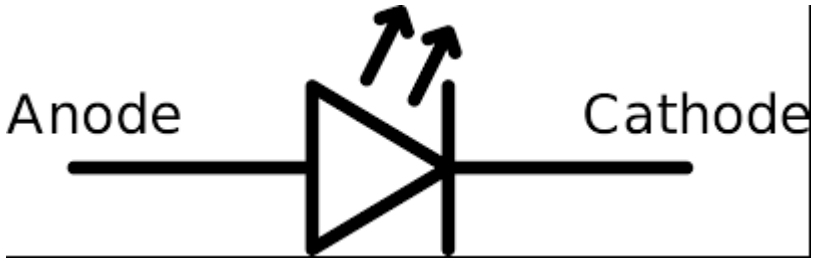
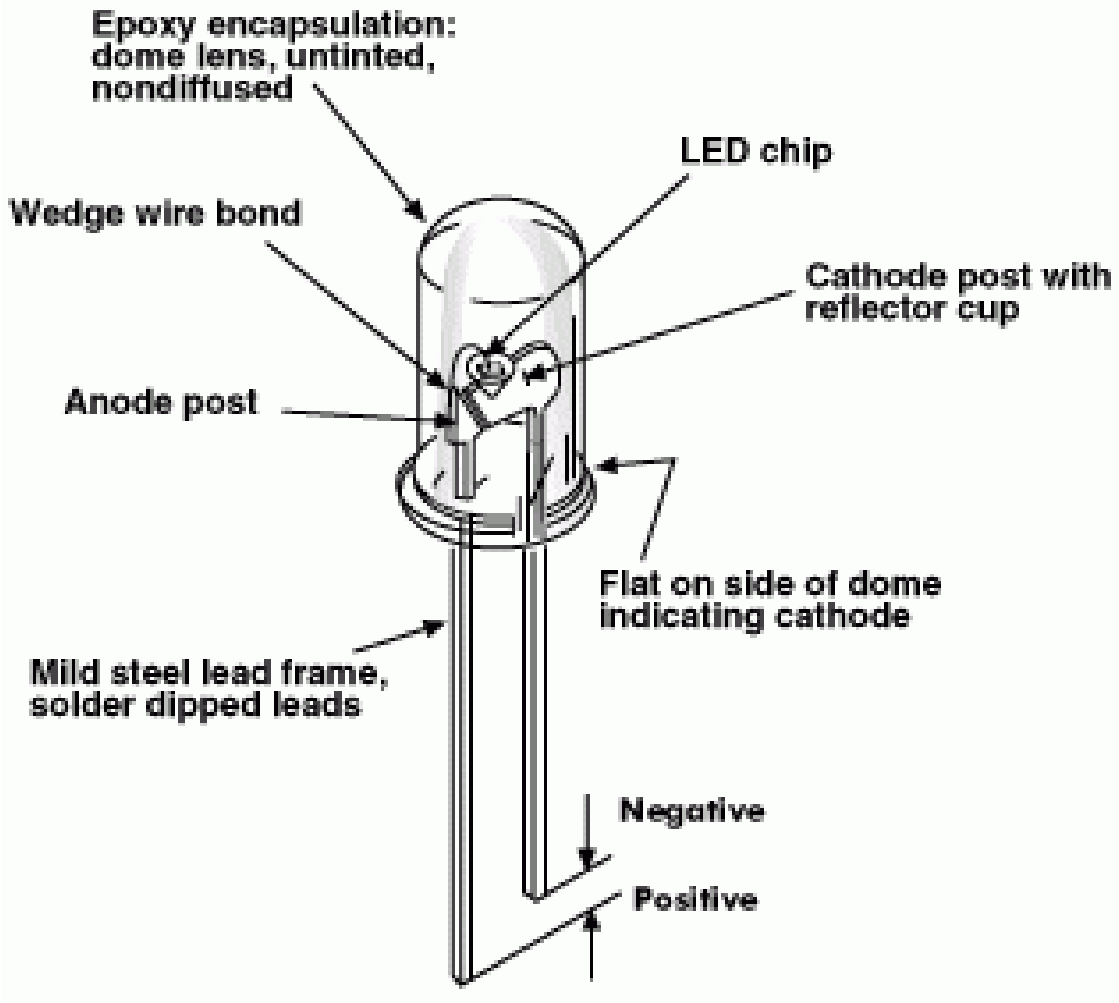
