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'-----Title-----
' File.....16F877A_bounce2.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 off then on from left to right
' then back 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 = %11111111    ' Sets all PORTB pins to HIGH (turns on
                          ' 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.

  LOW LED            ' Turns off one LED at a time

  PAUSE 250          ' Holds LED on for 250 milli-seconds

  HIGH LED           ' Turns LED back on

  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.

  LOW LED            ' Turns off one LED at a time

  PAUSE 250          ' Holds LED on for 250 milli-seconds

  HIGH LED           ' Turns LED back on

  NEXT LED           ' Goes to next LED

' Loop back to the beginning:

  GOTO start         ' Loops back to the start label

END
```