

Project Development
Delivery of sprint-2

Date	05 November 2022
Team ID	PNT2022TMID49512
Project Name	Signs with smart connectivity for better road safety.
Maximum Marks	2 Marks

Sprint-2: Coding

```
#define LCD_RS_PIN PIN_B0

#define LCD_RW_PIN PIN_B1

#define LCD_ENABLE_PIN PIN_B2

#define LCD_DATA4_PIN PIN_B3

#define LCD_DATA5_PIN PIN_B4

#define LCD_DATA6_PIN PIN_B5

#define LCD_DATA7_PIN PIN_B6

#include <16F84A.h>

#fuses HS,NOWDT,PUT,NOPROTECT

#use delay(clock=8000000)

#include <lcd.c>

#use fast_io(A)

unsigned int8 count;

unsigned int16 i, distance;

#INT_TIMER0

void timer0_isr() {

    count++;

    clear_interrupt(INT_TIMER0);

}

int1 wait_sensor() {

    i=0;

    set_timer0(0);
```

```

count=0;

while(!input(PIN_A1) && (i<1000))

    i=count*256+get_timer0();

if(i>990)

    return 0;

else

    return 1;

}

unsigned int16 get_distance(){

    i=0;

    set_timer0(0);

    count=0;

    while(input(PIN_A1) && (i<25000))

        i=count*256+get_timer0();

    return i;

}

void main(){

    output_a(0);

    set_tris_a(2);

    lcd_init();

    lcd_putc('\f');

    clear_interrupt(INT_TIMER0);

    enable_interrupts(GLOBAL);

    enable_interrupts(INT_TIMER0);

    setup_timer_0(T0_INTERNAL|T0_DIV_2);

    lcd_gotoxy(4,1);

    lcd_putc("Distance:");

    while(TRUE){

        output_high(PIN_A0);

```

```
delay_us(10);

output_low(PIN_A0);


if(wait_sensor()) {

    distance= get_distance();

    if(distance> 24990) {

        lcd_gotoxy(3,2);

        lcd_putc("Out Of Range");

    }

    else {

        distance=i/58;

        lcd_gotoxy(3,2);

        lcd_putc("    cm  ");

        lcd_gotoxy(6,2);

        printf(lcd_putc,"%3Lu",distance);

    }

}

else {

    lcd_gotoxy(3,2);

    lcd_putc(" Time Out ");

}

delay_ms(100);

}

}
```