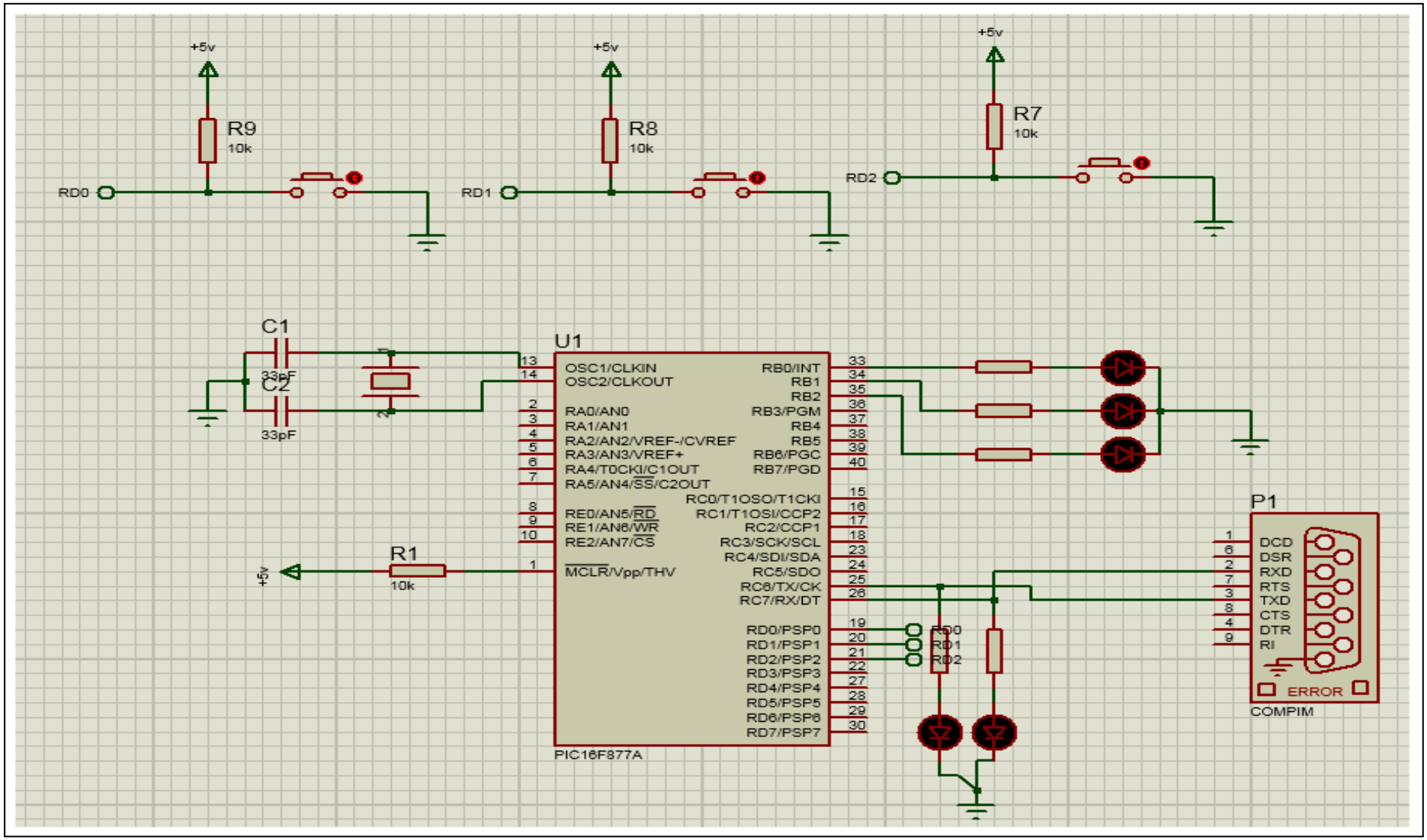
I. PIC TO PYTHON CIRCUIT



II. PIC TO PYTHON CONTROL

DOCUMENT 01

```
UART1_Init(9600);
Delay_ms(100);

while(1)
{

if(portd.f0 == 0)
{
portb.f0 = 1;
UART1_Write_Text("1");
delay_ms(200);
}else if(portd.f1 == 0)
{
portb.f1 = 1;
UART1_Write_Text("2");
delay_ms(200);
}else if(portd.f2 == 0)
{
portb.f2 = 1;
UART1_Write_Text("3");
delay_ms(200);
}
else
{
UART1_Write_Text("0");
portb= 0x00;
delay_ms(200);
```

```
}

}

}
```

