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'-----Title-----
' File.....16F877A_bounce1.pbp
' Started....6/1/05
' Microcontroller used:  Microchip Technology 16F877A
'                          microchip.com
' PicBasic Pro Code, micro-Engineering Labs, Inc.
'                          melabs.com

'-----Program Description-----
' Eight LED's scroll on then off from left to right
' then from right to left.

'-----Schematic-----
' See schematic at:
' http://www.cornerstonerobotics.org/schematics/pic16f877a\_bounce.pdf

'-----Revision History-----
' 11/6/07:  Change MCU from 16F84A to 16F88
' 1/1/09:   Change MCU from 16F88 to 16F877A

'-----Variables-----
      LED VAR BYTE          ' Variable LED setup as a byte

'-----Initialization-----
      PORTB = %00000000     ' Sets all PORTB pins to LOW (turns off
                          ' all LEDs)

      TRISB = %00000000     ' Sets up pins RB7-RB0 of PORTB as outputs

'-----Pin List for 40 Pin Microcontrollers-----
'
'      Pin      PORT/Pin
'
'      0      PORTB.0
'      1      PORTB.1
'      2      PORTB.2
'      3      PORTB.3
'      4      PORTB.4
'      5      PORTB.5
'      6      PORTB.6
'      7      PORTB.7
'      8      PORTC.0
'      9      PORTC.1
'     10      PORTC.2
'     11      PORTC.3
'     12      PORTC.4
'     13      PORTC.5
'     14      PORTC.6
'     15      PORTC.7
```

'-----Main Code-----'

```
start:                ' start label

' Loops LEDs to right:

    FOR LED = 0 TO 7  ' Loops through all 8 LEDs.
                       ' Since STEP is not given, the
                       ' increment is automatically +1.

    HIGH LED          ' Turns on LED one at a time

    PAUSE 250         ' Holds LED on for 250 milli-seconds

    LOW LED           ' Turns off LED

    NEXT LED          ' Goes to next LED

' Loops LEDs to left:

    FOR LED = 6 TO 1 STEP -1
                       ' Loop through 6 middle LEDs.
                       ' STEP is a negative number so
                       ' the variable LED will decrease by 1
                       ' each time through the FOR..NEXT loop.

    HIGH LED          ' Turns on LED one at a time

    PAUSE 250         ' Holds LED on for 250 milli-seconds

    LOW LED           ' Turns off LED

    NEXT LED          ' Goes to next LED

' Loop back to the beginning:

    GOTO start        ' Loops back to the start label

END
```