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

' File......16F977A_switch1.pbp
' Started....6/1/05
' Microcontroller used:  Microchip Technology 16F877A
'                         microchip.com
' PBPro Code, micro-Engineering Labs, Inc.
'              melabs.com

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

'  Turn on/off LEDs with button switch.

'-------------Schematic------------

' See schematic at:
' http://www.cornerstonerobotics.org/schematics/pic16f877a_switch1.pdf

'----------Related Lesson----------

' switch1.pbp (the 16F88 program) is used in the
' lesson PIC PROGRAMMING 3 SERVOS at:
' http://cornerstonerobotics.
org/curriculum/lessons_year2/erii13_pic_programming3_servos.pdf

' switch1.pbp is also used in the
' lesson ACTIVE HIGH ACTIVE LOW at:
' http://www.cornerstonerobotics.
org/curriculum/lessons_year2/erii19_active_high_active_low.pdf

'----New PicBasic Pro Commands-----

' The PicBasic Pro Compiler Manual is on line at:
' http://www.microengineeringlabs.com/resources/index.htm#Manuals

' IF...THEN
' IF comparison THEN label
' When the comparison in an IF..THEN command is true,
' the program will jump to the label after THEN.
' When the comparison is false, the program will
' continue to the statement after the IF..THEN command.
' Look around page 91 in the PicBasic Pro Compiler Manual

'--------Revision History---------

' 3/1/06    Clean-up comments & change labels
' 11/17/07: Change PIC MCU from 16F84A to 16F88
' 11/17/07  Add 16F88 oscillator initialization
' 1/1/09    Change from 16F88 to 16F877A

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

    switch1   VAR PORTB.0        ' Labels PORTB.0 as switch1

'---------Initialization----------
```

```
    TRISB = %00000001    ' Sets up pin RB0 of PORTB as an input
                         ' and pins B1-B7 as outputs

    PORTB = %00000010    ' Sets pin RB1 to HIGH (+5 volts),
                         ' all other PORTB pins to LOW (0 volts)


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

start:

    IF switch1 = 1 THEN led2    ' If the switch on PORTB.0 is pushed,
                                ' PORTB.0 becomes HIGH (+5 volts) and
                                ' the comparison is true, so the program
                                ' jumps to the label led2.

    HIGH 1                      ' When the comparison is false, the program
                                ' proceeds to the statement after the
                                ' IF..THEN command, in our case, HIGH 1.
                                ' This makes pin RB1 output high (+5 volts)

    LOW 2                       ' Makes pin RB2 output LOW (0 volts)

    PAUSE 1                     ' Pause 1 ms

    GOTO start                  ' Jump to start label

led2:

    LOW 1                       ' Makes pin RB1 output LOW(0 volts)

    HIGH 2                      ' Makes pin RB2 output HIGH(+5 volts)

    PAUSE 1                     ' Pause 1 ms

    GOTO start                  ' Jump to start label

    END
```