**5) Write an embedded C program to display triangular waveform using DAC 0808.**

#include <reg51.h>

// Delay function (approx. 1 ms per unit)

void delay\_ms(unsigned int x) {

unsigned int i, j;

for(i = 0; i < x; i++)

for(j = 0; j < 1275; j++);

}

void main() {

unsigned char i;

while(1) {

// Rising slope: 0 to 255

for(i = 0; i < 255; i++) {

P2 = i; // Output to DAC

delay\_ms(10); // Delay controls frequency

}

// Falling slope: 255 to 0

for(i = 255; i > 0; i--) {

P2 = i;

delay\_ms(10);

}

P2 = 0; // Ensure return to 0

delay\_ms(10);

}

}