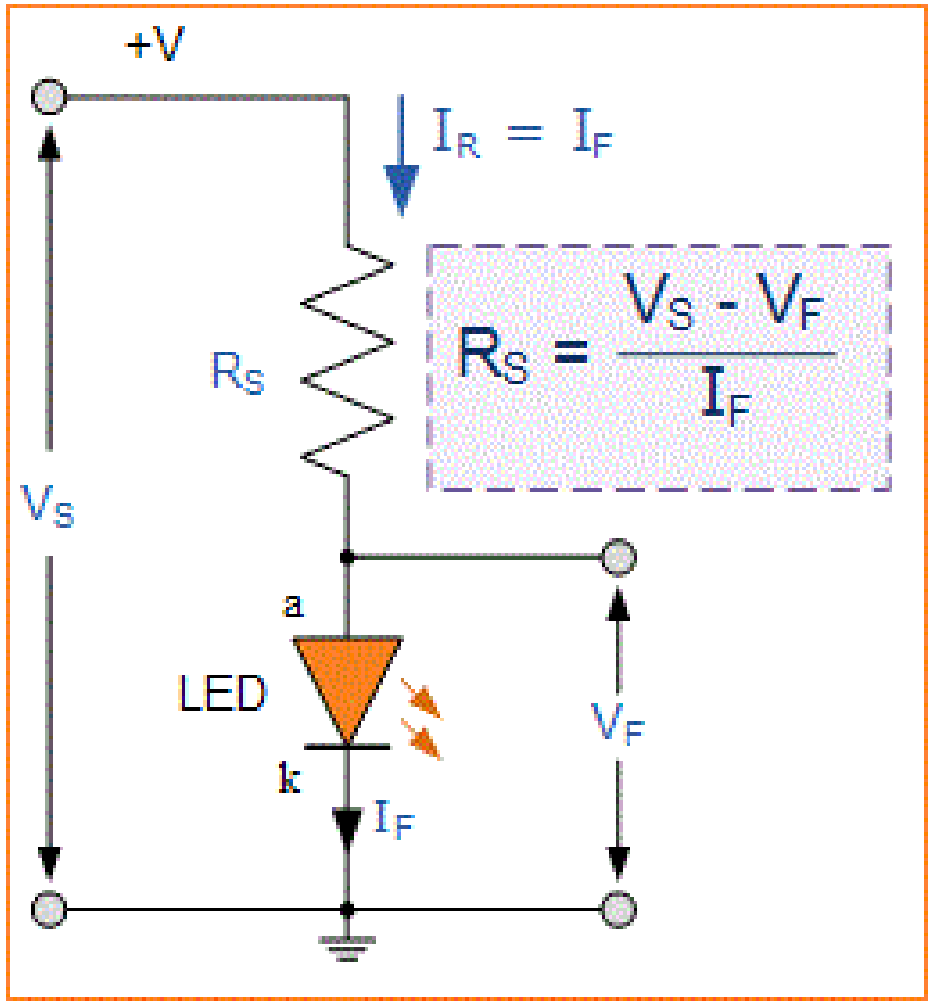
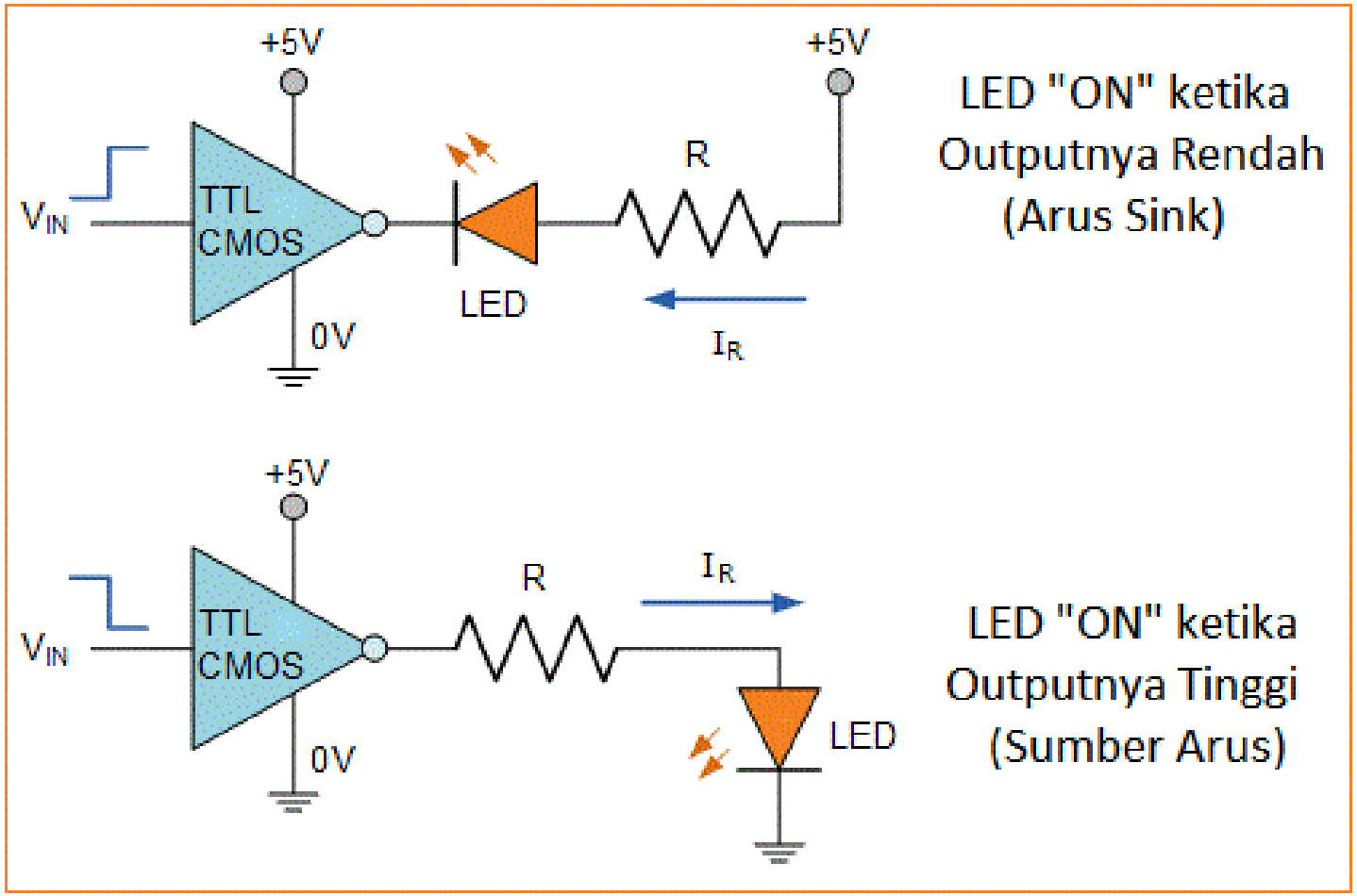
7 Segmen Driver

