

PRAKTIKUM SISTEM DIGITAL

MODUL 5 : ALJABAR BOOLEAN



Disusun oleh:

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PROGRAM STUDI TEKNIK INFORMATIKA

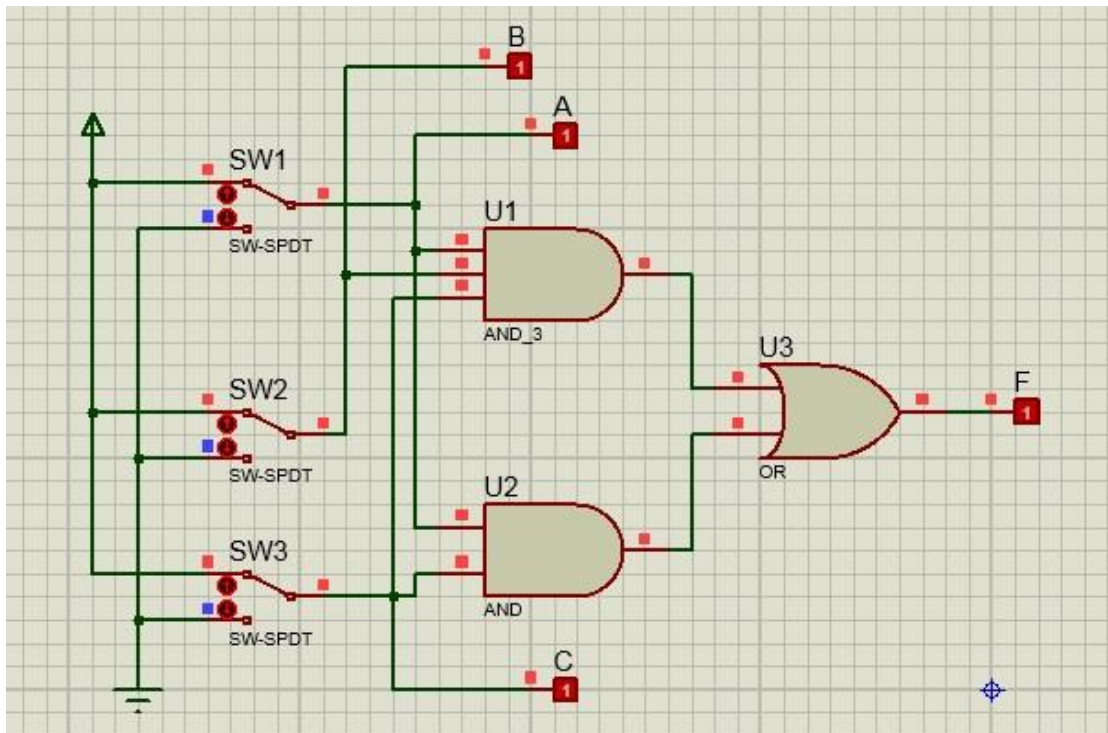
FAKULTAS KOMUNIKASI DAN INFORMATIKA

UNIVERSITAS MUHAMMADIYAH SURAKARTA

TAHUN 2019/2020

KEGIATAN PRAKTIKUM

Percobaan 1:



