DIGITAL SYSTEM

PRACTICUM REPORT 4 : LOGIC GATE COMBINATION

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INFORMATION TECHNOLOGY

FACULTY OF COMMUNICATION AND INFORMATICS

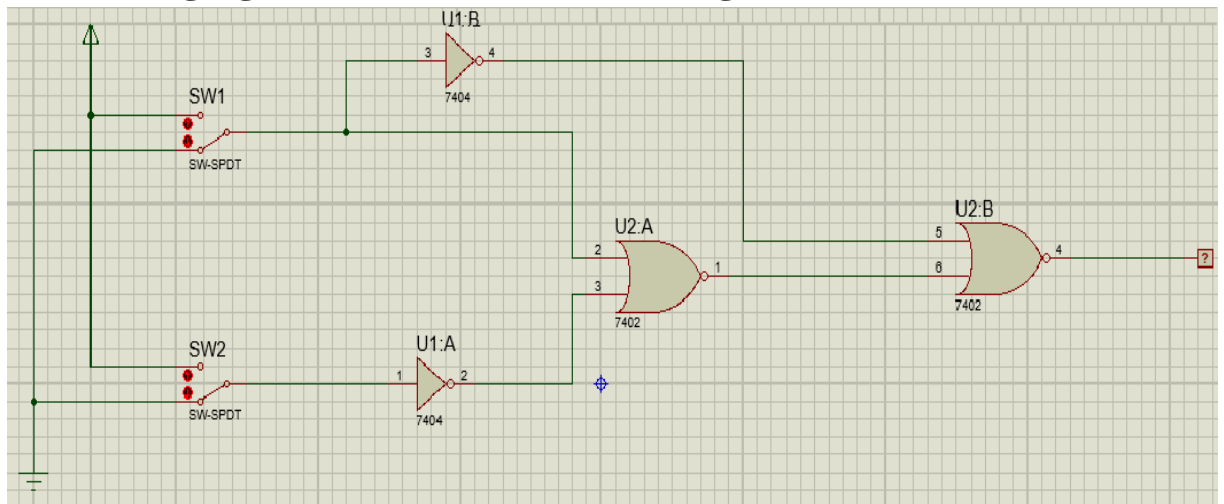# MUHAMMADIYAH UNIVERSITY OF SURAKARTA

2019

NIM   : L200184172

NAME   : HAFSHAH FITRI AFIFAH

CLASS   : X

ASSISTANT   : SALSA SASMITA MUKTI

DATE OF PRACTICUM   : Friday, March 22th 2019

#ADDITIONAL ASSIGNMENT

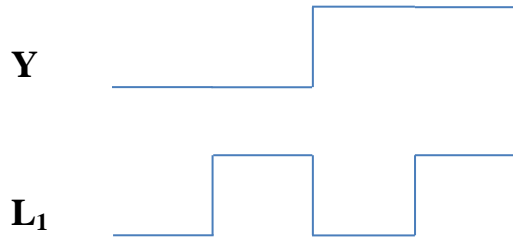1. **Create a logic gate combination as show in figure below!**

a) **Truth table**

X	Y	L$_1$
0	0	0
1	0	1
0	1	0
1	1	1

b) **Time diagram**

X

Y

L₁

c) **Boolean function**

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

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

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