**All below codes are interfacing on boards peripheral with ARM7 based LPC2148 board.**

**NOTE : The pin configuration are according to custom board we used .Please configure the pins accordingly.**

/////led with input

#include<lpc21xx.h>

void delay(unsigned int j);

unsigned int value;

int main()

{

        PINSEL1=0x00000000;

    PINSEL2=0x00000000;

        IODIR0=0x000F0000;

    //IODIR1=0x00000000;

    //IOPIN1=0x00f00000;

        while(1)

        {

            value=IOPIN1;

    value=value&0x00f00000;

                if((value)==0x00100000)

                {

                        IOCLR0=0x000F0000;

                delay(650000);

                IOSET0=0x000F0000;

                delay(650000);

                }

                else

                {

                     IOSET0=0x000F0000;

                    delay(650000);

                }

        }

}

void delay(unsigned int j)

{

        unsigned int i;

        for(i=0;i<j;i++);

}

/////buzzer

#include<lpc21xx.h>

void delay(unsigned int j);

int main()

{

        PINSEL0=0x00000000;

        IODIR0=0x00004000;

        while(1)

        {

                IOCLR0=0x00004000;

                delay(6500000);

                IOSET0=0x00004000;

                delay(6500000);

        }

}

void delay(unsigned int j)

{

        unsigned int i;

        for(i=0;i<j;i++);

}

///// dc clock or anticlock

#include<lpc21xx.h>

void delay(void);

int main()

{

        unsigned int x;

        PINSEL0=0x00000000;

        IODIR0=0x00000C00;

        IOCLR0=0x00000C00;

      IODIR1=0x00000C00;

        while(1)

        {

            x=IOPIN1;

            x=x &  0x00F00000;

            if(x==0x00800000)

            {

            IOCLR0=0x00000400;

            IOSET0=0x00000C00;

            // delay();

            }

            if(x==0x00400000)

        //  else

            {

             IOSET0=0x00000C00;

             IOCLR0=0x00000800;

             //delay();

            }

        }

}

void delay(void)

{

   unsigned int i;

     for(i=0;i<30000000;i++);

}

//// stepper takes 200 steps for revo ..thus 1.8 deg per step

#include<lpc21xx.h>

void delay(unsigned int j);

unsigned int value;

void clock()

{

     IO0CLR =0xF0000000 ;

IOSET0 =0x10000000;

    delay(100000);

    IO0CLR =0xF0000000 ;

    IOSET0 =0x20000000;

    delay(100000);

    IO0CLR =0xF0000000 ;

    IOSET0 =0x40000000;

    delay(100000);

    IO0CLR =0xF0000000 ;

    IOSET0 =0x80000000;

    delay(10000);

}

void anticlock()

{

                IO0CLR =0xF0000000 ;

IOSET0 =0x80000000;

    delay(10000);

    IO0CLR =0xF0000000 ;

    IOSET0 =0x40000000;

    delay(100000);

    IO0CLR =0xF0000000 ;

    IOSET0 =0x20000000;

    delay(100000);

    IO0CLR =0xF0000000 ;

    IOSET0 =0x10000000;

    delay(100000);

}

int main()

{

        PINSEL1=0x00000000;

    PINSEL2=0x00000000;

        IODIR0=0xF00F0000;

    //IODIR1=0x00000000;

    //IOPIN1=0x00f00000;

        while(1)

        {

            value=IOPIN1;

    value=value&0x00f00000;

                if((value)==0x00100000)

                {

                    /\*  IOCLR0=0x000F0000;

                delay(650000);

                IOSET0=0x000F0000;

                delay(650000);\*/

                    clock();

                }

                else

                {

                    /\* IOSET0=0x000F0000;

                    delay(650000);  \*/

           anticlock();

                }

        }

}

void delay(unsigned int j)

{

        unsigned int i;

        for(i=0;i<j;i++);

}

////////seven segment

#include<lpc21xx.h>

void delay(void);

void display1(int x);

void display2(int y);

int main()

{

    unsigned int i,j;

  while(1)

   {

         for(i=0;i<10;i++)

      {

                    for(j=0;j<10;j++)

          {

                         display1(i);

                         display2(j);

                    }

             }

      }

}

void display1(int x)

{

     unsigned int i;

   int a[10]={0x003f0000,0x0060000,0x005b0000,0x004f0000,0x00660000,0x006d0000,0x007d0000,0x00070000,0x007f0000,0x006f0000};

            IODIR0=0x10FF0000;

              IOSET0=0x10000000;