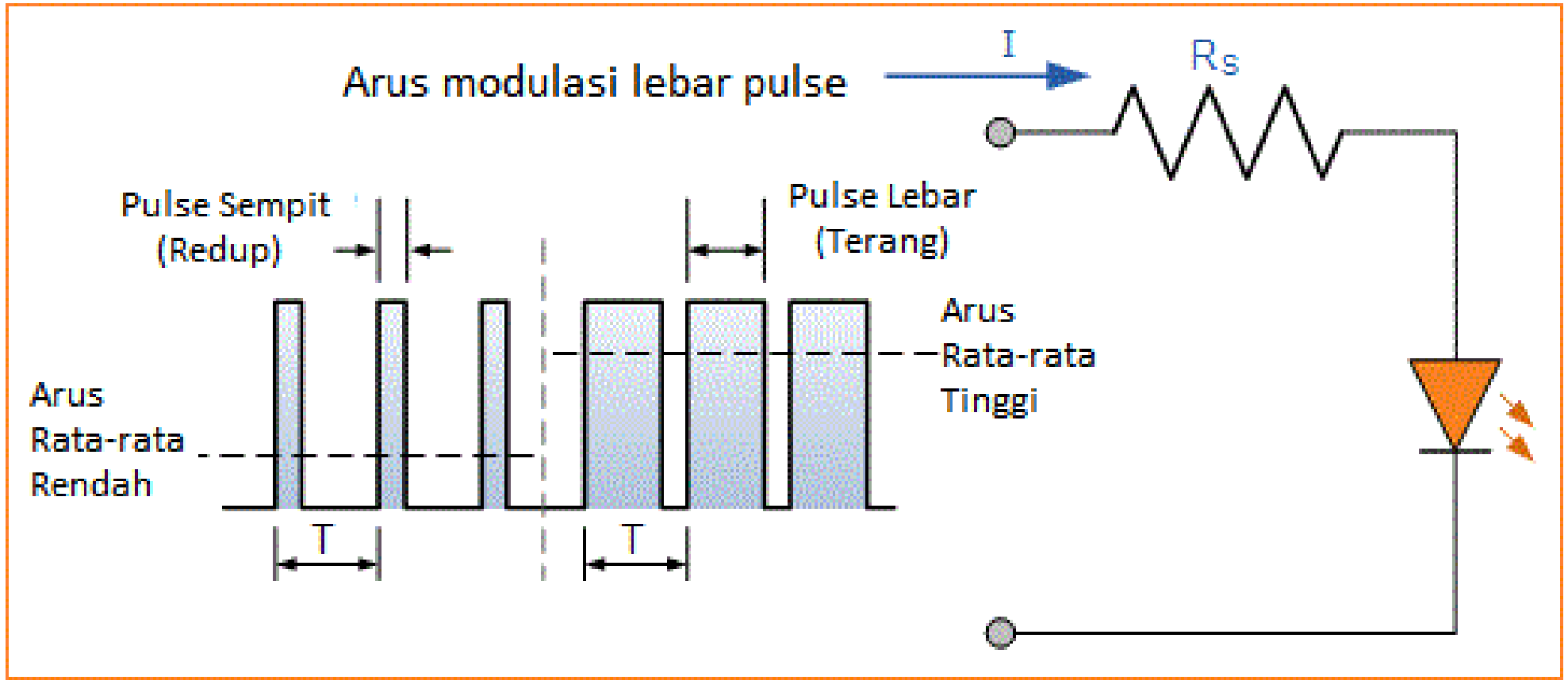
LED

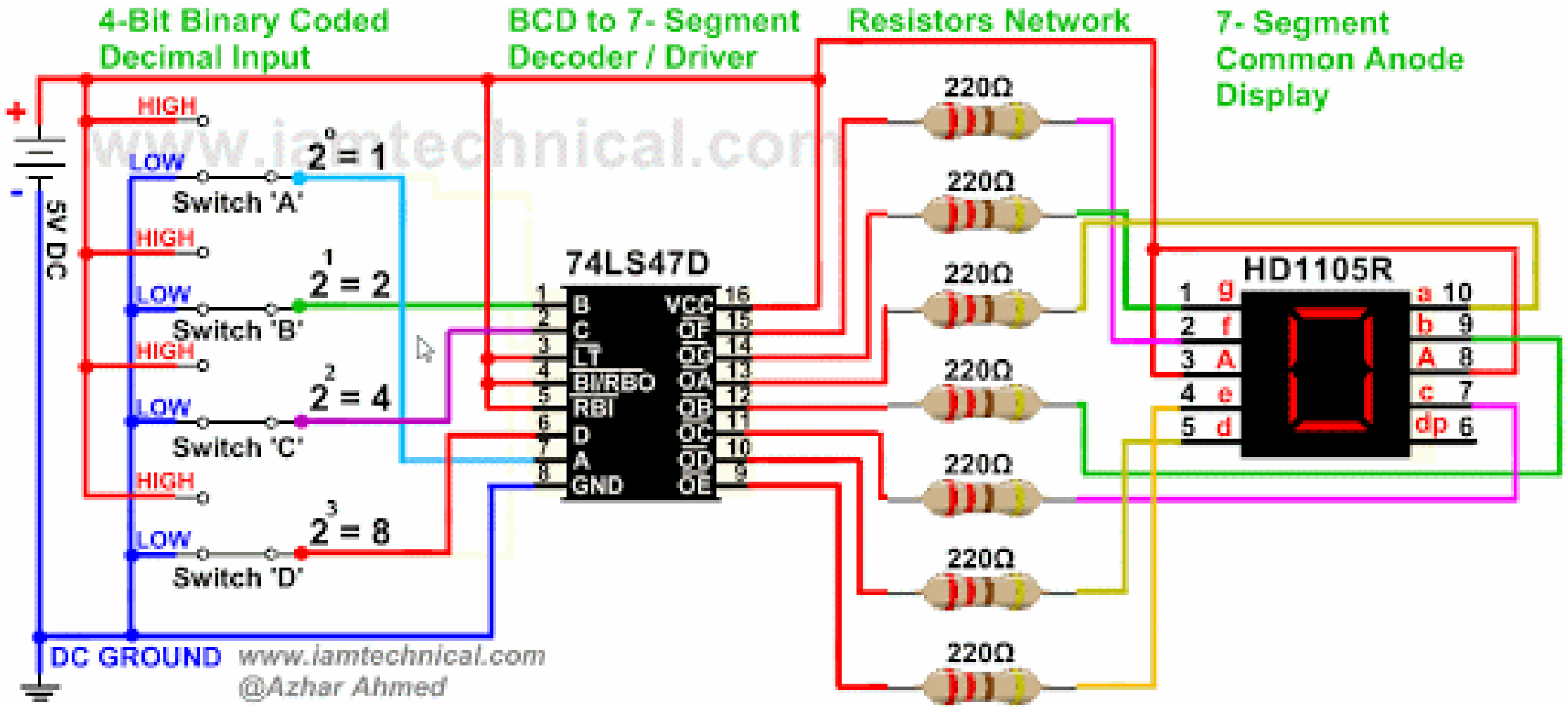

Anode
Cathode


Epoxy encapsulation: dome lens, untinted, nondiffused
LED chip
Wedge wire bond
Cathode post with reflector cup
Anode post
Flat on side of dome indicating cathode
Mild steel lead frame, solder dipped leads
Negative
Positive

