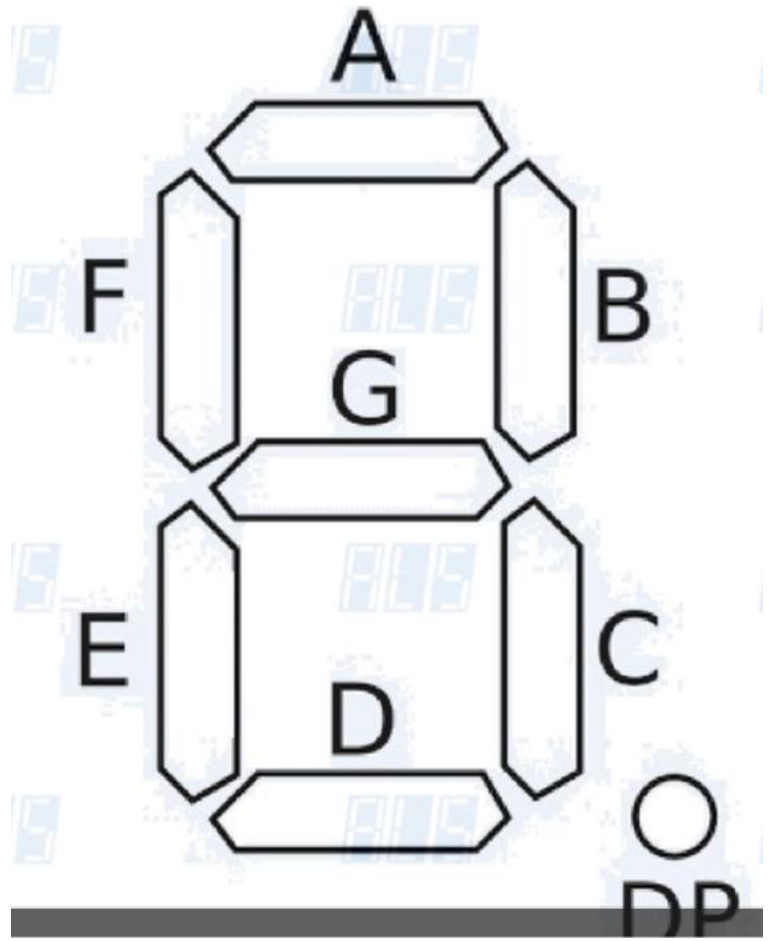
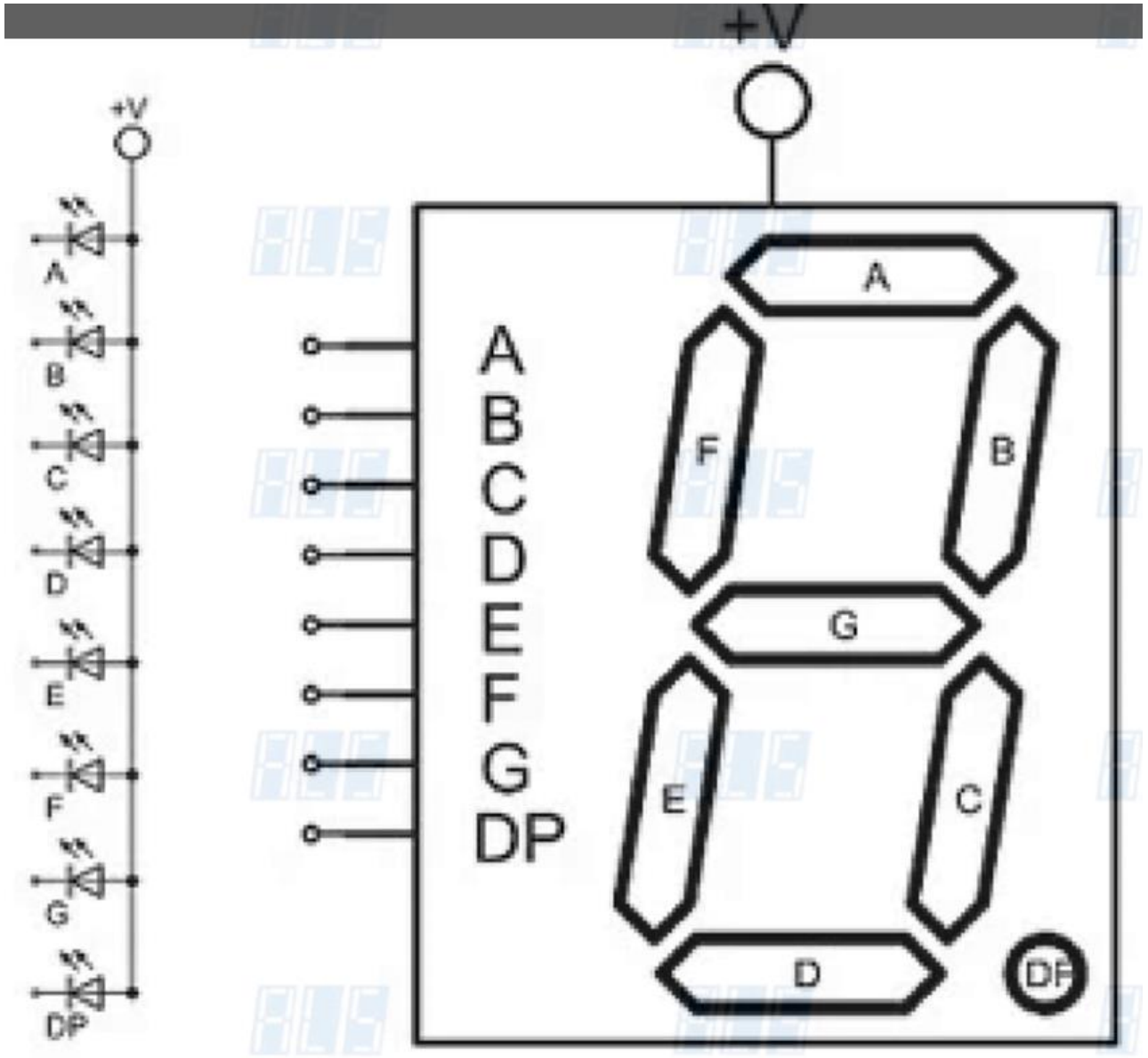
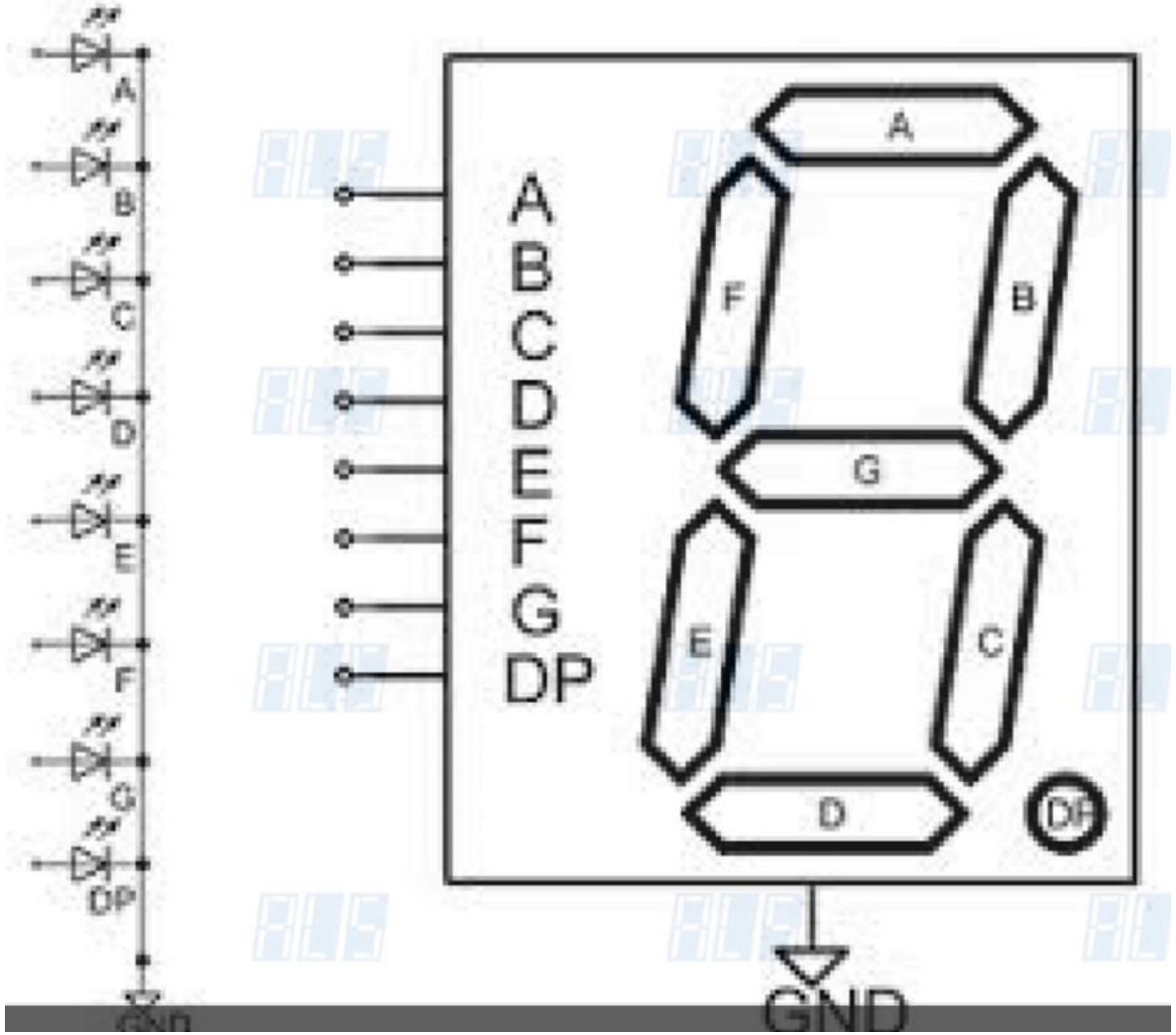
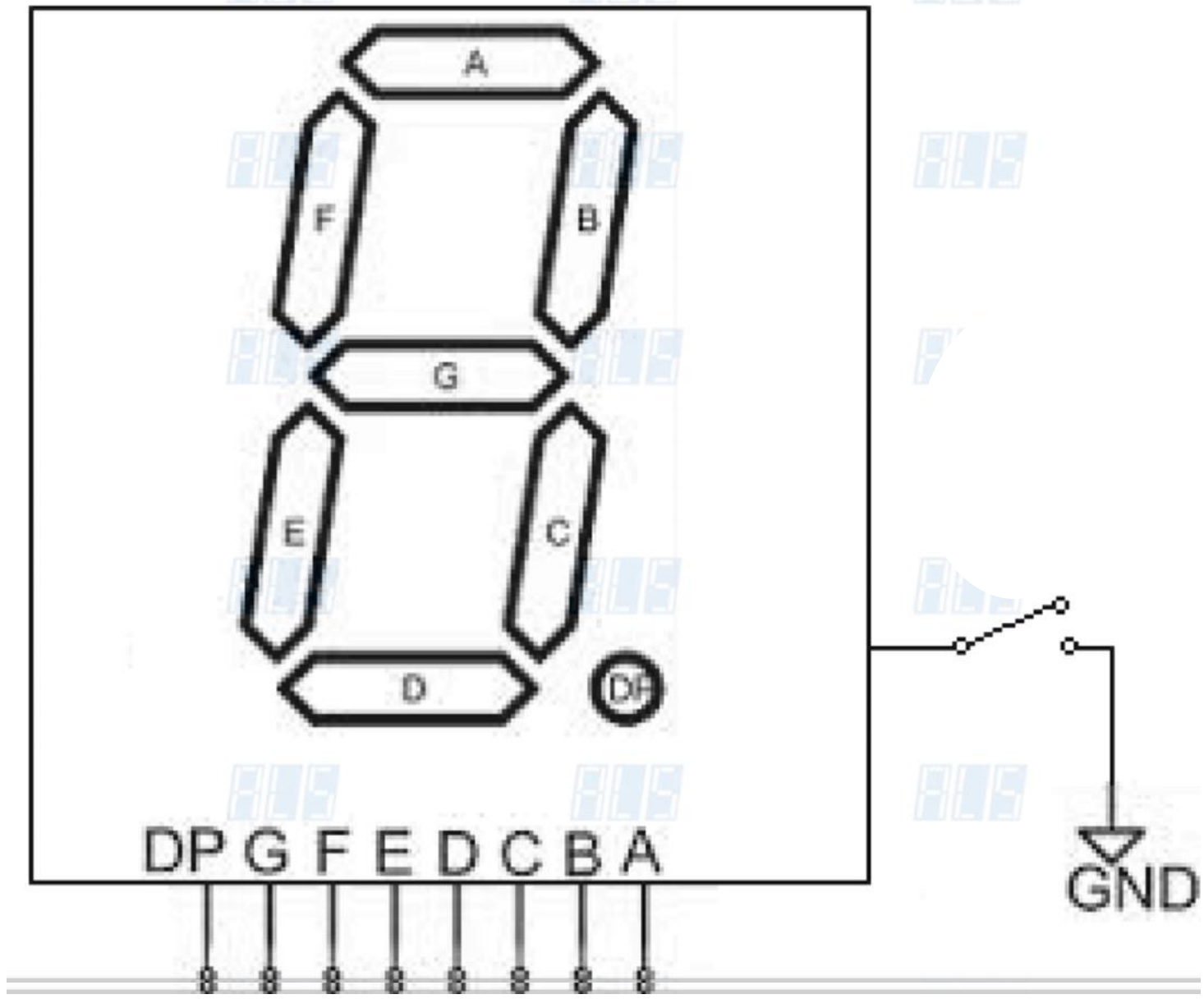
PROGRAMS ON MULTIPLEXED SEVEN SEGMENT DISPLAY

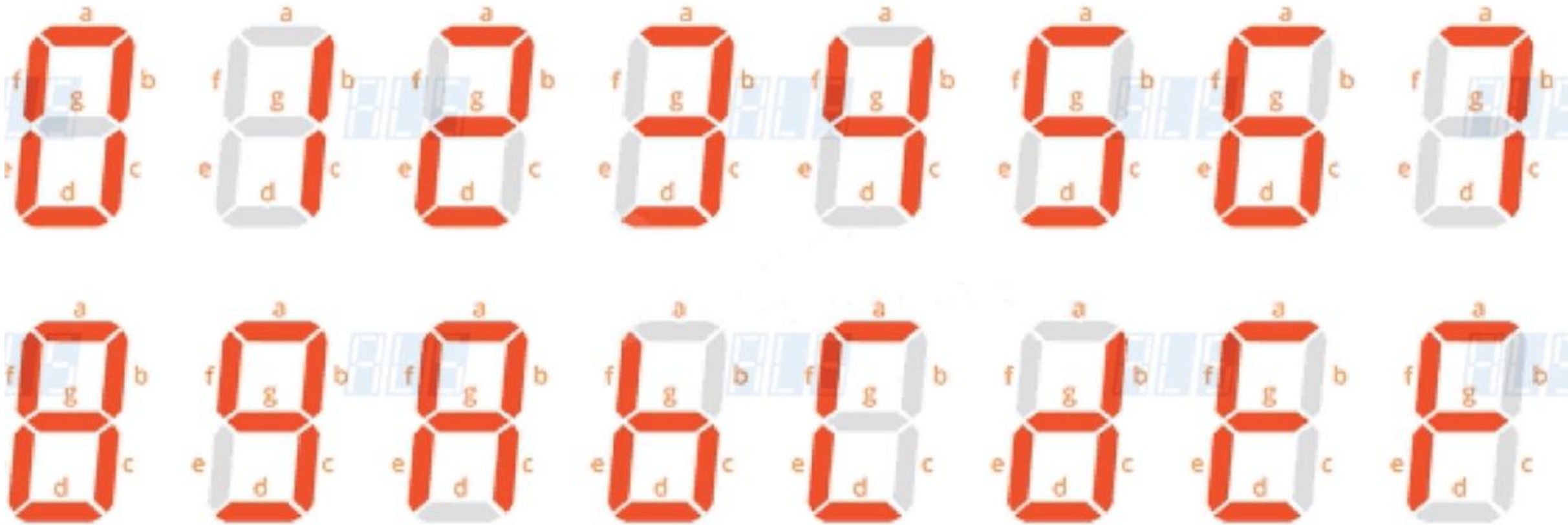

A
F
B
G
E
C
D
DP

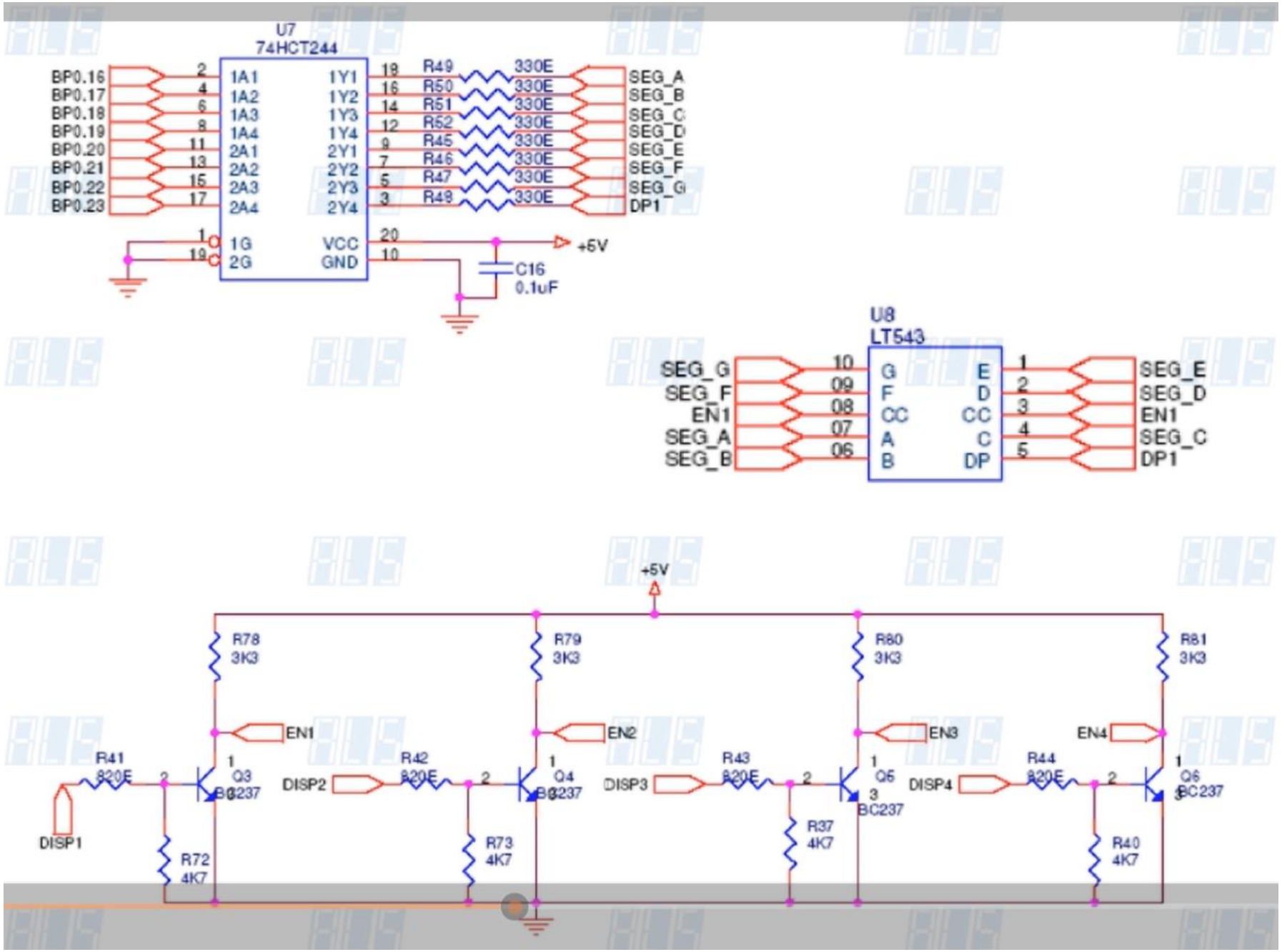

+V
A
B
C
D
E
F
G
DP
A
B
C
D
E
F
G
DP
DP


A
B
C
D
E
F
G
DP
A
B
C
D
E
F
G
DP
GND


A
F
B
G
E
C
D
DP
DP G F E D C B A
GND

DP	G	F	E	D	C	B	A	DISPLAY VALUE	HEX VALUE
0	0	1	1	1	1	1	1	0	0X3F
