

# **DIGITAL SYSTEM**

## **PRACTICUM REPORT 4 : LOGIC GATE COMBINATION**



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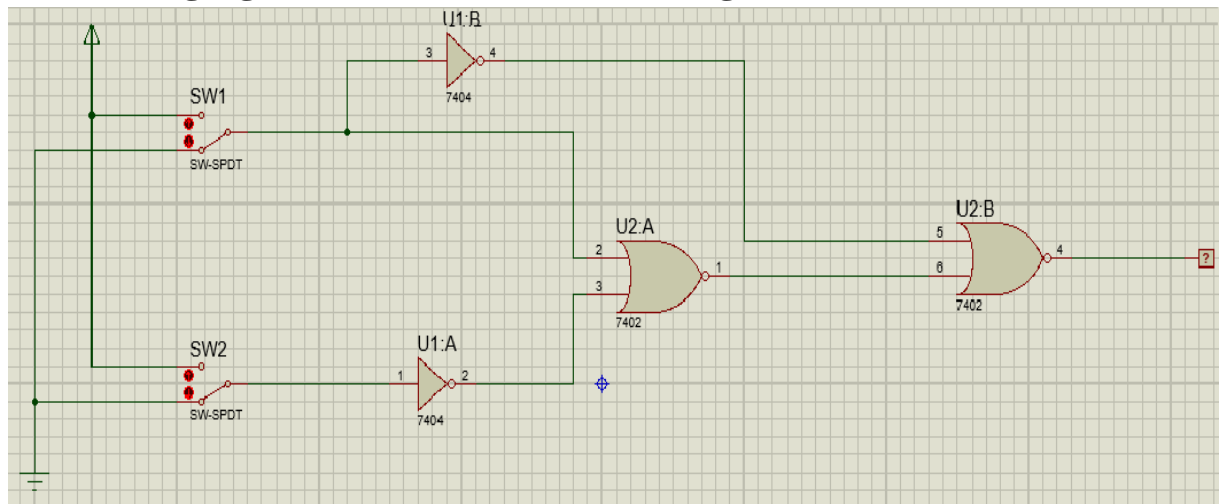
**MUHAMMADIYAH UNIVERSITY OF SURAKARTA**

**2019**

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**DATE OF PRACTICUM** : Friday, March 22<sup>th</sup> 2019

### #ADDITIONAL ASSIGNMENT

1. Create a logic gate combination as show in figure below!

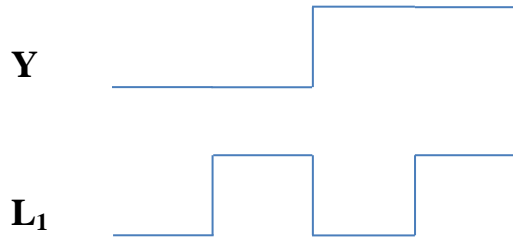


a) Truth table

X	Y	L <sub>1</sub>
0	0	0
1	0	1
0	1	0
1	1	1

b) Time diagram





c) Boolean function

$$\overline{(\overline{X + Y}) + \overline{X}}$$

2. Create a logic gate circuit based on the following Boolean function!

$$F = (\overline{A} \cdot \overline{B} + C) + (\overline{D} \cdot E)$$

