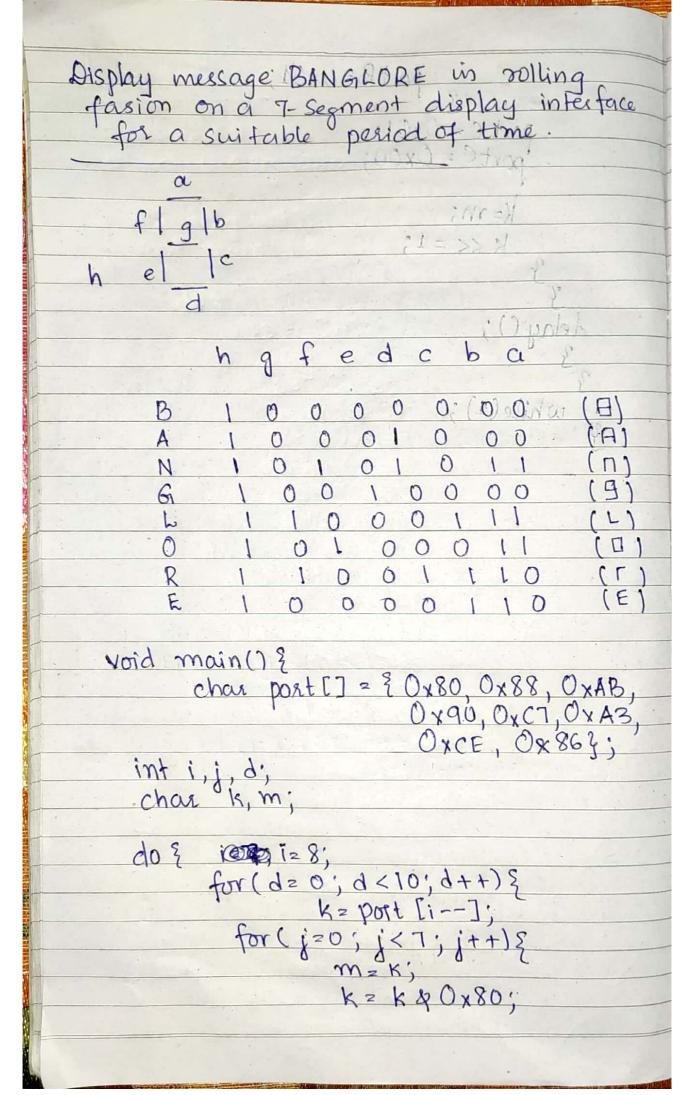# Micro Controller (8051)

Common Cathode Type 7 Segment Display to display HELP & FIRE .

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

char xdata CommW_at_0xe803;
char xdata portB_at_0xe801;
char xdata portC_at_0xe802;

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

void main() {
        int d,b,j,m;
        unsigned char k;
        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=0x00;
                else
                    portB= 0x01;
        }
```

```
                    portB = 0x01;

        port C = 0x01;
        portC = 0x00;

            k = m;
            k << = 1;
        }
        }
    delay ();
    }
    }
    while (1);
```

	0	0	0	0	0	0	1		9
	0	0	0	1	0	0	1		A
	1	1	0	1	0	1	1		
	0	0	0	0	1	0	0	1	
	1	1	0	0	0	1	1		
	1	1	0	0	0	1	0	1	0
	0	1	1	0	0	1	1		2
	0	1	1	0	0	0	0	1	

Display message BANGLORE in rolling
fasion on a 7-Segment display interface
for a suitable period of time.

```
       a
    ___
 f | g | b
    ___
 h  e | | c
    ___
       d
```

	h	g	f	e	d	c	b	a	
B	1	0	0	0	0	0	0	0	(8)
A	1	0	0	0	1	0	0	0	(A)
N	1	0	1	0	1	0	1	1	(n)
G	1	0	0	1	0	0	0	0	(9)
L	1	1	0	0	0	1	1	1	(L)
O	1	0	1	0	0	0	1	1	(□)
R	1	1	0	0	1	1	1	0	(r)
E	1	0	0	0	0	1	1	0	(E)

```
void main() {
    char port[] = { 0x80, 0x88, 0xAB,
                    0x90, 0xC7, 0xA3,
                    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 < 7; j++) {
                m = k;
                k = k & 0x80;
```

```c
        if (k == 00) {
            port B = 0x00; }
        else
            port B = 0x01;

    port C = 0x001;
    port C = 0x00;

    k = m;
    K <<= 1;
    }
    delay();
    }
    delay();
    }
    while (1);
    }
```

Stepper Motor :   [clockwise]

// wave Drive

```c
#include <stdio.h>
#include <reg 52.h>

void delay (int);
void main() {

    do {
            P2 = 0x01;
            delay (1000);      // 0001
            P2 = 0x02;
            delay (1000);      // 0010
            P2 = 0x04;
            delay (1000);      // 0100
            P2 = 0x08;
            delay (1000);      // 1000
        }
        while(1);
}


void delay (int k) {

        int i, j;
    for (i=0; i<k; i++) {
                for (j=0; j<100; j++)
                    { }
        }

}
```

Stepper Motor   [Anti-Clockwise]

// Full we Drive

```c
#include <stdio.h>
#include <reg52.h>

void delay(int);
void main() {

    do {
        P2 = 0x09;        // 1001
        delay(1000);
        P2 = 0x0C;        // 1100
        delay(1000);
        P2 = 0x06;        // 0110
        delay(1000);
        P2 = 0x03;        // 0011
        delay(100);
    }
    while (1);
}

void delay(int k) {

    int i, j;
    for (i=0; i<100; i++) {
        for (j=0; j<100; j++)

        { }
    }
}
```