unsigned int x)

{

int i;

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

}

int main()

{

PINSEL1=0x00000000;

IODIR0=0x00000C00;

IOCLR0=0x00000C00;

while(1)

{

IOSET0=0x00000400;

IOCLR0=0x00000800;

delay(5000000);

IOSET0=0x00000800;

IOCLR0=0x00000400;

delay(5000000);

}

}

**Triangular**

#include<lpc21xx.h>

void delay(unsigned int x)

{

int i;

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

}

int main()

{

int i,temp;

PINSEL1=0x00000000;

IODIR0=0x00ff0000;

IOCLR0=0x00ff0000;

while(1)

{

temp=0x00000000;

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

{

IOSET0=temp;

delay(10);

temp=temp<<1;

}

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

{

IOSET0=temp;

delay(10);

temp=temp>>1;

}

}

}

**Up seven seg count**

#include<lpc21xx.h>

void delay(void);

// unsigned int i;

unsigned int a[10]={0x103f0000,0x10060000,0x105b0000,0x104f0000,0x10660000,0x106D0000,0x107d0000,0x10070000,0x107f0000,0x106f0000};

unsigned int b[10]={0x203f0000,0x20060000,0x205b0000,0x204f0000,0x20660000,0x206D0000,0x207d0000,0x20070000,0x207f0000,0x206f0000};

int main()

{

int i,j;

int var;

PINSEL1=0x00000000;

IODIR0=0x30ff0000;

IOCLR0=0x00ff0000;

IOSET0=0x10000000;

while(1)

{

for(j=0;j<10;j++)

{

IOSET0=a[j];

delay();

IOCLR0=0x10ff0000;

}

IOCLR0=0x10ff0000;

}

}

void delay(void)

{

int i,k,j;

for(k=0;k<20000000;k++)

{

for(i=0;i<10;i++)

{

IOSET0=b[i];

for(j=0;j<1000000;j++) ;

IOCLR0=0x20ff0000;

for(j=0;j<1000000;j++) ;

}

}

}

**Keypad LCD**

#include<lpc214x.h>

#include<stdio.h>

void scan(void);

void getkey(void);

void display(void);

void delay(int);

void lcd\_init(void);

void lcd\_com(void);

void lcd\_data(void);

void clr\_disp(void);

void wr\_cn(void);

void wr\_dn(void);

long int code[16]={0x00EE0000,0x00ED0000,0x00EB0000,0x00E70000,0x00DE0000,0x00DD0000,0x00DB0000,0x00D70000,0x00BE0000,0x00BD0000,0x00BB0000,0x00B70000,0x007E0000,0x007D0000,0x007B0000,0x00770000};

int ascii[16]={'0','1','2','3','4','5','6','7','8','9','A','B','C','D','E','F'};

int temp,temp1,temp2,temp3,temp4,row,flag,res,result,var1,r;

int main(void)

{

PINSEL0=0X00000000;

PINSEL1=0X00000000;

PINSEL2=0X00000000;

IODIR0=0x000080FF;

IODIR1=0xFFF0FFFF;

delay(100);

IOCLR0=0x00008000;

lcd\_init();

delay(1000);

while(1)

{

getkey();

display();

}

}

void getkey(void)

{

int i;

flag=0;

IOPIN1=0x000F0000;

while(1)

{

for(row=0;row<0x04;++row)

{

if(row==0x00)

{temp3=0x00700000;}

else if(row==0x01)

{temp3=0x00B00000; }

else if(row==0x02)

{temp3=0x00D00000;}

else if(row==0x03)

{temp3=0x00E00000; }

var1=temp3;

IOPIN1=var1;

delay(1000);

scan();

delay(100);

if(flag)

break;

}

if(flag)

break;

}

for(i=0;i<16;++i)

{

//temp4=code[i]<<16;

if(code[i]==res)

{

result=ascii[i];

break;

}

}

}

void scan(void)

{

int t;

temp2=IOPIN1;

temp2 &=0x000F0000;

if(temp2!=0x000F0000)

{

//temp2=IOPIN1;

//temp2 &=0x000F0000;

//if(temp2!=0x000F0000)

//{

flag=1;

res=temp2;

t=(temp3 & 0x00F00000);

res=res | t;

}

else

flag=0;

}

void display(void)

{

clr\_disp();

temp1=0x80;

lcd\_com();

delay(1000);

temp1=result;

lcd\_data();

delay(1000);

}

void lcd\_init(void)

{

temp1 = 0x20;

wr\_cn();

delay(3200);

temp1 = 0x28;

lcd\_com();

delay(3200);

temp1 = 0x0C;

lcd\_com();

delay(800);

temp1 = 0x06;

lcd\_com();

delay(800);

temp1 = 0x80;

lcd\_com();

delay(800);

}

void lcd\_com(void)

{

temp = temp1 & 0xf0;

wr\_cn();

temp = temp1 & 0x0f;

temp = temp << 4;

wr\_cn();

delay(500);

}

void wr\_cn(void)

{

IO0CLR = 0x000000FC;

IO0SET = temp;

IO0CLR = 0x00000004;

IO0SET = 0x00000008;

delay(10);

IO0CLR = 0x00000008;

}

void wr\_dn(void)

{

IO0CLR = 0x000000FC;

IO0SET = temp;

IO0SET = 0x00000004;