DOCUMENT 2

```
_main:

;PICtoPythonControl.c,2 ::          void main() {
;PICtoPythonControl.c,4 ::          TRISB = 0X00;
      CLRF       TRISB+0
;PICtoPythonControl.c,5 ::          PORTB = 0X00;
      CLRF       PORTB+0
;PICtoPythonControl.c,7 ::          TRISD = 0XFF;
      MOVLW      255
      MOVWF      TRISD+0
;PICtoPythonControl.c,8 ::          PORTD = 0XFF;
      MOVLW      255
      MOVWF      PORTD+0
;PICtoPythonControl.c,10 ::         UART1_Init(9600);
      MOVLW      129
      MOVWF      SPBRG+0
      BSF        TXSTA+0, 2
      CALL       _UART1_Init+0
;PICtoPythonControl.c,11 ::         Delay_ms(100);
      MOVLW      3
      MOVWF      R11+0
      MOVLW      138
      MOVWF      R12+0
      MOVLW      85
      MOVWF      R13+0
L_main0:
      DECFSZ     R13+0, 1
      GOTO       L_main0
      DECFSZ     R12+0, 1
      GOTO       L_main0
      DECFSZ     R11+0, 1
      GOTO       L_main0
      NOP
      NOP
;PICtoPythonControl.c,13 ::         while(1)
L_main1:
;PICtoPythonControl.c,16 ::         if(portd.f0 == 0)
      BTFSC      PORTD+0, 0
      GOTO       L_main3
;PICtoPythonControl.c,18 ::         portb.f0 = 1;
      BSF        PORTB+0, 0
;PICtoPythonControl.c,19 ::         UART1_Write_Text("1");
      MOVLW      ?lstr1_PICtoPythonControl+0
      MOVWF      FARG_UART1_Write_Text_uart_text+0
      CALL       _UART1_Write_Text+0
;PICtoPythonControl.c,20 ::         delay_ms(200);
      MOVLW      6
      MOVWF      R11+0
      MOVLW      19
      MOVWF      R12+0
      MOVLW      173
      MOVWF      R13+0
```

```
L_main4:
      DECFSZ     R13+0, 1
      GOTO       L_main4
      DECFSZ     R12+0, 1
      GOTO       L_main4
      DECFSZ     R11+0, 1
      GOTO       L_main4
      NOP
      NOP
;PICtoPythonControl.c,21 ::          }else if(portd.f1 == 0)
      GOTO       L_main5
L_main3:
      BTFSC      PORTD+0, 1
      GOTO       L_main6
;PICtoPythonControl.c,23 ::          portb.f1 = 1;
      BSF        PORTB+0, 1
;PICtoPythonControl.c,24 ::          UART1_Write_Text("2");
      MOVLW      ?lstr2_PICtoPythonControl+0
      MOVWF      FARG_UART1_Write_Text_uart_text+0
      CALL       _UART1_Write_Text+0
;PICtoPythonControl.c,25 ::          delay_ms(200);
      MOVLW      6
      MOVWF      R11+0
      MOVLW      19
      MOVWF      R12+0
      MOVLW      173
      MOVWF      R13+0
L_main7:
      DECFSZ     R13+0, 1
      GOTO       L_main7
      DECFSZ     R12+0, 1
      GOTO       L_main7
      DECFSZ     R11+0, 1
      GOTO       L_main7
      NOP
      NOP
;PICtoPythonControl.c,26 ::          }else if(portd.f2 == 0)
      GOTO       L_main8
L_main6:
      BTFSC      PORTD+0, 2
      GOTO       L_main9
;PICtoPythonControl.c,28 ::          portb.f2 = 1;
      BSF        PORTB+0, 2
;PICtoPythonControl.c,29 ::          UART1_Write_Text("3");
      MOVLW      ?lstr3_PICtoPythonControl+0
      MOVWF      FARG_UART1_Write_Text_uart_text+0
      CALL       _UART1_Write_Text+0
;PICtoPythonControl.c,30 ::          delay_ms(200);
      MOVLW      6
      MOVWF      R11+0
      MOVLW      19
      MOVWF      R12+0
      MOVLW      173
      MOVWF      R13+0
L_main10:
      DECFSZ     R13+0, 1
```

```
      GOTO       L_main10
      DECFSZ     R12+0, 1
      GOTO       L_main10
      DECFSZ     R11+0, 1
      GOTO       L_main10
      NOP
      NOP
;PICtoPythonControl.c,31 ::          }
      GOTO       L_main11
L_main9:
;PICtoPythonControl.c,34 ::          UART1_Write_Text("0");
      MOVLW      ?lstr4_PICtoPythonControl+0
      MOVWF      FARG_UART1_Write_Text_uart_text+0
      CALL       _UART1_Write_Text+0
;PICtoPythonControl.c,35 ::          portb= 0x00;
      CLRF       PORTB+0
;PICtoPythonControl.c,36 ::          delay_ms(200);
      MOVLW      6
      MOVWF      R11+0
      MOVLW      19
      MOVWF      R12+0
      MOVLW      173
      MOVWF      R13+0
L_main12:
      DECFSZ     R13+0, 1
      GOTO       L_main12
      DECFSZ     R12+0, 1
      GOTO       L_main12
      DECFSZ     R11+0, 1
      GOTO       L_main12
      NOP
      NOP
;PICtoPythonControl.c,37 ::          }
L_main11:
L_main8:
L_main5:
;PICtoPythonControl.c,41 ::          }
      GOTO       L_main1
;PICtoPythonControl.c,43 ::          }
L_end_main:
      GOTO       $+0
; end of _main
```

