Experiment No: 05

Name of the Experiment: Write a program to interface LED with Push button using PIC microcontroller.

Objective(s):

(i) To learn Push button interfacing with PIC microcontroller.

(ii) To learn how to control a led using a Push button.

(iii) To design and understand circuit diagram

Theory: To push-button is a input device in the embedded system. It is used to control the operation of any output device using the microcontroller or control unit. It breaks the electrical circuit and intervals the flow of current.

The push-button is basic meenanical on-off button that act as control devices. It short circuit the line when it is pressed and when it is not pressed.

Positive logic: In this resiston we use a pull down resiston connected to the ground. When we pressed the switch then logic high and when we disconnect the switch logic hits low.

negative logic: In this connective, we use a pull-up resiston connected to Vcc. Where we pressed the switch then logic assents, low and when we disconnect the switch logic assent high.

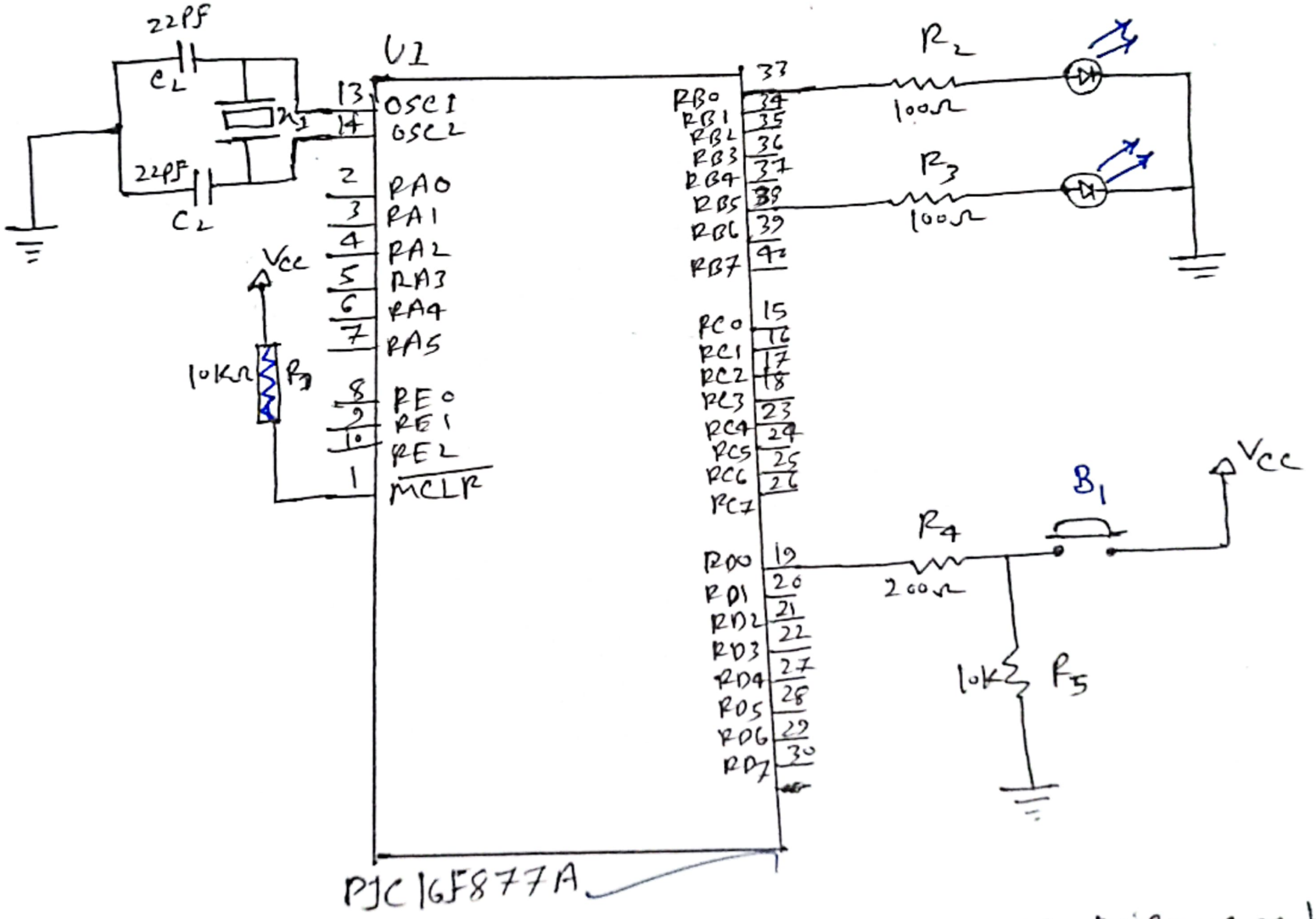

Fig1 Button interfacing using PIC microcontroller

Apparatus Required : PIC 16F877A, crystal, capacitor, resistor, LED, push button

Source code :

```
void main()
{
int count=0;
TRISD = 0x00;
TRISB = 0x00;
portbf0=0;
while(1)
  {
if
  {
   portdf0 = 0;
  }
  {
  delay.ms(200);
   if ((count(i))
else count=0;
  }
  if
   (count == 0)
   {
    portbf0=0;
    portb.f5=0;
    delay.ms(200)
   }
  else
   {
    portbf0==1;
    portbf5 = 1;
    delay-ms(200)
   }
  }
}
```