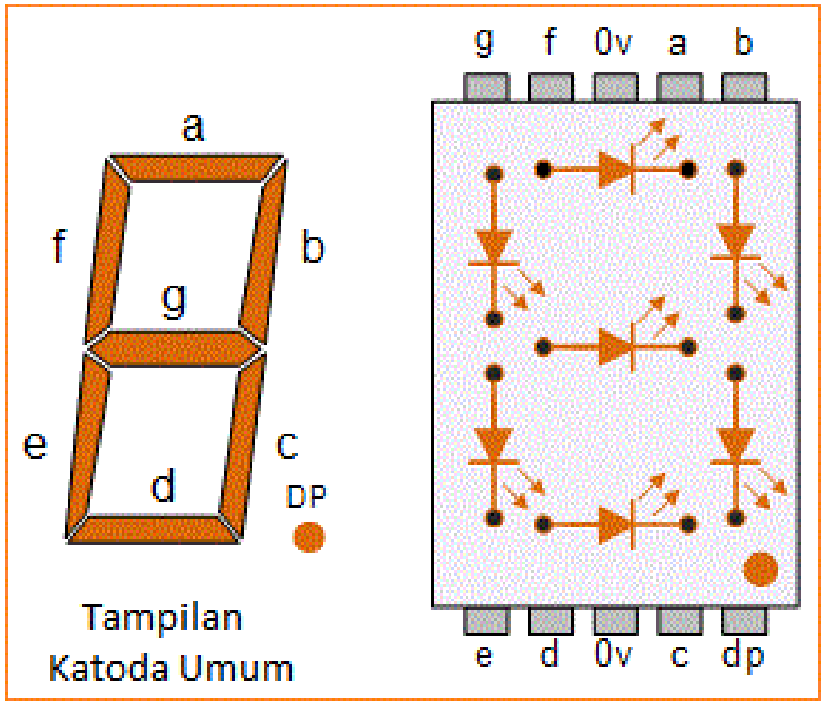

+V
$I_R = I_F$
R_S
V_S
a
LED
k
I_F
V_F
$R_S = \frac{V_S - V_F}{I_F}$

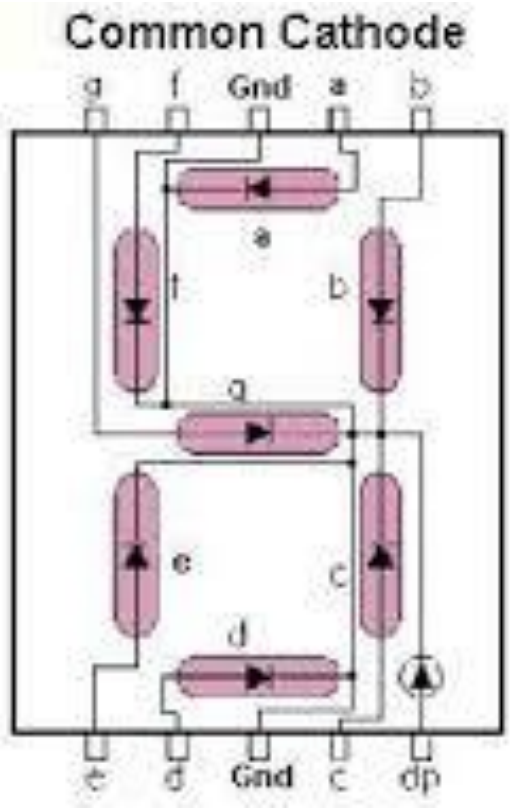

+5V
+5V
V_{IN}
TTL
CMOS
0V
LED
R
I_R
LED "ON" ketika
Outputnya Rendah
(Arus Sink)
+5V
V_{IN}
TTL
CMOS
0V
R
I_R
LED
LED "ON" ketika
Outputnya Tinggi
(Sumber Arus)

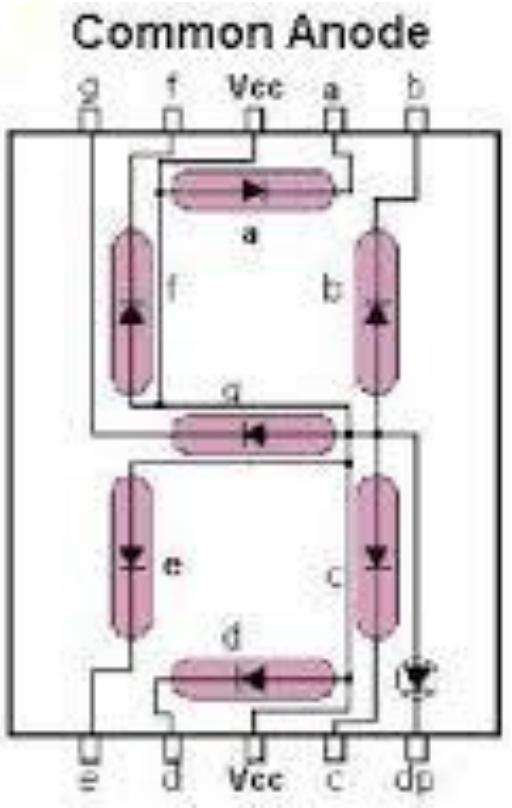

Arus modulasi lebar pulse
I
Rs
Pulse Sempit
(Redup)
Pulse Lebar
(Terang)
Arus
Rata-rata
Tinggi
Arus
Rata-rata
Rendah
T
T