0	0	0	0	0	1	1	0	1	0X06
0	1	0	1	1	0	1	1	2	0X5B
0	1	0	0	1	1	1	1	3	0X4F
0	1	1	0	0	1	1	0	4	0X66
0	1	1	0	1	1	0	1	5	0X6D
0	1	1	1	1	1	0	1	6	0X7D
0	0	0	0	0	1	1	1	7	0X07
0	1	1	1	1	1	1	1	8	0X7F
0	1	1	0	1	1	1	1	9	0X6F
0	1	1	1	0	1	1	1	A	0X77
0	1	1	1	1	1	0	0	B	0X7C
0	0	1	1	1	0	0	1	C	0X39
0	1	0	1	1	1	1	0	D	0X5E
0	1	1	1	1	0	0	1	E	0X79
0	1	1	1	0	0	0	1	F	0X71


a
f
g
b
e
d
c


U7
74HCT244
BP0.16
BP0.17
BP0.18
BP0.19
BP0.20
BP0.21
BP0.22
BP0.23
1A1
1A2
1A3
1A4
2A1
2A2
2A3
2A4
1G
2G
1Y1
1Y2
1Y3
1Y4
2Y1
2Y2
2Y3
2Y4
VCC
GND
R49 330E
R50 330E
R51 330E
R52 330E
R45 330E
R46 330E
R47 330E
R48 330E
SEG_A
SEG_B
SEG_C
SEG_D
SEG_E
SEG_F
SEG_G
DP1
+5V
C16
0.1uF
U8
LT543
SEG_G
SEG_F
EN1
SEG_A
SEG_B
G
F
CC
A
B
E
D
CC
C
DP
SEG_E
SEG_D
EN1
SEG_C
DP1
+5V
R78 3K3
R79 3K3
R80 3K3
R81 3K3
EN1
EN2
EN3
EN4
R41 820E
R42 820E
R43 820E
R44 820E
Q3 BC237
Q4 BC237
Q5 BC237
Q6 BC237
DISP1
DISP2
DISP3
DISP4
R72 4K7
R73 4K7
R37 4K7
R40 4K7

```
/* Description  :\\\\\\\\\\\\\\\\DISPLAY ARE CONNECTED IN COMMON CATHODE MODE\\\\\\\\\\\\\\\\\\\\\\\\
