Program to demo the elevator interface.

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

unsigned char xdata CommandWord _at_ 0xc803;
unsigned char xdata PortA _at_ 0xc800;
unsigned char xdata PortB _at_ 0xc801;
unsigned char xdata PresentFloor, RequestedFloor, step = 0xf0;
unsigned long xdata count, i;

Delay()
{
 for(count = 0; count <= 4500; count++);
}
Reset()
{  step = step & 0x0f;
   PortA = step;
   step = step | 0xf0;
   PortA = step;
 }
GoUp()
{
   switch(RequestedFloor)
   {
      case 0x0d: while(step < 0xf3)
                 {  step++;
                    PortA = step;
                    Delay();
                 }
                 Reset();
                 break;
```

```
case 0x06 : while(step < 0x16)
            {
              step++;
              PortA = step;
              Delay();
            }
            Reset();
            break;

case 0x07 : while(step < 0x19)
            {
              step++;
              PortA = step;
              Delay();
            }
            Reset();
            break;

    }
}
GoDown()
{
  switch(RequestedFloor)
  {
    case 0x0d : while(step > 0x13)
                { step--;
                  PortA = step;
                  Delay();
                }
                Reset();
                break;
```

```
case 0x06: while (step > 0xf6)
           {
             step--;
             PortA = step;
             Delay();
           }
           Reset();
           break;

case 0x0e: while (step > 0xf0)
           {
             step--;
             PortA = step;
             Delay();
           }
           Reset();
           break;

    }
  }
void main()
{
    CommandWord = 0x82;
    PortA = 0xf0;
    PresentFloor = 0x0e;
    while(1){
     RequestedFloor = PortB;
     RequestedFloor = RequestedFloor &0x0f;
if(RequestedFloor != 0x0f && RequestedFloor != PresentFloor){
```

```
if (RequestedFloor < PresentFloor)
  goUp();
  else
    goDown();
    PresentFloor = RequestedFloor;

  }
  RequestedFloor = PortB;

  }

}
```