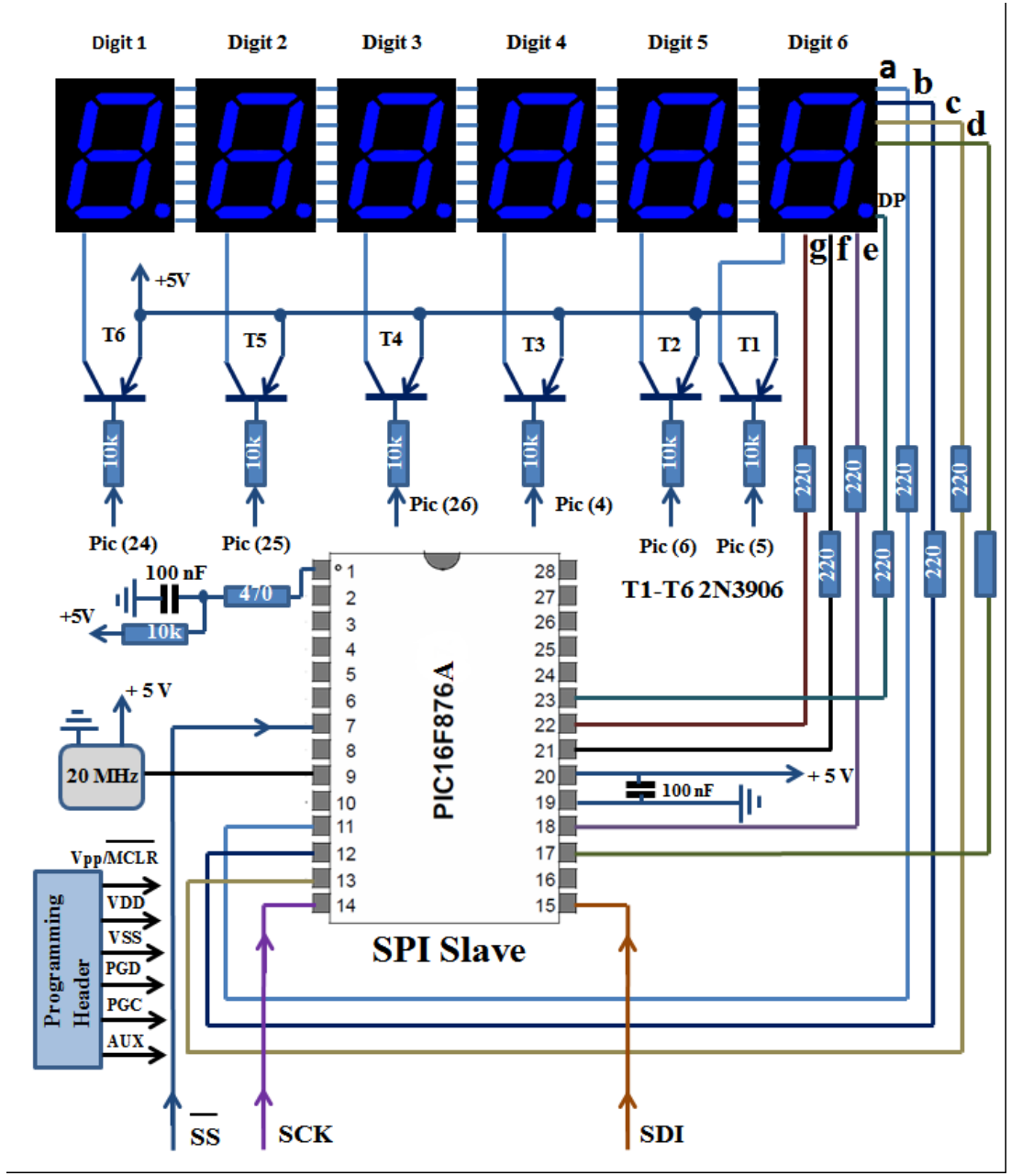

4-Bit Binary Coded Decimal Input
BCD to 7- Segment Decoder / Driver
Resistors Network
7- Segment Common Anode Display
+
-
5V DC
HIGH
LOW
Switch 'A'
Switch 'B'
Switch 'C'
Switch 'D'
2^0 = 1
2^1 = 2
2^2 = 4
2^3 = 8
74LS47D
B
C
LT
BI/RBO
RBI
D
A
GND
VCC
OF
OG
OA
OB
OC
OD
OE
220Ω
HD1105R
g
f
A
e
d
a
b
A
c
dp
DC GROUND
www.iamtechnical.com
@Azhar Ahmed

