

NÚT NHẤN ĐƠN

"D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"

// Chương trình chong doi nut nhan don.

```
void Nut_ON()
{
    if(!input(ON))
    {
        delay_ms(20);
        if(!input(ON))
        {
            // Phai phan tich xem yeu cau thuc thi khong doi hoi tuan hoan lien tuc thi moi duoc.
            while(!input(ON));
        }
    }
}

void main()
{
    SET_UP_PORT_IC_CHOT();
    while(TRUE)
    {
        // Goi cac chuong trinh con kiem tra nut nhan o day.
        // Va nho phai goi lien tuc khong gian doan.
    }
}
```

MA TRẬN PHÍM 4x4

#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"

#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_KEY4X4_138.c"

unsigned int8 mp; // Khai bao bien de chua ma phim doc ve.

```

void main()
{
    SET_UP_PORT_IC_CHOT();
    while(TRUE)
    {
        mp=KEY_4X4_DW();

        // Sau khi co ma phim roi ta phan tich yeu cau co TUAN HOAN hay KHONG TUAN HOAN.
    }
}

```

COUNTER

```

#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"
signed int16 sp, tmp; // Khai bao bien chua ket qua dem.
void main()
{
    SET_UP_PORT_IC_CHOT();

    setup_timer_0(T0_EXT_L_TO_H | T0_DIV_1 | T0_8_BIT);
    set_timer0 (a); // Muon dem bat dau tu dau thi thay so bang a.
    while(TRUE)
    {
        sp = get_timer0();    // Doc ket qua dem tra ve.

        // Hien thi o dau?

        // XUAT_4LED_7DOAN_GIAIMA_XOA_SO0(sp);

        if(sp>b)    { sp=a; set_timer0(a ); } // So sanh va khong che trang thai dem.

    }
}

```

8 LED QUÉT TT

```

#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"

void GiaiMa()
{
    LED_7DQ[0]= Ma7Doan [SoCanHienThi];
    LED_7DQ[1]= Ma7Doan [SoCanHienThi];
    LED_7DQ[2]= Ma7Doan [SoCanHienThi];
    LED_7DQ[3]= Ma7Doan [SoCanHienThi];
    LED_7DQ[4]= Ma7Doan [SoCanHienThi];
    LED_7DQ[5]= Ma7Doan [SoCanHienThi];
    LED_7DQ[6]= Ma7Doan [SoCanHienThi];
    LED_7DQ[7]= Ma7Doan [SoCanHienThi];
}

void main()
{
    SET_UP_PORT_IC_CHOT();

    GiaiMa();

    while(TRUE)
    {
        HIEN_THI_8LED_7DOAN_QUET_ALL();

        // XUAT_32LED_DON_4BYTE(UNSIGNED INT8 BLD3,BLD2,BLD1,BLD0);
        // XUAT_32LED_DON_2WORD(UNSIGNED INT16 WLD1, UNSIGNED INT16 WLD0);
        // XUAT_32LED_DON_1DW(UNSIGNED LONG LONG DWLD);
        // XUAT_4LED_7DOAN_4SO(UNSIGNED INT BL743,BL742,BL741,BL740);
        // XUAT_4LED_7DOAN_GIAIMA_XOA_SO0 (UNSIGNED INT16 TAM);
        // HIEN_THI_8LED_7DOAN_QUET();

    }
}

```

```
}
```

TIMER

```
#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"

signed int8    BDN;

#int_timer1    // Chuong trinh con phuc vu ngat Timer1.

void NgatT1()
{
    set_timer1(29411); // Nap lai gia tri bat dau:  $nap = 65536 - \frac{x*5000}{bc*n}$ 

    BDN++; // Neu cong viec phai thuc hien nhieu lan (LON HON 65535) .
}

void main()
{
    SET_UP_PORT_IC_CHOT();

    setup_timer_1 (T1_INTERNAL | T1_DIV_BY_8);
    set_timer1 (29411); // Dat truoc gia tri dem.
    enable_interrupts (GLOBAL); // Cho phep ngat toan cuc.
    enable_interrupts (INT_TIMER1); // Cho phep ngat Timer1.
    while(TRUE)
    {
        // So sanh BDN voi so lan thuc hien neu du thi tien hanh thuc thi.
        if (BDN >= 5)
        {
            BDN = BDN - 5;

            // Xu ly cong viec dinh thoi khi DU thoi gian yeu cau.
        }
        else
```

```

    {
        //Xu ly cong viec khac khi CHUA DU thoi gian yeu cau.
    }
}

