#include "mbed.h"

#include "TextLCD.h"

BusIn input (p5,p6,p7,p9);

BusOut outputs(LED1,LED2,LED3,LED4);

TextLCD lcd(p28,p27,p26,p25,p24,p23);

DigitalIn a(p5),b(p6),c(p7),d(p9);

int i;

int Output;

char ST=1;

int main()

{

a.mode(PullUp);

b.mode(PullUp);

c.mode(PullUp);

d.mode(PullUp);

while (1)

{

i=input;

switch(ST)

{

case 0:

Output=0x01;

lcd.printf("state 0\n");

if(((i&0x01)==0x00)||((i&0x06)==0x02))

ST=1;

else if((i&0x03)==0x01)

ST=3;

break;

case 1:

Output=0x03;

lcd.printf("state 1\n");

if((i&0x07)==0x01)

ST=2;

break;

case 2:

Output=0x07;

lcd.printf("state 2\n");

if((i&0x03)==0x00)

ST=5;

break;

case 3:

Output=0x0c;

lcd.printf("state 3\n");

if((i&0x07)==0x03)

ST=4;

break;

case 4:

lcd.printf("state 4\n");

if((i&0x03)==0x01)

ST=5;

else if((i&0x01)==0x00)

ST=1;

break;

case 5:

Output=0x0f;

lcd.printf("state 5\n");

if((i&0x0f)==0x07)

ST=0;

break;

}

outputs = Output;

}

}