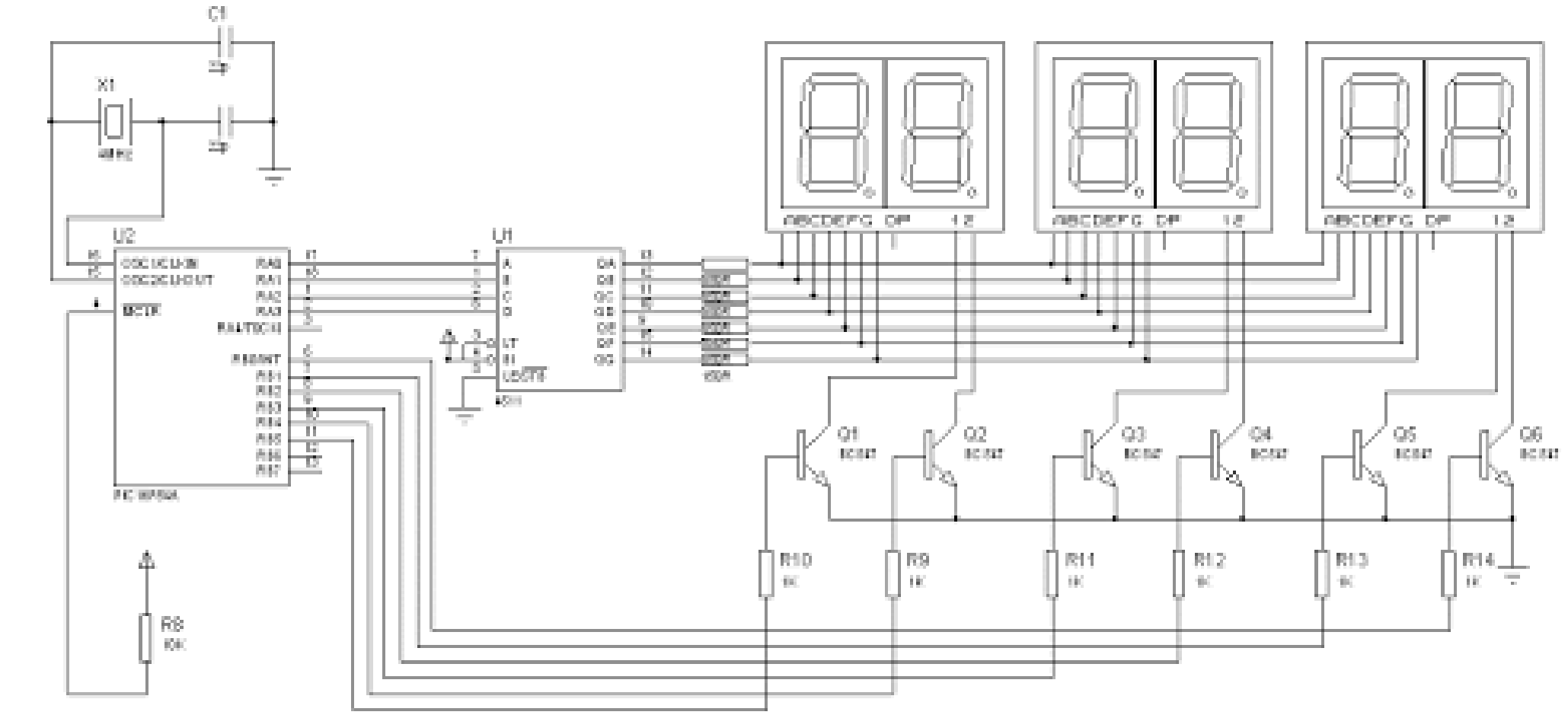
7 Segmen


a
f
b
g
e
c
d
DP
Tampilan
Katoda Umum
g f 0v a b
e d 0v c dp

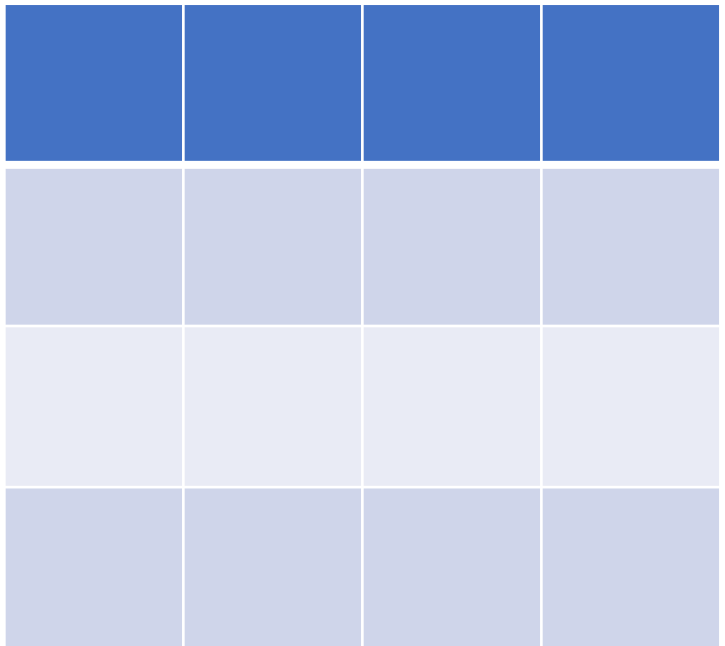

Common Cathode
g f Gnd a b
a
f
b
g
e
c
d
e d Gnd c dp


Common Anode
g f Vcc a b
a
f
b
g
e
c
d
e d Vcc c dp


Digit 1
Digit 2
Digit 3
Digit 4
Digit 5
Digit 6
a
b
c
d
DP
g
f
e
+5V
T6
T5
T4
T3
T2
T1
10k
220
Pic (24)
Pic (25)
Pic (26)
Pic (4)
Pic (6)
Pic (5)
T1-T6 2N3906
100 nF
470
+5V
10k
+ 5 V
20 MHz
PIC16F876A
SPI Slave
100 nF
+ 5 V
Vpp/MCLR
VDD
VSS
PGD
PGC
AUX
Programming Header
SS
SCK
SDI


