2] Display messages FIRE and HELP alternately with flickering effects on a 7-segment display interface for a suitable period of time. Ensure a flashing rate that makes it easy to read both the messages.

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

char          xdata CommW _at_ 0xe803;
char   xdata portB _at_ 0xe801;
char   xdata portc _at_ 0xe802;
char   port[20] = {0x8e, 0xf9, 0xde, 0x86, 0xff, 0xff, 0xff, 0xff, 0x89,
0x86, 0xc7, 0x8c}, i;

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==0)
                        port B = 0x00;
                        else
                        port B = 0x01;
                }
                portc = 0x01;
                portc = 0x00;

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

```c
// To Display Bangalore in rolling fashion.

#include <stdio.h>
#include <stdlib.h>
#include <reg51.h>

char xdata commw _at_ 0xe803;
char xdata portB _at_ 0xe800;
char idata xx portc _at_ 0xe802;
char port[20] = {0xff, 0xff, 0xff, 0xff, 0x83, 0x88, 0xc8, 0x82, 0x82, 0xc7,
                 0xc0, 0xaf, 0x86}, i;
void delay()
{ for(int i = 0; i < 4000; i++);

}
void main()
{  int a, d, b, j, m;  unsigned char k;
   Commw = 0x80;
   do{  i = 0;
        for(d = 0; d < 1; d++)
        {  for(b = 0; b < 13; b++)
           {  delay();
              k = port[i++];
              for(j = 0; j < 8; j++)
              {   m = k;
                  k = k & 0x80;
                  if(k == 0)
                      portB = 0x00;

                  else
                      portB = 0x01;
              }
              portc = 0x01;  portc = 0x00;  k = m;
              k << = 1; } } delay(); }} while(1)}
```