#include <htc.h>

#define mt1 RC0

#define mt2 RC1

#define buzzer RB2

#define temp RA0

#define lcd\_port PORTD

#define RS RE2

#define RW RE1

#define EN RE0

void lcd\_init(void);

void lcd\_cmd(unsigned char cmd1);

void lcd\_data(unsigned char c1);

void lcd\_str(unsigned char \* str1);

void delay(unsigned int i);

void adc\_init()

{

TRISA=0XFF;

ADCON1=0XC2;

ADCON0=0x01;

}

unsigned int adc(void)

{

unsigned int j,i;

ADGO=1;

while(ADGO);

j=ADRESL;

// j=j<<20|ADRESL;

// j=(j\*0.488);

return j;

}

void adc\_lcd(unsigned int i)

{

unsigned int a,b,c,d;

a=i/1000;

b=(i%1000)/100;

c=(i%100)/10;

d=i%10;

lcd\_data((a+0x30));

lcd\_data((b+0x30));

lcd\_data((c+0x30));

lcd\_data((d+0x30));

}

void lcd\_init()

{

ADCON1=0x02;

lcd\_cmd(0x38);

lcd\_cmd(0x0C);

}

void lcd\_cmd(unsigned char cmd1)

{

RS=0;

RW=0;

lcd\_port=cmd1;

EN=1;

delay(1000);

EN=0;

}

void lcd\_data(unsigned char c1)

{

RS=1;

RW=0;

lcd\_port=c1;

EN=1;

delay(1000);

EN=0;

}

void lcd\_str(unsigned char \* str1)

{

while(\*str1)

lcd\_data(\*str1++);

}

void delay(unsigned int num)

{

while(num--);

}

void uart\_init()

{

TXSTA=0X24;

RCSTA=0X90;

SPBRG=25;

}

void tx(unsigned char i)

{

TXREG=i;

while(!TXIF);

TXIF=0;

}

unsigned char rx()

{

while(RCIF==0);

unsigned j=RCREG;

RCIF=0;

return j;

}

void send(unsigned char \*str)

{

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

{

tx(\*str);

\*str++;

}

}

void main(void)

{

int temp;

TRISE0=TRISE1=TRISE2=0;

TRISA=1;

TRISD=0x00;

TRISB=0x00;

TRISC0= TRISC1=0;TRISC6=0;

TRISC0=0;

lcd\_init();

adc\_init();

uart\_init();

lcd\_cmd(0x38);

lcd\_cmd(0x01);

lcd\_cmd(0x80);

lcd\_str("Secured building ");

delay(10000);

lcd\_cmd(0xc0);

lcd\_str("system using IOT");

delay(65000);

}