C1
X1
U2
U1
A
B
C
D
LT
RBI
LE/STB
Q1
Q2
Q3
Q4
Q5
Q6
R8
10K
R9
1K
R10
1K
R11
1K
R12
1K
R13
1K
R14
1K

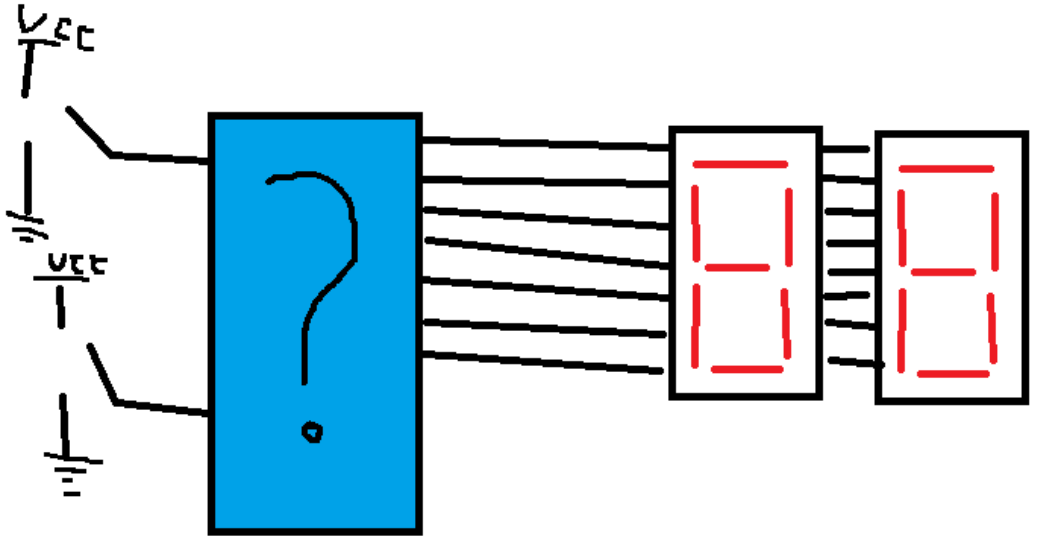
A	B	C	D	a	b	c	d	e	f	g
0	0	0	0	1	1	1	1	1	1	0
0	0	0	1	0	1	1	0	0	0	0
0	0	1	0	1	1	0	1	1	0	1
0	0	1	1	1	1	1	1	0	0	1
0	1	0	0	0	1	1	0	0	1	1
0	1	0	1	1	0	1	1	0	1	1
0	1	1	0	1	0	1	1	1	1	1
0	1	1	1	1	1	1	0	0	0	0
1	0	0	0	1	1	1	1	1	1	1
1	0	0	1	1	1	1	1	0	1	1
1	0	1	0	1	1	1	0	1	1	1
1	0	1	1	0	0	1	1	1	1	1
1	1	0	0	1	0	0	1	1	1	0
1	1	0	1	0	1	1	1	1	0	1
1	1	1	0	1	0	0	1	1	1	1
1	1	1	1	1	0	0	0	1	1	1



Tugas 2 minggu kedepan

- Membuat simulasi dengan input saklar dan output dua 7 segmen (boleh common anode, boleh common cathode)

A1	A0	7 segmen dua digit
0	0	NRP
0	1	Tgl lahir
1	0	Berat Badan
1	1	Tinggi Badan



Hasil diupload

1. Laporan yang berisi
   a) Cara kerja
   b) Deskripsi input output
   c) Desain Truth table
   d) Kmap dan persamaan
   e) Gambar rangkaian dan simulasi desain
2. Lampiran
   a) Foto bukti NRP dari KTM (sebagai Bukti NRP)
   b) Foto bukti tanggal lahir (bisa dari screenshoot integra atau lainnya)
   c) Foto bukti timbang badan (sebagai bukti berat badan)
   d) Foto bukti pengukuran Tinggi Badan (Sebagai bukti Tinggi Badan h anda)

Hasil diupload

1. Video saat simulasi desain dan saat alat dijalankan dengan penamaan Demo1_NRP.mp4
2. File laporan dalam format PDF dengan penamaan Demo1_NRP.pdf