```

LCD

```

#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"
#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_LCD.c"

void main()
{
    SET_UP_PORT_IC_CHOT();

    setup_lcd ();          // Khoi tao LCD.

    // Hien thi cac noi dung co dinh.

    lcd_goto_xy(x,y);

    lcd_data("chuoi can hien thi");

    while(TRUE)
    {
        // Cac noi dung THAY DOI thi ta hien thi va cap nhat tai day.

        /*      lcd_data(t/1000% 10+ 0x30);

                lcd_data (t/100% 10+ 0x30);

                lcd_data (t/10% 10+ 0x30);

                lcd_data (t% 10+ 0x30);

        */

    }
}

```

KI TU DAC BIET

```
#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"

#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_LCD.c"

unsigned int8 kt[]={0x04,0x0e,0x0e,0x0e,0x1f,0x1f,0x04,0x00,
0x04,0x0e,0x0a,0x0a,0x0e,0x0e,0x0e,0x00}; //Do minh TU TAO theo yeu cau.


void HienThi_SoLon(int8 so, int8 x, int8 y)
{
    unsigned int8 i;
    lcd_goto_xy(x, y);
    for(i=0;i<6;i++)
    {
        if (i==3)    lcd_goto_xy (x+1, y);
        lcd_data(LCD_SO_X[so][i] );
    }
}

void main()
{
    unsigned int8 i;
    SET_UP_PORT_IC_CHOT();
    SETUP_LCD();
    lcd_goto_xy(x,y);
    lcd_data("NoiDung");
    //    lcd_command(0x40) ;
    //    for(i=0;i<16;i++)    lcd_data(kt[i]);
    //    lcd_goto_xy(x, y);
    //    lcd_data(0);        // Hien thi ki tu dau tien.
    //    lcd_data(0);        // Hien thi ki tu tiep theo.
    lcd_command(0x40) ;
    for(int8 i=0;i<64;i++)    lcd_data(LCD_MA_8DOAN[i]);
}
```

```

HienThi_SoLon (x/10%10, 1, 7);    // Hien thi hang chuc.
HienThi_SoLon (x%10, 1, 10);    // Hien thi hang don vi.
while(TRUE)
{

}
}

```

GLCD

```

#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"
#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_GLCD128X64.c"
void main()
{
    SET_UP_PORT_IC_CHOT();
    setup_glcd (0x30);    // Khoi tao o che do TEXT.
    glcd_command (Lenh);    // Cac lenh o che do TEXT.
    glcd_data (kytu);    // Hien thi cac ki tu ngoai.
    setup_glcd (0x36);    // Khoi tao o che do Graphic.
    GLCD_MAU_NEN(mau);    // Xoa mau nen-Cac lenh de ve noi dung CO DINH.
    GLCD_XUAT_ANH(int width, int height, int x, int y) ;

    /*  glcd_line(x1, y1, x2, y2, color);
        glcd_rect(x1, y1, x2, y2, fill, color);
        glcd_bar(x1, y1, x2, y2, width, color) ;.
        glcd_circle(x, y, radius, fill, color); */

    GDRAM_VDK_TO_GDRAM_GLCD_ALL() ;    // Cho phep hien thi ra man hinh.
    while(TRUE)
    {
        // setup_glcd (0x30); // Khoi tao o che do TEXT.

```

```

//Cac lenh che do text de hien thi nhung noi dung text THAY DOI

//setup_glcd (0x36); // Khoi tao o che do Graphic.

// Cac lenh che do Graphic de CAP NHAT nhung hinh anh THAY DOI.

// GDRAM_VDK_TO_GDRAM_GLCD_ALL() ; // Cap nhat hinh anh da THAY DOI.
}
}

```

ADC

```

#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_1.c"
#include "D:\TT VXL\ThuVien\TV_PICKIT2_SHIFT_LCD.c"

unsigned int16 kq1,kq2;

unsigned int8 n;

void main()
{
    SET_UP_PORT_IC_CHOT();

    setup_adc(ADC_CLOCK_DIV_32);

    setup_adc_ports(AN0_TO_AN2|VSS_VDD);

    while(TRUE)
    {
        /* //Do nhiet do 1lan.
        set_adc_channel(0);

        kq1=read_adc();

        kq1 = kq1/2.048; */
    }
}

```


// Do trung binh 100 lan.

set_adc_channel(0);

kq1=0;

for(n=0;n<solan;n++) **//Han che do TrungBinh.**

{

kq1= kq1+ read_adc();

delay_us(200);

}

kq1 = kq1/2.046;

kq1 = kq1/solan;

set_adc_channel(1);

kq2=0;

for(n=0;n<solan;n++)

{

kq2= kq2+ read_adc();

delay_us(200);

}

kq2 = kq2/2.046;

kq2 = kq2/solan;

// Dem bien kq1 va kq2 ra hien thi hay lam gi do.

XUAT_4LED_7DOAN_4SO(Ma7Doan[gtcdt/10%10],Ma7Doan[gtcdt%10],Ma7Doan[lm35a/10%10],Ma7Doan[lm35a%10]);

}

}