```
'--------Title--------

' File......count1.pbp
' Started....5/9/08
' Microcontroller used:  Microchip Technology PIC16F88
'                        microchip.com
' PicBasic Pro Code: micro-Engineering Labs, Inc.
'                    melabs.com

'--------Program Desciption--------

' Program illuminates 8 LEDs to count in binary from
' 1 to 255.

'-------------Comments------------

' Schematic uses 470 ohm current limiting resistors
' connected to each LED.  The current through each LED
' is about 6 mA. When all 8 LEDs are on, the total
' current sourced by PORTB is about 50mA, within the
' 100 mA maximum current limit that a PORT can source.

'---------PIC Connections---------

'       16F88 Pin            Wiring
'       ---------           ----------
'         RB0                 LED1
'         RB1                 LED2
'         RB2                 LED3
'         RB3                 LED4
'         RB4                 LED5
'         RB5                 LED6
'         RB6                 LED7
'         RB7                 LED8
' See schematic for the other usual PIC connections


'------------Variables------------

    c0    VAR    BYTE           ' BYTE to store counter variable, c0

'----------Initialization---------

    TRISB = %00000000           ' Set PORTB pins as outputs

    PORTB = %00000000           ' Set PORTB pins LOW(0 volts)

    ANSEL = 0                   ' Configure all pins to digital
                                ' operation since not using ADC
                                ' (Analog to Digital Converter)

    OSCCON = $60                ' Sets the internal oscillator in the
                                ' 16F88 to 4 MHz

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

```
start:

    FOR c0 = 1 TO 255           ' Count from 1 to 255

    PORTB = c0                  ' Illuminate LEDs to display binary
                                ' number.  For example, when c0 = 4
                                ' the binary number for 4 is %00000100.
                                ' This command sets PORTB to %00000100,
                                ' bringing RB2 HIGH which turns on the
                                ' LED connected to RB2.  All of the
                                ' pins are set LOW leaving their
                                ' respective LEDs off.

    PAUSE 200                   ' Pause 200 ms

    NEXT c0

    PAUSE 3000                  ' Pauses 3 seconds displaying the binary
                                ' number %11111111, then starts over

    GOTO start
    END
```