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/*
 * Shervin khalili - Sadra trme baf.c
 *
 * Created: 11/12/2021 09:47:08 ط.ب
 * Author: admin
 */

#include <io.h>
#include <mega32.h>
#define F_CPU 1000000
#include <interrupt.h>
#include <delay.h>
int n=0,second=0,minute=0 , hour=0;
flash char control [8] ={0b11111110,0b11111101,0b11111011,0b11110111,0b11101111,
0b11011111,0b10111111,0b01111111};
flash char seven [10] = {0x3f,0x06,0x5b,0x4f,0x66,0x6d,0x7d,0x07,0x7f,0x6f};
flash char sevendp [1] = {0x80};

void main(void)
{
    int start;
    DDRA = 0xFF;
    DDRC = 0xFF;
    DDRD = 0xFF;
    start=1;
    while (1)
    {
        // Please write your application code here
        PORTC = control[0];
        PORTA = seven[second % 10];
        delay_ms(5);
        PORTC = control [1];
        PORTA = seven[second /10];
        delay_ms(5);
        PORTC = control[2];
        PORTA = sevendp[0];
        delay_ms(5);
        PORTC = control[3];
        PORTA = seven[minute % 10];
        delay_ms(5);
        PORTC = control [4];
        PORTA = seven[minute /10];
        delay_ms(5);
        PORTC = control [5];
        PORTA = sevendp[0];
        delay_ms(5);
        PORTC = control[6];
        PORTA = seven[hour % 10];
        delay_ms(5);
        PORTC = control [7];
        PORTA = seven[hour /10];
        delay_ms(5);
        if (start==1)
        {
            if(PIND.1==0)
            {
                n++;
                if(n >= 3){
                    second++;
                    if(second >=60){
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        minute++;
        second = 0;
        if (minute >=60){
            hour++;
            minute = 0;
            if (hour >=24)
                hour = 0;
        }
    }
    n = 0;
}
}
else
{
    n++;
    if(n >= 3){
        second--;
        if(second <=0){
            minute--;
            second = 59;
            if (minute <=0){
                hour--;
                minute = 59;
                if (hour <=0)
                    hour = 23;
            }
        }
        n = 0;
    }
}
}

if(PIND.0==1)
{
    start=0;
}
else
{
    start=1;
}
if(PIND.5==0)
{
    if(PIND.2==1)
    {
        delay_ms(200);
        hour++;
        if (hour>=24)
            hour=0;
    }
    if(PIND.3==1)
    {
        delay_ms(200);
        minute++;
        if (minute>=60)
            minute=0;
    }
    if(PIND.4==1)
    {
        delay_ms(200);

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        second++;
        if (second>=60)
            second=0;
        }
        }
        else
        {
            if(PIND.2==1)
            {
                delay_ms(200);
                hour--;
                if (hour<=0)
                    hour=23;
            }
            if(PIND.3==1)
            {
                delay_ms(200);
                minute--;
                if (minute<=0)
                    minute=59;
            }
            if(PIND.4==1)
            {
                delay_ms(200);
                second--;
                if (second<=0)
                    second=59;
            }
        }
    }

}

// interrupt[TIM0_OVF]void timer0_ovf_isr (void)
// {
//     if(PIND.1==0)
//         n++;
//         if(n >= 1953){
//             second++;
//             if(second >=60){
//                 minute++;
//                 second = 0;
//                 if (minute >=60){
//                     hour++;
//                     minute = 0;
//                     if (hour >=24)
//                         hour = 0;
//                 }
//             }
//             n = 0;
//         }
//     }
//     else
//     {
//         n++;
//         if(n >= 1953){
//             second--;
//             if(second <=0){
//                 minute--;

```

```
//          second = 59;
//          if (minute <=0){
//              hour--;
//              minute = 59;
//              if (hour <=0)
//                  hour = 23;
//          }
//      }
//      n = 0;
//  }

//  }
//}
//void main(void)
//  DDRA = 0xFF;
//  DDRC = 0xFF;
//  TCCR0 = 0x01;
//  TIMSK = 0b00000001;
//  DDRD=0xFF;
//  //sei ();
//  // #asm("sei")
//  while(1)
//  if(PIND.0==1)
//  {
//      start=0;
//      PORTD.0=0;
//      TIMSK = 0b00000000;
//  }
//  else
//  {
//      start=1;
//      PORTD.0=1;
//      TIMSK = 0b00000001;
//  }
```