

LAB WORK
DIGITAL SYSTEM
SEMESTER GENAP



Disusun oleh:

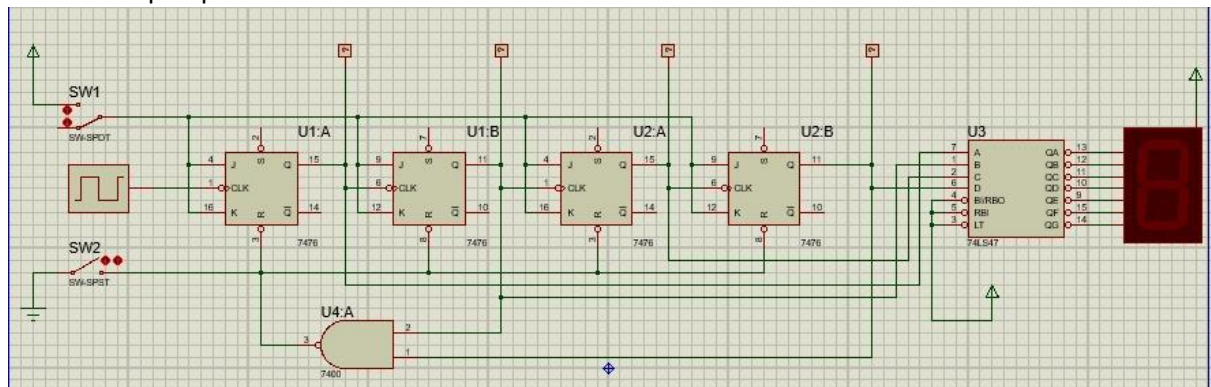
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PROGRAM STUDI INFORMATIKA
FAKULTAS KOMUNIKASI DAN INFORMATIKA
MUHAMMADIYAH UNIVERSITY OF SURAKARTA

Exercise 1. Modulus Circuit 10 and Decoder

1. Create JK flip flop combinations



2. Components needed in the circuit.

No.	Device	Information
1	IC 74LS47	-
2	IC 7476	-
3	IC 7400	-
4	Logic Probe	-
5	Clock	Frequency= 50 Hz
6	Switch-SPDT	-
7	Switch-SPST	-
8	BCD-7Segment	-

3. SW-SPST set it is not connected.

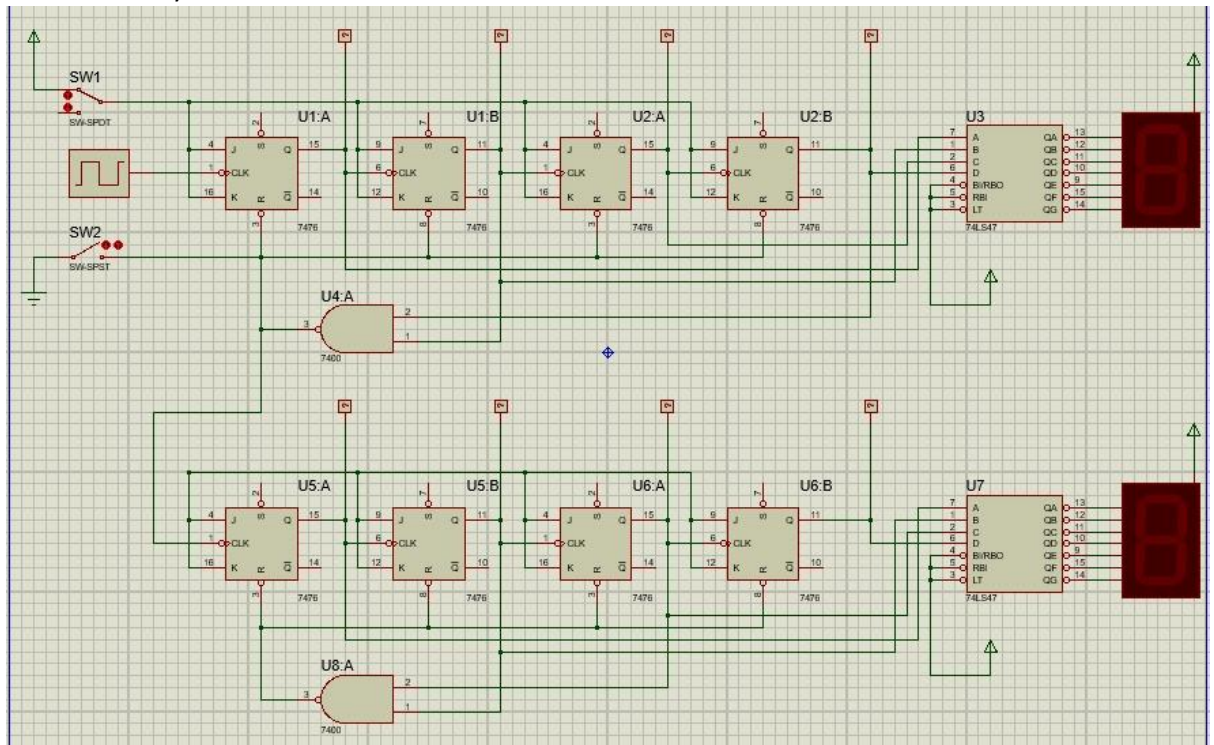
4. Run the circuit and how the output seen on the seven segment!

Answers : If SW-SPST isn't connected, seven segment runs 0-9 quickly.

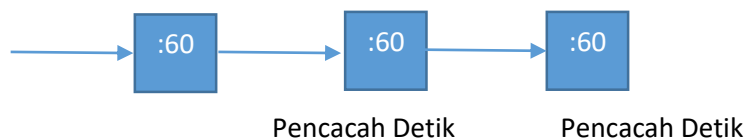
If the SW-SPST is connected then the seven segment stops at 0.

Exercise 2 . Modulus circuit 6 and decoder.

1. To reach seconds, it is necessary to add another series of counters. the NAND gate (first try) will send the clock on the first JK flip flop in the second experiment if the decoder has reached binary 9.



2. Change the clock frequency to 250 Hz. What is the clock function in the series above?
Answers : Set the speed of changing numbers in the segment.
3. Lanjutkan rangkaian di atas hingga perhitungan daur menit.



4. Explain the usefulness of the SW-SPDT in the above sequence?
Answers : Only as a complement to the main series.
5. Describe the use of the SW-SPST in the above sequence?
Answers : To stop circuit 1 and add 1 number to the 2nd circuit.