**Write an 8051 C program to toggle all bits of P2 continuously every 500ms. Use Timer 1, mode 1 to create the delay. (demo)**

**Making TH and TL both zero means that the timer will count from 0000 to FFFF, and then roll over to raise the TF flag. As a result, it goes through a total Of 65536 states. Therefore, we have delay =**

**(65536 - 0) × 1.085 us = 71.1065ms.**

**71.1065ms \* X =500ms**

**X = 500/71.1065 = 7**

**#include<reg51.h>**

**void T1M1Delay(void);**

**void main(void)**

**{**

**Unsigned char x;**

**P2=0X55;**

**while(1)**

**{**

**P2=~P2;**

**for(x=0;x<7;x++)**

**T1M1Delay();**

**}**

**}**

**void T1M1Delay(void)**

**{**

**TMOD=0x10;**

**TH1=0x00;**

**TL1=0x00;**

**TR1=1;**

**while(TF1==0);**

**TF1=0;**

**TR1=0;**

**}**

**Write an 8051 C program to create a frequency of 2500Hz on pin P2.7. Use Timer 1, mode 2 to create the delay.**

#include <reg51.h>

void T1M2Delay(void);

sbit mybit=P2^7;

void Main(void)

{

while(1)

{

mybit=~mybit; //toggle p2.7

T1M2Delay();

}

}

void T1M2Delay(void)

{

TMOD=0x20;

TH1=48;

TR1=1;

while(TF1==0);

TR1=0;

TF1=0;

}

**Write an 8051 C program to toggle port only bit p1.5 continuously every 50ms.**

#include<reg51.h>

void T0M1Delay(void);

sbit mybit=P1^5;

void main(void)

{

while(1)

{

mybit=~mybit;

T0M1Delay();

}

}

void T0M1Delay(void)

{

TMOD=0x01;

TH0=0x4B;

TL0=0XFD;

TR0=1;

while(TF0==0);

TF0=0;

TR0=0;

}