IO0SET = 0x00000008;

delay(10);

IO0CLR = 0x00000008;

}

void lcd\_data(void)

{

temp = temp1 & 0xf0;

wr\_dn();

temp= temp1 & 0x0f;

temp= temp << 4;

wr\_dn();

delay(100);

}

void clr\_disp(void)

{

temp1 = 0x01;

lcd\_com();

delay(500);

}

void delay(int r1)

{

for(r=0;r<r1;r++);

}

**Keypad Seven seg**

#include<lpc21xx.h>

void delay(unsigned int);

void disp(unsigned int);

int main()

{

unsigned long int value,i;

unsigned int row0[4]={0x00ee0000,0x00ed0000,0x00eb0000,0x00e70000};

unsigned int row1[4]={0x00de0000,0x00dd0000,0x00db0000,0x00d70000};

unsigned int row2[4]={0x00de0000,0x00bd0000,0x00bb0000,0x00b70000};

unsigned int row3[4]={0x007e0000,0x007d0000,0x007b0000,0x00770000};

IO1DIR =0XFFF0FFFF;

PINSEL1=0x00000000;

IODIR0=0xf0ff0000;

IOSET0=0XF0000000;

while(1)

{

IO1PIN=0x00ff0000;

IOCLR1=0x00100000;

value=IOPIN1;

delay(50000);

value=value & 0x00ff0000;

for(i=0;i<4;i++)

{

if(value==row0[i])

{

disp(i);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

}

}

IO1PIN=0x00ff0000;

IOCLR1=0x00200000;

value=IOPIN1;

delay(50000);delay(50000);

value=value & 0x00ff0000;

for(i=0;i<4;i++)

{

if(value==row1[i])

{

disp(i+4);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

}

}

IO1PIN=0x00ff0000;

IOCLR1=0x00400000;

value=IOPIN1;

delay(65000);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

value=value & 0x00ff0000;

for(i=0;i<4;i++)

{

if(value==row2[i])

{

disp(i+8);

delay(50000);

}

}

IO1PIN=0x00ff0000;

IOCLR1=0x00800000;

value=IOPIN1;

delay(65000);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

value=value & 0x00ff0000;

for(i=0;i<4;i++)

{

if(value==row3[i])

{

disp(i+12);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

}

}

}

}

void disp(unsigned int temp)

{

unsigned int i;

unsigned int da[16]={0x003F0000,0x00060000,0x005B0000,0x004F0000,

0x00660000,0x006D0000,

0x007D0000,0x00070000,0x007F0000,0x006F0000,

0x00770000,0x007C0000,

0x00390000,0x005E0000,0x00790000,0x00710000};

IOCLR0=0x00ff0000;

i=temp;

IOSET0=da[i];

delay(65000);

delay(65000);

delay(65000);

delay(65000);

delay(65000);

IOCLR0=0X00FF0000;

}

void delay(unsigned int del)

{unsigned int k;

for(k=0;k<del;k++);

}

**ADC**

#include<lpc214x.h>

#include<stdio.h>

#define volt 3.3

#define fullscale 0x3FF

void delay(int);

void lcd\_init(void);

void lcd\_com(void);

void lcd\_data(void);

void clr\_disp(void);

void wr\_cn(void);

void wr\_dn(void);

int temp1,temp2,r,adc=0,temp\_adc=0;

char \*ptr,var1[10];

int main(void)

{

PINSEL1=0X00040000;

IODIR0=0x000000FC;

delay(100);

lcd\_init();

delay(1000);

while(1)

{

AD0CR=0x01200010;

while(((temp\_adc=AD0GDR)&0x80000000)==0);

adc=AD0GDR;

adc=adc>>6;

adc=adc&0x3FF;

temp1=0x80;

lcd\_com();

delay(100);

sprintf(var1,"%3X",adc);

ptr=var1;

while(\*ptr!='\0')

{

temp1=\*ptr;

lcd\_data();

ptr++;

}

}

}

void lcd\_init(void)

{

temp1 = 0x20;

wr\_cn();

delay(3200);

temp1 = 0x28;

lcd\_com();

delay(3200);

temp1 = 0x0C;

lcd\_com();

delay(800);

temp1 = 0x06;

lcd\_com();

delay(800);

temp1 = 0x01;

lcd\_com();

delay(800);

}

void lcd\_com(void)

{

temp2 = temp1 & 0xf0;

wr\_cn();

temp2 = temp1 & 0x0f;

temp2 = temp2 << 4;

wr\_cn();

delay(500);

}

void wr\_cn(void)

{

IO0CLR = 0x000000FC;

IO0SET = temp2;

IO0CLR = 0x00000004;

IO0SET = 0x00000008;

delay(10);

IO0CLR = 0x00000008;

}

void wr\_dn(void)

{

IO0CLR = 0x000000FC;

IO0SET = temp2;

IO0SET = 0x00000004;

IO0SET = 0x00000008;

delay(10);

IO0CLR = 0x00000008;

}

void lcd\_data(void)

{

temp2 = temp1 & 0xf0;

wr\_dn();

temp2= temp1 & 0x0f;

temp2= temp2 << 4;

wr\_dn();

delay(100);

}

void clr\_disp(void)

{

temp1 = 0x01;

lcd\_com();

delay(500);

}

void delay(int r1)

{

for(r=0;r<r1;r++);

}