- 1.
2. Fungsi Boolean : $F = ABC + AC$
3. Tabel Kebenaran

A	B	C	F
0	0	0	0
1	0	0	0
0	1	0	0
1	1	0	0
0	0	1	0
1	0	1	1
0	1	1	0
1	1	1	1

4. Karnaugh Map

00		AB			
		01	11	10	00
C	0	0	0	0	0
	1	0	1	1	0

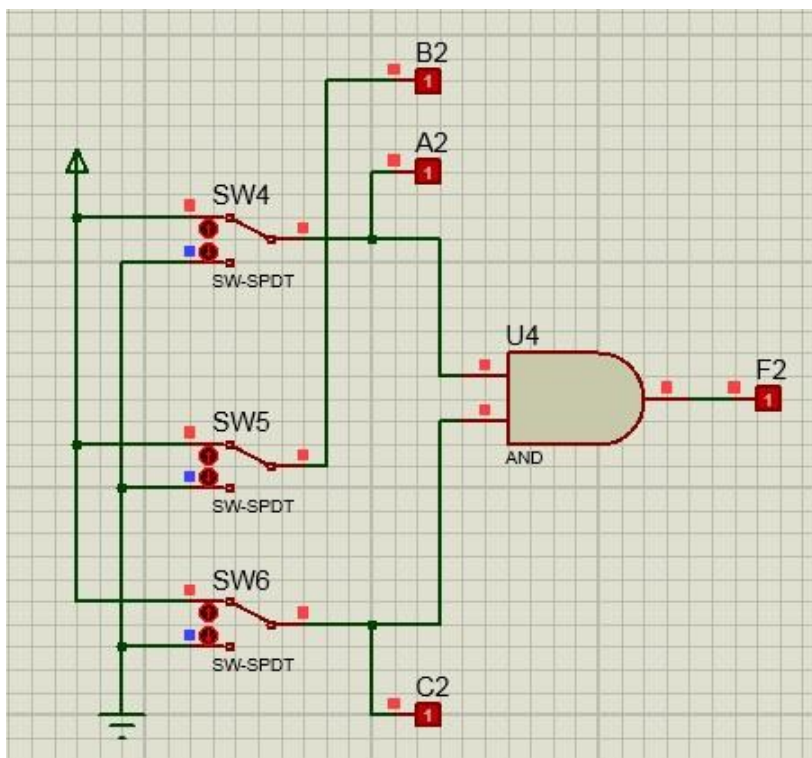
5. Sederhanakan fungsi boolean berdasarkan karnaugh map :

$$F = ABC + AC$$

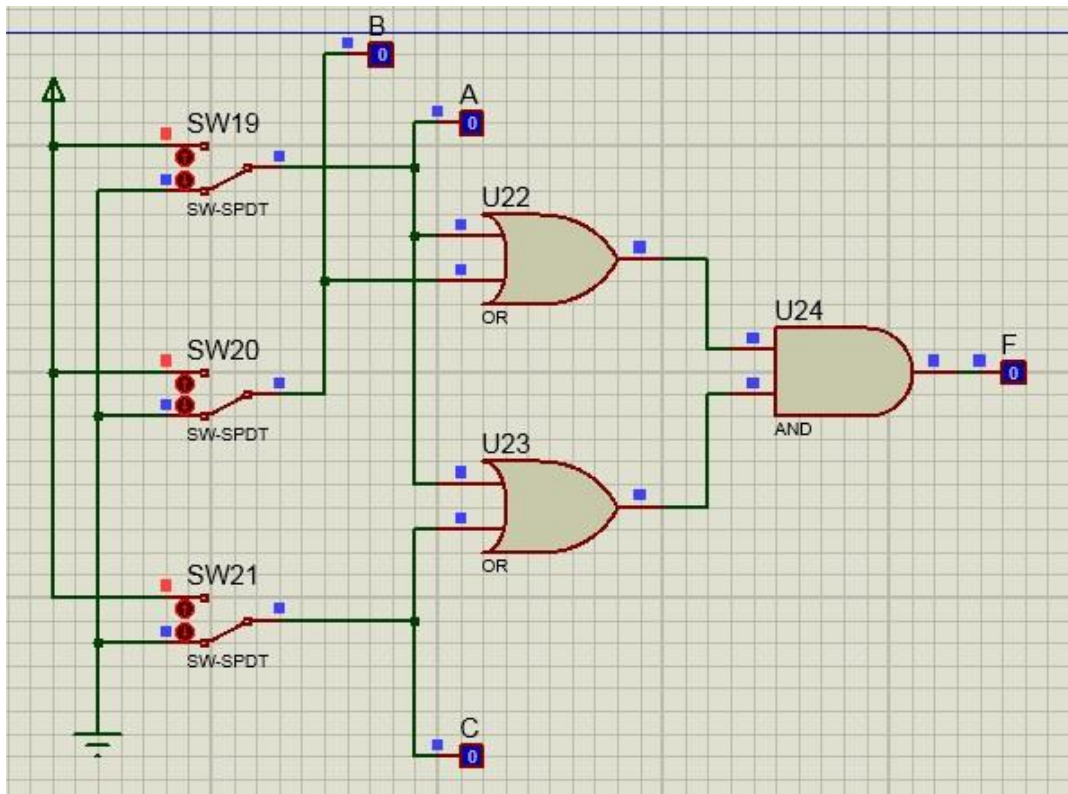
$$F = AC(B+1)$$

$$F = AC$$

6.



