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CTT10009 – COMPUTER SYSTEM

EXERCISES

EX4: Logic circuit design

I. Information:

Code:	EX4
Deadline:	
Form of submission:	Individual
Tool to submit:	Moodle
Supervisor	Chung Thùy Linh
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II. Outcome

After this exercise you will reach to:

- G5.1: design some typical combinational circuits in logical level

III. Describe

A. Consider the following true table

S	A	B	Y
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	1

1. Create the corresponding boolean expression in sum-of-product form
2. Simplify the expression using Karnaugh diagram
3. Draw the final logic circuit in a simple form, that can reuse as many gates as possible
4. Use Logisim to simulate this circuit

IV. Submission requirement:

1. Report *student_ID.pdf* is included:
   a. Your explanation for state A.1, A.2, A.3
   b. The result when you simulate by using Logisim (capture the screen)
2. Please submit to moodle site with the name **Student_ID.pdf**