                IOSET0=a[x];

              delay();

            IOCLR0=a[x];

}

void display2(int y)

{

     unsigned int j;

   int b[10]={0x003f0000,0x0060000,0x005b0000,0x004f0000,0x00660000,0x006d0000,0x007d0000,0x00070000,0x007f0000,0x006f0000};

            IODIR0=0x20FF0000;

              IOSET0=0x20000000;

                IOSET0=b[y];

              delay();

            IOCLR0=b[y];

     delay();

}

void delay(void)

{

        unsigned int m;

        for(m=0;m<999990;m++);

}

///// Keypad

#include<lpc21xx.h>

void delay(unsigned int);

void disp(unsigned int);

//Main function

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]={ 0x00be000,0x00bd0000,0x00bb0000,0x00b70000};

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

IO1DIR   = 0XFFF0FFFF;  //set rows as output and colomn as input

PINSEL1=0x00000000;

IODIR0=0xf0ff0000; // making po.16 to p0.23  and p0.28 to p0.31 output lines for disp

IOSET0=0XF0000000;

while(1)

 {

  IO1PIN=0x00ff0000; //initialize rows and colomns with one

    IOCLR1=0x00100000; //enable row0

    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; //initialize rows and colomns with one

    IOCLR1=0x00200000; //enable row1

    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; //initialize rows and colomns with one

    IOCLR1=0x00400000; //enable row2

    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; //initialize rows and colomns with one

    IOCLR1=0x00800000; //enable row3

    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);

        }

    }

 }

}

//Display function

void disp(unsigned int temp)

{

unsigned int i;

unsigned int da[16]={0xf03F0000, 0xf0060000, 0x305B0000, 0x304F0000, 0x00660000,0x006D0000,

                       0x007D0000, 0x00070000, 0x007F0000, 0x006F0000, 0x00770000,0x007C0000,

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

IOCLR0=0x00ff0000; //clear disp

IOSET0=0x10000000;

i=temp;

IOSET0|=da[i];

delay(65000);delay(65000);delay(65000);

delay(65000);delay(65000);

//IOCLR0=0X00FF0000;

}

// Delay function

void delay(unsigned int del)

{ unsigned int k;

    for(k=0;k<del;k++);

}

////// LCD

#include<lpc21xx.h>

void cmd(unsigned char a);

void data(unsigned char b);

void delay(unsigned int c);

int main()

{

    unsigned char data0[]={"hello world"};

    unsigned char cmd0[]={0x30,0x30,0x20,0x20,0x28,0x28,0x01,0x06,0x0e,0x80};

    unsigned int i,j;

    IODIR0=0x000000fc;

  for(i=0;i<10;i++)

    {

        cmd(cmd0[i]);

        delay(2000);

    }

    while(1)

    {

         cmd(0x80);

      delay(2000);

        for(j=0;j<11;j++)

        {

            data(data0[j]);

            delay(2000);

        }

        delay(2000);

        cmd(0x01);

        delay(200);

    }

}

void cmd(unsigned char a)

{

     unsigned int m,n;

     n=a;

     n=n & 0xf0; // mask lower nibble

     IOCLR0=0x000000fc;// to clear all the bits

     IOCLR0=0x00000004;// to set rs=0 for command

     IOSET0=n;

     IOSET0=0x00000008;

     delay(2);

     IOCLR0=0x00000008;

     m=a;

     m=m & 0x0f;//mask higher nibble

     m=m<<4;

     IOCLR0=0x000000fc;// to clear all the bits

     IOCLR0=0x00000004;// to set rs=0 for command

     IOSET0=m;

     IOSET0=0x00000008;

     delay(2);

     IOCLR0=0x00000008;

}

void data(unsigned char a)

{

     unsigned int m,n;

     n=a;

     n=n & 0xf0; // mask lower nibble

     IOCLR0=0x000000fc;// to clear all the bits

     IOSET0=0x00000004;// to set rs=1 for data

     IOSET0=n;

     IOSET0=0x00000008;

     delay(2);

     IOCLR0=0x00000008;

     m=a;

     m=m & 0x0f;//mask higher nibble

     m=m<<4;

     IOCLR0=0x000000fc;// to clear all the bits

     IOSET0=0x00000004;// to set rs=1 for data

     IOSET0=m;

     IOSET0=0x00000008;

     delay(2);

     IOCLR0=0x00000008;

}

void delay(unsigned int z)

{

     unsigned int g,l;

    for(g=0;g<z;g++)

    {

         for(l=0;l<35;l++);

    }

}