  Port0 Connected to data lines of all 7 segement displays
     a
    ----
  f|  g |b
   |----|
  e|    |c
    ----  . dot
     d
  a = P0.04
  b = P0.05
  c = P0.06
  d = P0.07
  e = P0.08
  f = P0.09
  g = P0.10
  dot = P0.11
  */
```

```c
#include <LPC17xx.h>
unsigned int delay, count=0, Switchcount=0,j;

unsigned int Disp[16]={0x000003f0, 0x00000060, 0x000005b0, 0x000004f0, 0x00000660,0x000006d0,
              0x000007d0, 0x00000070, 0x000007f0, 0x000006f0, 0x00000770,0x000007c0,
              0x00000390, 0x000005e0, 0x00000790, 0x00000710 };

#define ALLDISP  0x00180000                          //Select all display
#define DATAPORT 0x00000ff0                          //P0.4 to P0.11 : Data lines connected to drive Seven Segments
int main (void)
{
  LPC_PINCON->PINSEL0 = 0x00000000;
  LPC_PINCON->PINSEL1 = 0x00000000;
  LPC_GPIO0->FIODIR = 0x00180ff0;

  while(1)
  {
    LPC_GPIO0->FIOSET |= ALLDISP;
    LPC_GPIO0->FIOCLR = 0x00000ff0;                  // clear the data lines to 7-segment displays
    LPC_GPIO0->FIOSET = Disp[Switchcount];           // get the 7-segment display value from the array

       for(j=0;j<3;j++)
      for(delay=0;delay<30000;delay++);              // delay

        Switchcount++;
        if(Switchcount == 0x10)                      // 0 to F has been displayed ? go back to 0
          {
           Switchcount = 0;
           LPC_GPIO0->FIOCLR  = 0x00180ff0;
          }
  }
```