

# **VASAVI COLLEGE OF ENGINEERING**

**ECE-A**

**V Semester**



**MPMC Mini project**

**Y HEMANTHA JAWAHAR**

**1602-21-735-015**

**A.N.S KARTIKEYA**

**1602-21-735-301**

**ABHIRAM GOUD SUDAGANI**

**1602-21-735-305**

**P.KRISHNA SAI VIKAS**

**1602-21-735-306**

## **QUESTION:**

**1. Get 4KHz, 7KHz clocks on P2.0 & P2.1 and display the message UART received data on P1? (User can send any string over Port 1)**

## **CODE:**

```
#include <lcd.h>
sbit mybit=P2^0;
sbit mybit1=P2^1;
sbit mybit2=P0^0;
void timer0_isr()interrupt 1
{
    TH0=0XFF;
    TL0=0X8a;
    mybit=~mybit;
}
void main() {

    TMOD = 0x21;
    TH1 = 0xFd;
    SCON = 0x50;
    TR1 = 1;
    IE=0X82;
    TH0=0xFF;
    TL0=0X8a;
    TR0=1;
    ET0=1;
    EA=1;
```

```

lcd_init8bit();

    if(mybit2==0)
{
    while(1)
    {
mybit1=1;
    msdelay(0.1);
    mybit1=0;
    msdelay(0.1);
    }
}

while (1) {
    unsigned char i;
        unsigned char j;
    unsigned char msg[] = " Mpmc";
    for (i = 0; i < sizeof(msg) - 1; i++) {
        SBUF = msg[i];
        P1 = msg[i];
        lcddata(P1); j++;
            if(j>15)
            {
                lcd_init8bit1();
                lcddata(P1);
            }

        while (!TI);
        TI = 0;
        }
    }
}

```

### 03

```
#include<at89x52.h>
void lcdcmd(unsigned char);
void msdelay(unsigned char);
void delay(unsigned char);

void lcddata(unsigned char);
void delay4k(void);
void delay7k(void);
void lcd_init8bit();
void lcd_init8bit2();
sfr ldata=0x90;
sbit rs=P3^7;
sbit rw=P3^6;
sbit en=P3^5;
void lcdcmd(unsigned char value)
{
ldata=value;
rs=0;
rw=0;
en=1;
msdelay(1);
en=0;
}
void lcddata(unsigned char value)
{
ldata=value;
rs=1;
rw=0;
en=1;
msdelay(1);
en=0;
}
void msdelay(unsigned int itime)
{
unsigned int i,j;
for(i=0;i<itime;i++)
for(j=0;j<127;j++);
}
```

```
void delay(unsigned int itime)  
{  
    unsigned int i,j;  
    for(i=0;i<itime;i++)  
        for(j=0;j<127;j++);  
}
```

