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Program 5: Demo the 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 xdata PresentFloor, RequestFloor, step=0x0f;
unsigned long xdata count,i;

Delay()
{
for(count=0; count<=45000; count++);
}
Reset()
{
Step = step & 0x0f;
PortA = Step;
step = step | 0x10;
PortA = Step;
}
Group()
{
Switch(RequestFloor)
{

}
case 0x0d: while(step<0x13)
{
steptt;
PortA=Step;
Delay()
}
```

```
Reset();
Break;

case 0x0b: while(step < 0xfb)
           {
           step++;
      PortA = step;
     Delay();
     }
Reset();
Break;

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

Go Down()
 {
 switch(Required floor)
 {
  case 0x0d: while(step > 0xf3)
  step--;
Port A= 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()
  {
Command Word = 0x82;
 Port = 0xf0;
 Present Floor = PortB;
 Requested Floor = PortB;
 Requested Floor = Requested Floor & 0x0f;
```

```
if (RequestedFloor != 0 && RequestedFloor != PresentFlo)
    {
if (RequestedFloor < PresentFloor)
        GoUp();
    else
        GoDown();
PresentFloor = RequestedFloor;
    }
RequestedFloor.Push();
}
```