```
 1 /*
 2  *  Experiment No. 11
 3  *  Program statement: 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 #include<P18F452.h>
12 #pragma config OSC = HS
13 #pragma config PWRT = OFF
14 #pragma config DEBUG = OFF
15 #pragma config WDT = OFF
16 #pragma config LVP = OFF
17
18 void main(void){
19 TRISC = 0xFB;
20 TRISD = 0x80;
21 CCP1CON= 0x0F;//PWM mode 11XX
22 PR2 = 199;//Value for 2.5kHz
23 T2CON = 0x01;//1:4 PRESCALER
24 while(1){
25 if(PORTDbits.RD7 == 1){
26 CCP1CONbits.DC1B1 = 1;  //0.75%
27 CCP1CONbits.DC1B0 = 1;
28 CCPR1L = 49;            //25% Duty cycle
29 }
30 else{
31 CCP1CONbits.DC1B1 = 1;  //0.25%
32 CCP1CONbits.DC1B0 = 0;
33 CCPR1L = 99;            //50% Duty cycle
34 }
35 TMR2 = 0x0;//Clear Timer 2
36 PIR1bits.TMR2IF = 0;//Clear Timer Flag
37 T2CONbits.TMR2ON = 1;//TIMER 2 ON
38 while(PIR1bits.TMR2IF == 0);//WAIT FOR END OF PERIOD
39 }
40 }
```