```
 1 /*
 2  *  Experiment No. 10
 3  *  Program statement: Write an embedded C program for PIC 18 to monitor
 4  *  the status of the switch SW and perform the following
 5  *      1. If SW = 0 the DC motor moves with 50% duty cycle
 6  *      2. If SW = 1 the motor moves with 25% duty cycle.
 7  *  Roll no.- 312046     Batch no.- B2
 8  *  Date of performance-
 9  */
10
11 //PROGRAM FOR 1KHZ PWM WAVE
12 #include<P18F452.h>
13 #pragma config OSC = HS
14 #pragma config PWRT = OFF
15 #pragma config DEBUG = OFF
16 #pragma config WDT = OFF
17 #pragma config LVP = OFF
18
19 void main(void){
20 TRISC = 0b11111011;                //CCP1 as output
21 TRISD = 0b10000000;                //Switch i/p
22 CCP1CON= 0x0F;                    //PWM mode 11XX(1111)
23 PR2 = 124;                         //Value for 1kHz
24 T2CON = 0x10;                      //1:16 PRESCALER
25 while(1){
26 if(PORTDbits.RD7 == 1){
27 CCPR1L = 31;               //25% Duty cycle
28 }
29 else{
30 CCPR1L = 62;               //50% Duty cycle
31 }
32 TMR2 = 0x0;                     //Clear Timer 2
33 PIR1bits.TMR2IF = 0;           //Clear Timer Flag
34 T2CONbits.TMR2ON = 1;          //TIMER 2 ON
35 while(PIR1bits.TMR2IF == 0);//WAIT FOR END OF PERIOD
36 }
37 }
```