

Program to 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, RequestedFloor,
```

```
step = 0xf0;
```

```
unsigned long xdata Count, i;
```

```
Delay()
```

```
{
```

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

```
}
```

```
Rise()
```

```
{ step = step + 0x0f;
```

```
PortA = step;
```

```
step = step / 0xf0;
```

```
PortA = step;
```

```
}
```

```
Group()
```

```
{
```

```
switch (RequestedFloor)
```

```
{
```

case 0x0d: while (step < 0xf3)

step++;

Port A = step;

Delay();

Reset();

break;

case ~~0x0b~~ 0x0b: while (step < 0xf6)

step++;

Port A = step;

Delay();

Reset();

break;

case 0x07: while (step < 0xf9)

step++;

Port A = step;

Delay();

Reset();

break;

}

GoDown ()

<

switch (Requested floor)

<

case 0x0d: while (step > 0xf3)

<

step --;

Port A = step;

Delay ();

}

Reset ();

break;

case 0x0b: while (step > 0xf6)

<

step --;

Port A = step;

Delay ();

}

Reset ();

break;

case 0x0c: while (step > 0xf0)

<

step --;

Port A = step;

Delay ();

}

break; }

void main ()

{

command word = 0x82;

Port A = 0xf0;

Present Floor = 0x0e;

while (1) {

Requested floor = Port B;

Requested Floor = Requested Floor & 0x0f;

if (Requested floor != 0x0f & Requested floor !=
Present floor) {

if (Requested floor < present floor)

Go up();

else

Go Down();

present floor = Requested floor;

}

Requested Floor = Port B;

}

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