1BM19CS167
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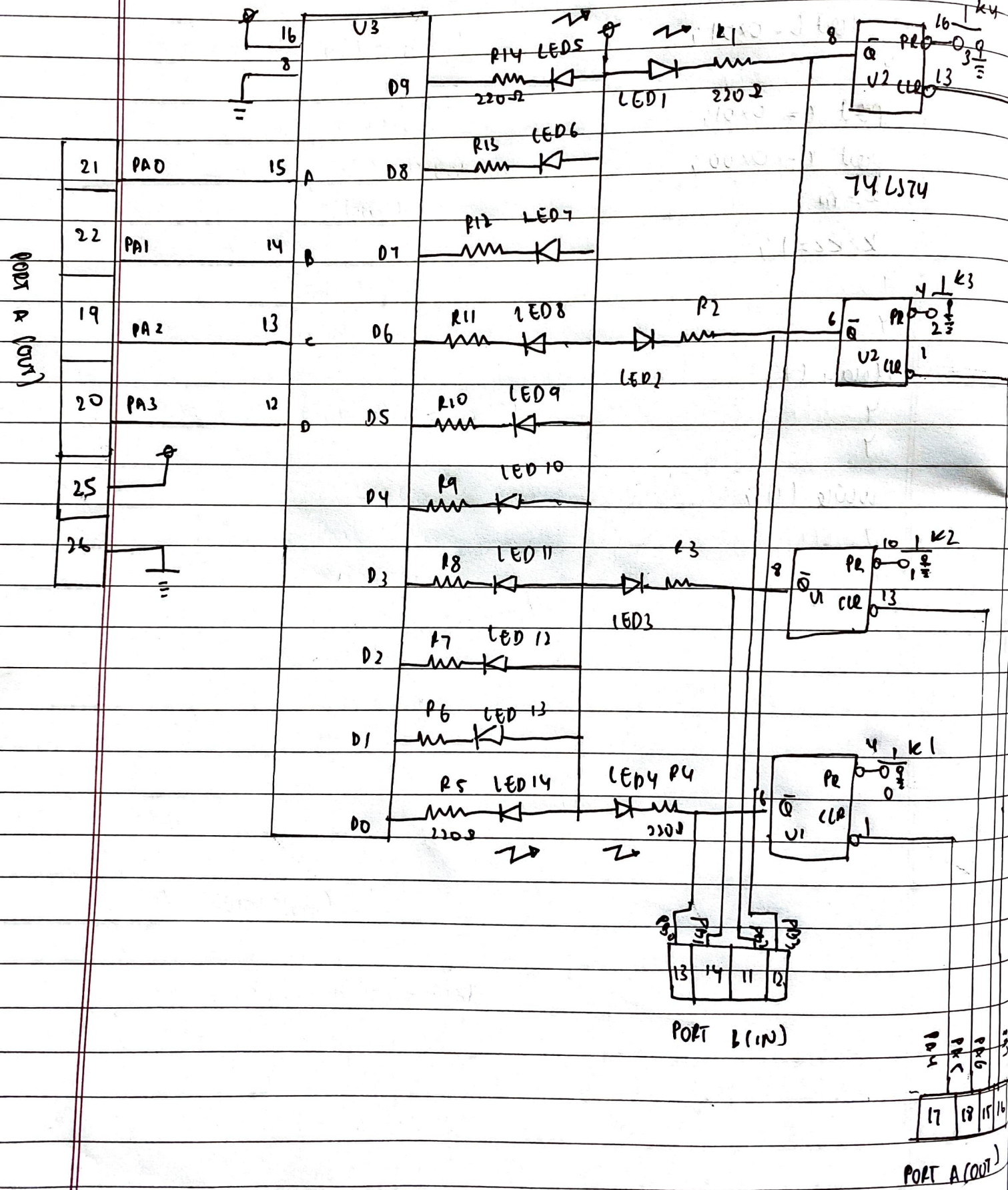
5. Elevator Interface



```
#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= 0x10;
unsigned long xdata Count, i;

Delay()
{
 for (Count = 0; Count <= 4500; Count++);
}

Reset()
{
  Step = Step & 0x0f;
   PortA = Step;
   Step = Step | 0x10;
   PortA = Step;
}
Go Group()
{
  switch (RequestedFloor)
  {
   case 0x00: while (Step!=0x13)
              {
                Step++;
                PortA = Step;
                Delay();
              }
```

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```
Reset ();
break;

case 0x0b: while(step<0x06)
           {
             step++;
             Port A = step;
             Delay();
           }
           Reset ();
           break;

case 0x07: while(step <= 0x09)
           {
             step++;
             Port A= step;
             Delay();
           }
           Reset ();
           break;
  }
}

GoDown()
{
 Switch (RequestFloor)
 {
   case 0x00: while(step >0x03)
              {
                step--;
                Port A= step;
                Delay();
              }
```

```
Reset (1);
break;

Case 0x0b: while (step > 0x06)
           {
            step --;
           Port A = step;
           delay ();
           }
           Reset (1);
           break;

Case 0x0e : while(step > 0x10)
            {
             step --;
            Port A = step;
            Delay ();
            }
            Reset (1);
            break;
}
}
Void main ()
{
  Command word = 0x80;
  Port A = 0x00;
  Present Floor = 0x0e;
  while(1)
  {
     Requested floor = Port B;
     Requested floor = Requested floor & 0x0f;
```

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```
if (RequestedFloor != 0x01 && RequestedFloor != PresentFloor)
{
    if (RequestedFloor < PresentFloor)
        GoUp();
    else
        GoDown();
    PresentFloor = RequestedFloor;
}
RequestedFloor = PortB;
}
```