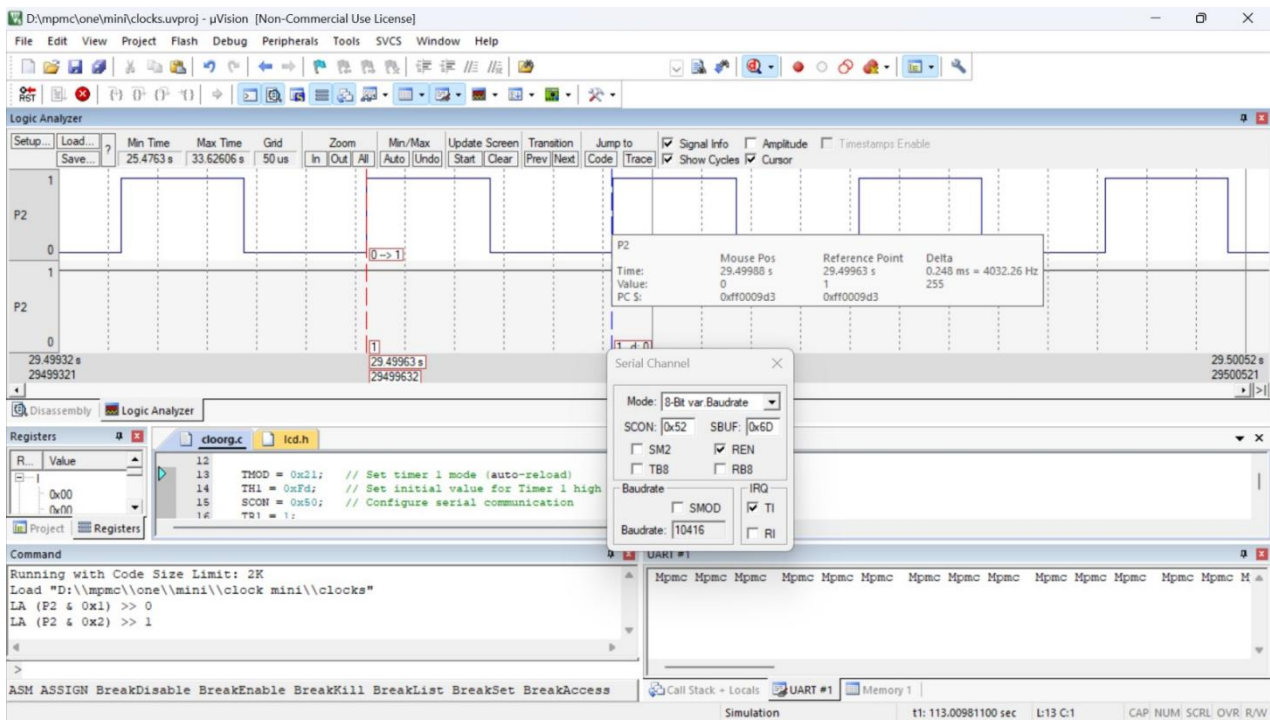
```
void delay(unsigned int itime)  
{  
    unsigned int i,j;  
    for(i=0;i<itime;i++)  
        for(j=0;j<1275;j++);  
}
```

```
void lcd_init8bit()  
{  
    lcdcmd(0x38);  
    lcdcmd(0x0e);  
    lcdcmd(0x01);  
    lcdcmd(0x06);  
}
```

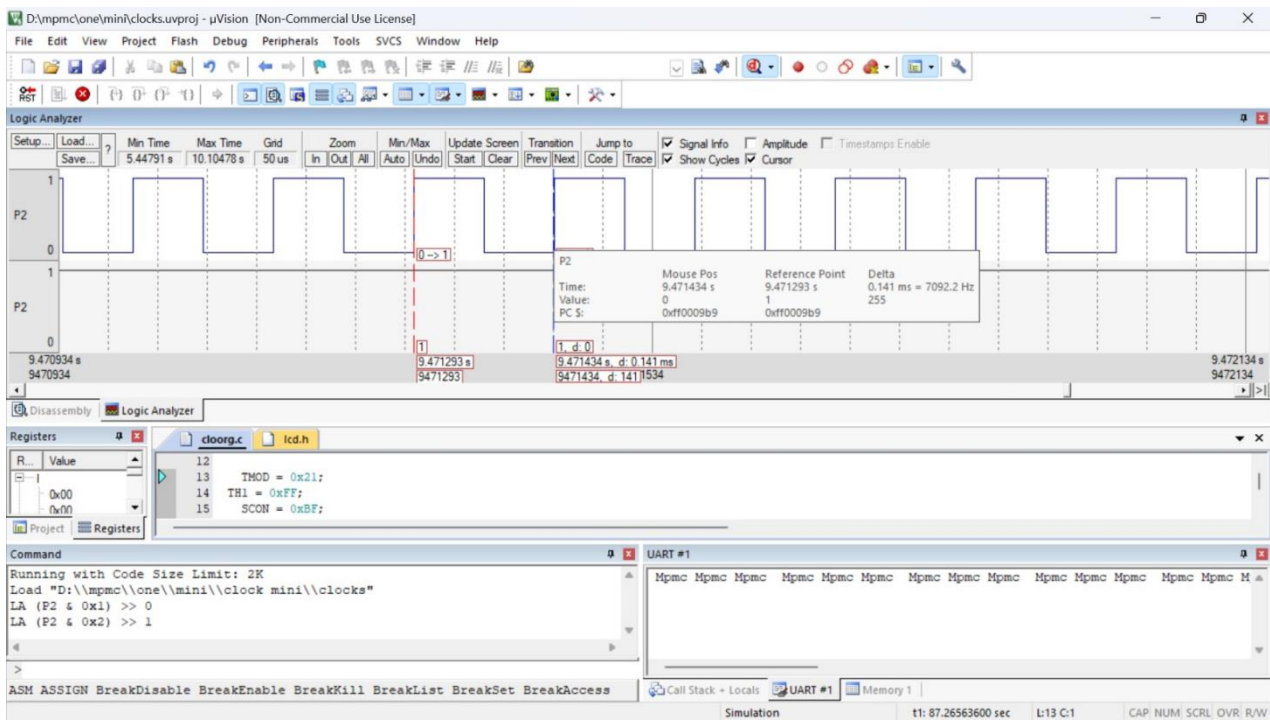
```
void lcd_init8bit2()  
{lcdcmd(0xc0);  
  
}
```