Percobaan 2:



- 1.
2. Fungsi Boolean : $F = (A+B).(A+C)$
3. Tabel Kebenaran

A	B	C	F
0	0	0	0
1	0	0	1
0	1	0	0
1	1	0	1
0	0	1	0
1	0	1	1
0	1	1	1
1	1	1	1

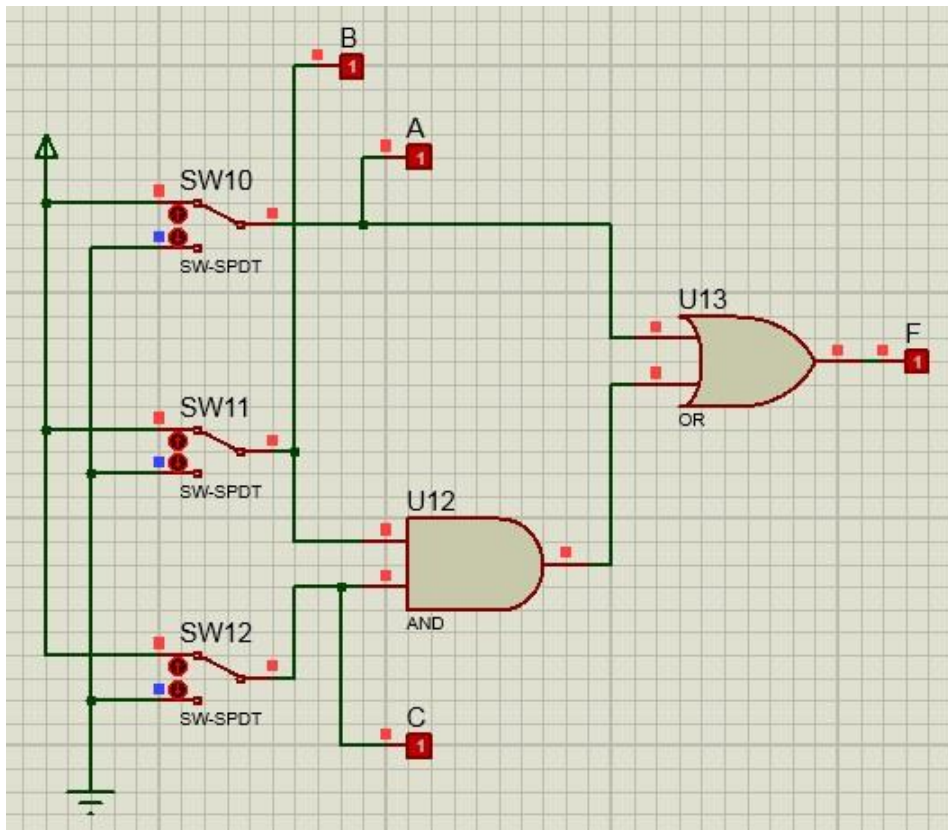
4. Karnaugh Map

00		AB			
		01	11	10	00
C	0	0	1	1	0
	1	1	1	1	0

5. Sederhanakan fungsi boolean berdasarkan karnaugh map :

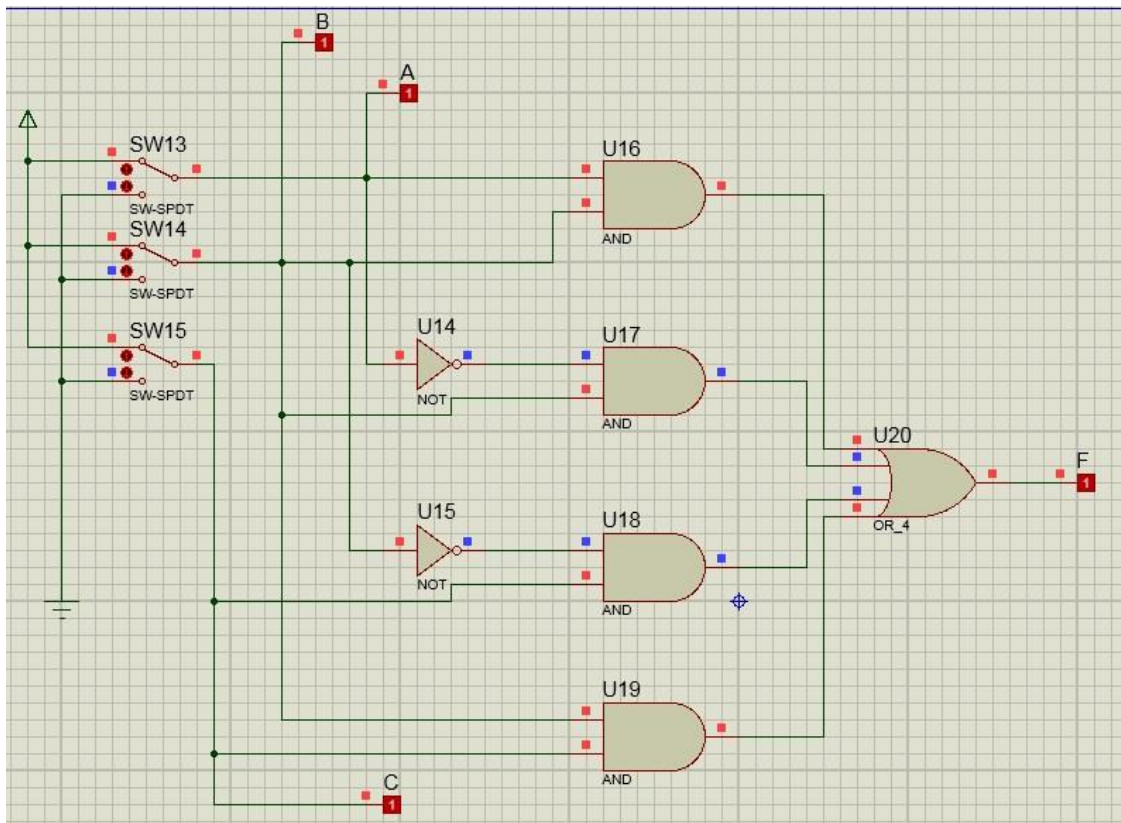
$$F = (A+B).(A+C)$$

$$\mathbf{F = A+(BC)}$$



6.

