Q) Program to demo the elevator interface.

```c
#include <stdio.h>
#include <regs1.h>
unsigned char xdata CommandWord _at_ 0xe803;
unsigned char xdata PortA _at_ 0xe800;
unsigned char xdata PORTB _at_ 0xe801;
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 0x0b: while (Step < 0xf6)
                {
                    Step++;
                    PortA = Step;
```

```c
        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;
```

```c
case 0xOe: 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;
}
```