## OUTPUT:

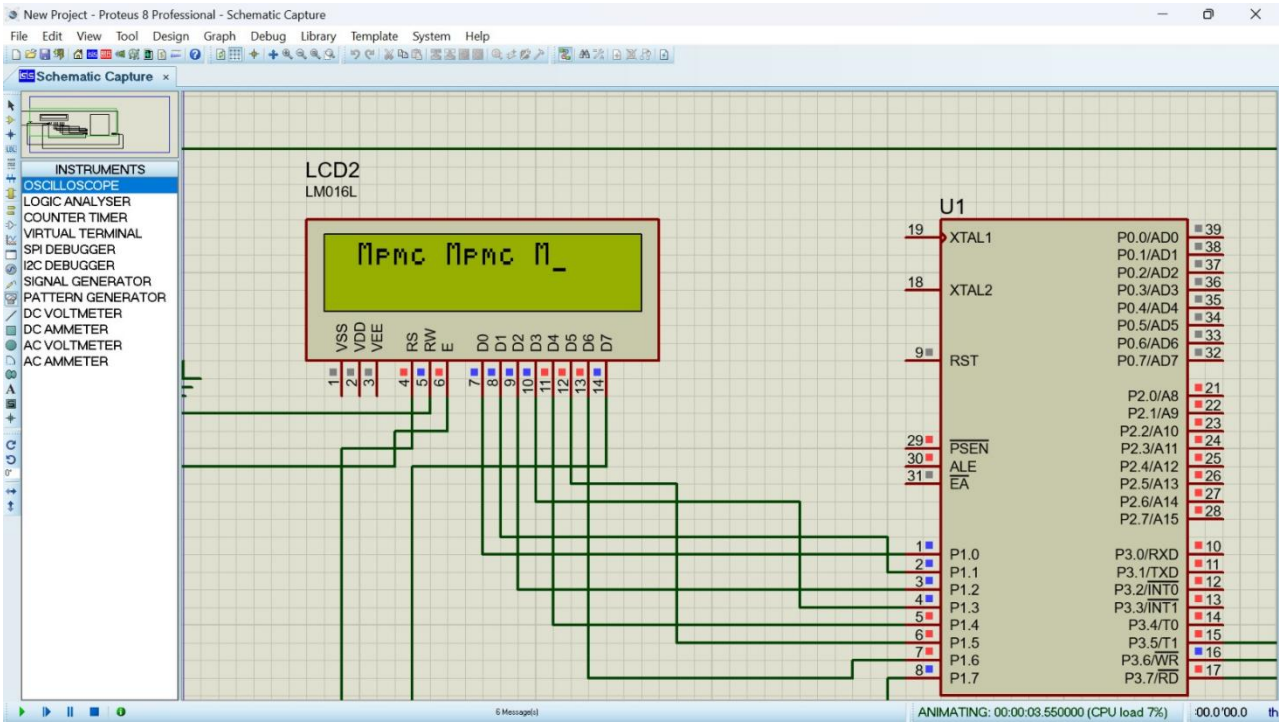
## 4KHZ CLOCK ON P2^0



## 7KHZ CLOCK ON P2^1



## OUTPUT:



## BOTH THE CLOCKS SIMULTANEOUSLY