Percobaan 3:



- 1.
2. Fungsi Boolean : $F = AB + A'B + B'A + BC$
3. Tabel Kebenaran

A	B	C	F
0	0	0	0
1	0	0	0
0	1	0	1
1	1	0	1
0	0	1	1
1	0	1	1
0	1	1	1
1	1	1	1

4. Karnaugh Map

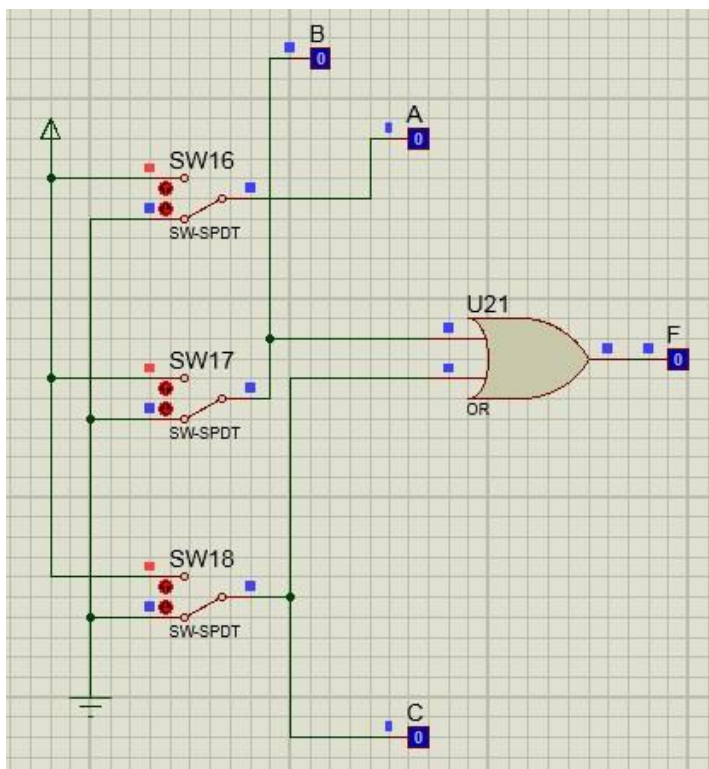
00		AB			
		01	11	10	00
C	0	1	1	0	0
	1	1	1	1	1

5. Sederhanakan fungsi boolean berdasarkan karnaugh map :

$$F = AB + A'B + B'C + BC$$

$$F = (B(A+A')) + (C(B+B'))$$

$$\mathbf{F = B+C}$$



6.