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/*
A demonstration program for GCBASIC.
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The first lesson showed how to turn on a LED, this
lesson shows how to make it blink.

Building on lessons 1 and 2, which showed how to light
up a LED and then make it blink
with a delay loop, this lesson adds rotation. It will
light up DS8 and then shift it to DS7,
then to DS6, to DS8, and then back to DS1.

The program flow to rotate the lighting of the LEDs is
listed below:
1. First, initialize the chip
2. Set the start bit.
3. Delay for a time dependent on the value of the ADC.
4. Rotate the display.

@author    EvanV
@license   GPL
@version   1.00
@date      2024-08-17
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*/


#chip 16F887
#option explicit


/*
            ------------PORTA---------------
    Bit#:   -7---6---5---4---3---2---1---0---
    IO:     ----------------------------AN0--
```

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    IO:    ---------------------------------

           ------------PORTB----------------
    Bit#:  -7---6---5---4---3---2---1---0---
    IO:    -----------------------------SW---
    IO:    ---------------------------------

           ------------PORTC----------------
    Bit#:  -7---6---5---4---3---2---1---0---
    IO:    ---------------------------------
    IO:    ---------------------------------

           ------------PORTD----------------
    Bit#:  -7---6---5---4---3---2---1---0---
    IO:   -DS8-DS7-DS6-DS5-DS4-DS3-DS2-DS1--
    IO:    ---------------------------------

*/

DIR PORTD OUT
PORTD.7 = 1

Dim ADCValue as Byte

Do

    ADCValue = Scale(  ReadAD10 ( AN0 ), 0, 1023, 1,
250)

    //Wait for the value of ADC
    Wait ADCValue ms

    // Ensure the Carry bit is clear
    Set C OFF

    //Rotate the port to the right, shift the bits of
the port to the right
```

```
    ROTATE PORTD RIGHT

    //Did the rotate set the carry bit? If, yes, set
the bit to 1
    IF C = 1 Then PORTD.7 = 1

Loop

End
```