```
 1 /*
 2  *  Experiment No. 6
 3  *  Program statement: Write a embedded C program for interfacing switches,
 4  *  LED's, relay and buzzer with PIC18F452
 5  *  Roll no.- 312046     Batch no.- B2
 6  *  Date of performance- 29/08/2018
 7  */
 8
 9
10 #include<P18F452.h>
11 #pragma config OSC = HS
12 #pragma config PWRT = OFF
13 #pragma config WDT = OFF
14 #pragma config DEBUG = OFF
15 #pragma config LVP = OFF
16
17 #define SW1 PORTCbits.RC0                //Declaration of pin labels
18 #define SW2 PORTCbits.RC1
19 #define RELAY PORTBbits.RB0
20 #define BUZZER PORTBbits.RB1
21 #define LED PORTD
22
23 void milliDelay(unsigned int);             //Function prototype
24 unsigned int i,j;
25
26 void main(){
27     TRISCbits.TRISC0 = 1;                //Making SW1 as I/P
28     TRISCbits.TRISC1 = 1;                //Making SW2 as I/P
29     TRISBbits.TRISB0 = 0;                //Making RELAY as O/P
30     TRISBbits.TRISB1 = 0;                //Making BUZZER as O/P
31     TRISD = 0;                           //Making LED as O/P
32     for(;;){
33         if(SW1 == 0 && SW2 == 0){        //Condition for both switch
pressed
34             RELAY = 1;
35             BUZZER = 1;
36            while(SW1 == 0 && SW2 == 0){
37                LED = 0xFF;
38                milliDelay(100);
39                LED = 0;
40            }
```

```
41          }
42          else if(SW1 == 0 && SW2 == 1){   //Condition for SW1 pressed
43              RELAY = 0;
44              BUZZER = 0;
45              LED = 0b10000000;
46              while(SW1 == 0 && SW2 == 1){
47                  LED = LED>>1;
48                  milliDelay(100);
49              }
50          }
51          else if(SW1 == 1 && SW2 == 0){   //Condition for SW2 pressed
52              RELAY = 1;
53              BUZZER = 1;
54              LED = 0b00000001;
55              while(SW1 == 1 && SW2 == 0){
56                  LED = LED<<1;
57                  milliDelay(100);
58              }
59          }
60          else{                            //Condition for both switch
released
61              RELAY = 1;
62              BUZZER = 1;
63              LED = 0;
64          }
65      }
66 }
67
68 void milliDelay(unsigned int millisec){ //Function for generating delay
69      for(i=0;i<millisec;i++)
70          for(j=0;j<165;j++);
71 }
```