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LAB-5

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

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

```
unsigned char xdataCommandWord at 0xe803;
```

```
unsigned char xdataPortA at 0xe800;
```

```
unsigned char xdataPortB at 0xe801;
```

```
unsigned char xdataPresentFloor, RequestedFloor, Step=0xf0;
```

```
unsigned long xdataCount, i;
```

```
Delay ()
```

```
{
```

```
for (count=0; count <= 4500; count++);
```

```
}
```

```
Reset ()
```

```
{
```

```
Step = Step & 0xf0;
```

```
PortA = Step;
```

```
Step = Step | 0xf0;
```

```
PortA = Step;
```

```
}
```

```
GoUp ()
```

```
{  
Switch (RequestedFloor)  
{
```

```
Case 0x0d: while (Step < 0xf3)  
{  
    Step++;  
    Port A = Step;  
    Delay();  
}  
Reset();  
break;
```

```
Case 0x0b: while (Step < 0xfe)  
{  
    Step++;  
    Port A = Step;  
    Delay();  
}  
Reset();  
break;
```

```
Case 0x07: while (Step < 0xfa)  
{  
    Step++;  
    Port A = Step;  
    Delay();  
}  
Reset();  
break;
```

```
}  
}
```

Go Down C)

{

Switch (Requested Floor)

{

Case 0x0d: While (Step > 0xf3)

{

Step--;

PortA = Step;

Delay C);

}

Reset C);

break;

Case 0x0b: While (Step > 0xf5)

{

Step--;

PortA = Step;

Delay C);

}

Reset C);

break;

Case 0x0e: While (Step > 0xf0)

{

Step--;

PortA = Step;

Delay C);

}

Reset C);

break;

}

}



```
void main ()
```

```
{
```

```
CommandWord = 0x82;
```

```
PortA = 0xf0;
```

```
PresentFloor = 0xDe;
```

```
while (1) {
```

```
    RequestedFloor = PortB;
```

```
    RequestedFloor = RequestedFloor & 0x0f;
```

```
    if (RequestedFloor != 0x0f && RequestedFloor != PresentFloor)
```

```
    {
```

```
        if (RequestedFloor < PresentFloor)
```

```
            GoUp();
```

```
    else
```

```
        GoDown();
```

```
        PresentFloor = RequestedFloor;
```

```
    }
```

```
    RequestedFloor = PortB;
```

```
}
```