DOCUMENT 3

```
                import serial
import  time
serialStringData = ""


serialPort = serial.Serial(port = "COM2", baudrate = 9600, bytesize =8, timeout =2, stopbits =
serial.STOPBITS_ONE)




while(1):
    if(serialPort.in_waiting > 0):
       serialStringData = serialPort.read(1)
       ch = str(serialStringData, 'utf-8')
       print(ch)
       time.sleep(0.5)
       if(ch == "1"):
          print("Do Something when you receive one from PIC Microcontroller")
       if(ch == "2"):
          print("Do something else 2 was pressed ")
       if(ch == "3"):
          print("3 was pressed")



serialPort.close()
```

DOCUMENT 4

```
char dataRead;
void main() {

TRISB = 0X00;
PORTB = 0X00;

TRISD = 0XFF;
PORTD = 0XFF;

UART1_Init(9600);
Delay_ms(100);

while(1)
{

if(portd.f0 == 0)
{
portb.f0 = 1;
UART1_Write_Text("1");
delay_ms(200);
}else if(portd.f1 == 0)
{
portb.f1 = 1;
UART1_Write_Text("2");
delay_ms(200);
}else if(portd.f2 == 0)
{
portb.f2 = 1;
UART1_Write_Text("3");
```

```
delay_ms(200);
}
else
{
UART1_Write_Text("0");
portb= 0x00;
delay_ms(200);
}




}


}
```

II. PIC TO PYTHON TEST

```
import serial
import  time
serialStringData = ""


serialPort = serial.Serial(port = "COM2", baudrate = 9600, bytesize =8, timeout =2, stopbits =
serial.STOPBITS_ONE)



while(1):
      if(serialPort.in_waiting > 0):
         serialStringData = serialPort.read(1)
         ch = str(serialStringData, 'utf-8')
         print(ch)
         time.sleep(0.5)
         if(ch == "1"):
            print("Do Something when you receive one from PIC Microcontroller")
         if(ch == "2"):
            print("Do something else 2 was pressed ")
         if(ch == "3"):
            print("3 was pressed")



serialPort.close()
```