Microcontroller (8051)

```c
#include <reg51.h>
#include <stdio.h>

void delay (int val){
    int i,j;
    for(i=0; i< val ; i++){
        for(j=0 ; j<100 ; j++)
    }

}

void main () {
    do{
        P2 = 0x03;
        delay (1000);
        P2 = 0x06 ;
        delay (1000);
        P2 = 0x0C;
        delay(1000);
        P2 = 0x09;
        delay(1000);
    } while (1);

}
```

```c
#include <stdio.h>
#include <reg51.h>

void delay (){
    int i,j;
    for(i=0 ; i< 1000 ; i++){
        for(j=0; j<100 ; j++){
        }
    }
}
```

```
void main(){
    do{
        P2 = 0x09;
        delay();
        P2 = 0x0C;
        delay();
        P2 = 0x06;
        delay();
        P2 = 0x03;
        delay();
    } while(1);
}
```

Lab program - 3 :

```c
#include <stdio.h>
#include <reg51.h>

void delay(){
    long u;
    for(u=0; u<=8000; u++){
    }
}

void main(){
    char xdata CommW _at_ 0xe803;
    char xdata portB _at_ 0xe801;
    char xdata portC _at_ 0xe802;
    char port[12] = {0x8e, 0xf9, 0xde, 0x86, 0xff, 0xff, 0xff, 0xff,
                     0x89, 0x86, 0xc7, 0x8c};

    int i, j, d, b;
    char k, n; commW = 0x80;
    do {
        i=0
        for(d=0; d<3; d++){
            for(b=0; b<4; b++){
                k = port[i];
                for(j=0; j<8; j++){
                    m=k;
                    k=k&0x80;
                    if(k==00){
                        portB =00;
                    }else{
                        portB=0x01;
                    }
                    portC =0x01;
                    portC =0x00;
```

```
            k = m
            k<<= 1;

        }

    }
    delay();
  }

} while(1);

}


To display "BANGALORE" in sequence


void main() {
    char port[] = {0x80, 0x88,
                   0xAB, 0x90,
                   0x88, 0xC7,
                   0xA8, 0xCE,
                   0x86};

    int i, j, d;
    char k, m;

    do {
      i = 8;
      for(d = 0; d < 10; d++) {
          k = port[i];
          for(j = 0; j < 8; j++) {
              m = k;
              k = k & 0x80;
              if(k == 00) {
                  portB = 0x00;
              } else {
                  portB = 0x01;
              }
              portC = 0x01;
              portC = 0x00;
              k = m;
              k <<= 1;
```

	h	g	f	e	d	c	b	a
E =	1	0	0	0	0	1	1	0
Γ =	1	1	0	0	1	1	1	0
O =	1	0	1	0	0	0	1	1
L =	1	1	0	0	0	1	1	1
A =	1	0	0	0	1	0	0	0
g =	1	0	0	1	0	0	0	0
n =	1	0	1	0	1	0	1	1
A =	1	0	0	0	1	0	0	0
B =	1	0	0	0	0	0	0	0

```
    }
      delay();
    }
    delay();
} while (1);

}
```