#include <p18f4550.h>

#include "vector\_relocate.h"

#define LCD\_DATA PORTD

#define ctrl PORTE

#define rs PORTEbits.RE0

#define rw PORTEbits.RE1

#define en PORTEbits.RE2

void init\_LCD(void);

void LCD\_command(unsigned char cmd);

void LCD\_data(unsigned char data);

void LCD\_write\_string(unsigned char \*str);

void msdelay (unsigned int time);

void main(void)

{

char var1[] = "Welcome";

char var2[] = "To Embedded Lab";

ADCON1 = 0x0F;

TRISD = 0x00;

TRISE = 0x00;

init\_LCD();

msdelay(15);

LCD\_write\_string(var1);

msdelay(15);

LCD\_command(0xC0);

LCD\_write\_string(var2);

while (1);

}

void msdelay (unsigned int time)

{

unsigned int i, j;

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

for (j = 0; j < 710; j++);

}

void init\_LCD(void)

{

LCD\_command(0x38);

msdelay(15);

LCD\_command(0x01);

msdelay(15);

LCD\_command(0x0C);

msdelay(15);

LCD\_command(0x80);

msdelay(15);

}

void LCD\_command(unsigned char cmd)

{

LCD\_DATA = cmd;

rs = 0;

rw = 0;

en = 1;

msdelay(15);

en = 0;

}

void LCD\_data(unsigned char data)

{

LCD\_DATA = data;

rs = 1;

rw = 0;

en = 1;

msdelay(15);

en = 0;

}

void LCD\_write\_string(unsigned char \*str)

{

int i = 0;

while (str[i] != '\0')

{

LCD\_data(str[i]);

msdelay(15);

i++;

}

}