Experiment – 1

Title: Interfacing LED / Switch to PIC.

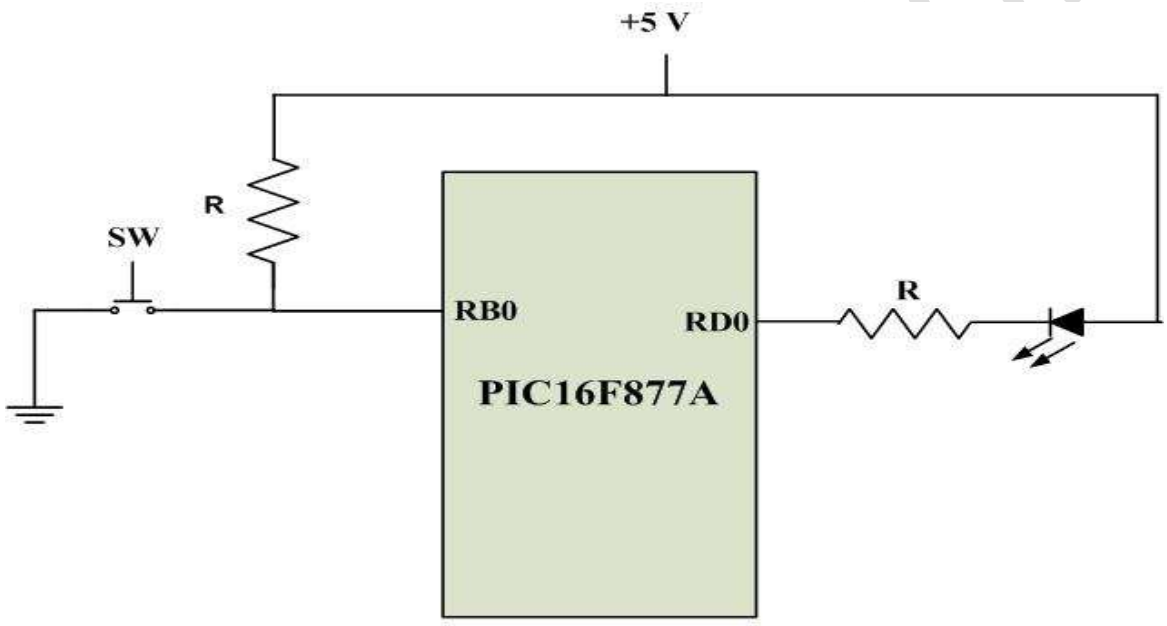
Aim: To interface LED / Switch to PIC and turn on the LED when switch is pressed.

Objectives:

- To study concept of LED / Switch interfacing.
- To study MPLAB IDE software.
- To study programming of LED / Switch interfacing.

Software Used: MPLAB IDE

Block Diagram:



Procedure:

- Make necessary connections to connect the LED / Switch to PIC target board.
- Switch on the power.
- Start MPLAB IDE software PC and write a program to read status of switch and send to the LED.
- Perform the configuration settings and build it.
- Connect the PICKit3 programmer to the Target board.
- Program the .hex file into the PIC.
- Reset the microcontroller and observe the output.

Program:

```
#define _XTAL_FREQ 16000000
#include <xc.h>
int main()
{
 TRISD0 = 0;        //RD0 as Output PIN
 TRISB0 = 1;       //RB0 as Input PIN
 while(1)
 {
  if(RB0 == 0)
  {
   RD0 = 0;          // LED ON
  }
  else
  {
   RD0 = 1;          // LED OFF
  }
 }
 return 0;
}
```

Applications: (Write applications of LED / Switch here)

Result: Interfacing of LED / Switch with PIC microcontroller is studied successfully and observed the output.

Teacher's Sign

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