Experiment no: 04

Name of experiment: Write a program to display 2 digit number using 7 segment multiplexing technique.

objective(s):

(i) ~~Learning how to~~ design a display of 2 digit number using 7 segment multiplexing technique.

(ii) ~~Learning~~ To learn & understand and understanding short multiplexing

Theory: A seven-segment display is a form of electron display device for displaying decimal number that is an alternative to the more complex matrix display. Multiplexing is necessary to interface two or more seven segment display to a microcontroller software program can control these multiplexed seven segment to on/off in a fashion. This also helps to reduce power in battery operated systems.

Apparatus required: (1) PIC16F877A (2) capacitor (3) resistors crystal, digital 7 segment.

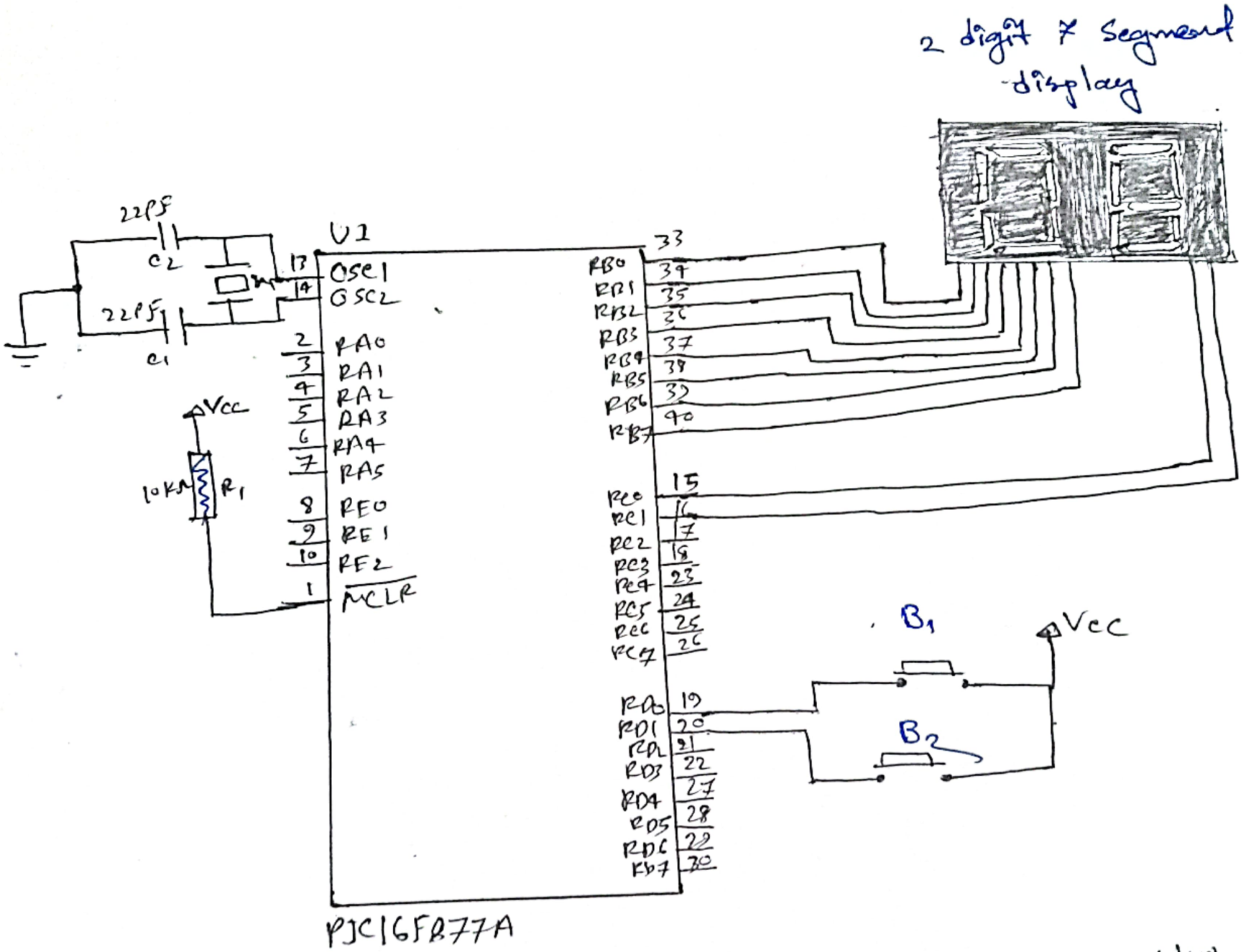

Fig: Display 2 digit number using 7 segment multiplexer.

Program:

```
char segment[] = {0x3f, 0x06, 0x5B, 0x4F}
int i=0;
void main()
 {
  TRISB = 0X00;
  Anise = 0X00;
  Portb = 0X00;
  PortC = 0X00;
  trisd = 0Xff;
  Portb = 0;
  while(1)
  {
   portc f0=0;
   Portb = segment[i/10];
   delay_ms(10);
    PortC f0=1;
    PortC f1 =0;
    Portb = segment [i%10];
    delay_ms(10);
    portc f1 = 1;
   if(Portd f0==1)
    {
     i++
      while(Portd f0==1);
    }
     if(Portd f1 ==1)
     {
       i--
       while(Portd f1 ==1)
       }
      if(i<0; i, i%999)
        i=0
    }}
```