ELEVATOR INTERFACE

```
#include <stdio.h>
#include <reg51.h>
unsigned char xdata CommandWord -at- 0xe803;
unsigned char xdata PortA -at- 0xe800;
unsigned char xdata PortB -at- 0xe801;
unsigned char xdataPresentFloor, RequestedFloor, step = 0xf0;
unsigned long xdata count, i;
  Delay() {
     for (long count= 0; count <= 4500; count++)
  }

  Reset() {
     Step = Step & 0x0f;
     Port A = Step;
     Step = Step | 0xf0;
     PortA = Step;
}

  GoUp() {
    switch (RequestedFloor) {
       case 0x0d : while (step < 0xf3) {
                      Step++;
                      PortA= Step;
                      Delay();
                   }
                   Reset();
                   break;
      case 0x0b: while (step <0xf6) {
                      Step++;
                      PortA = Step;
                      Delay();
                   }
```

```
            Reset();
            break;
        case 0x07:  while (step < 0xf9) {
                        Step++;
                        PortA = Step;
                        Delay();
                    }
                    Reset();
                    break;
    }
}

GoDown() {
    switch (RequestedFloor){
        case 0x0d:  while(Step > 0xf3) {
                        Step--;
                        PortA = Step;
                        Delay();
                    }
                    Reset();
                    break;
        case 0x0b:  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;
        }
    }
```