Dept. of Computer Science &Engineering

Course Code: CSE-2324

Course Title : Digital Logic Design Lab

Submitted by:

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SUBMISSION: *03-10-21*

Experiment No: 05

Experiment Name: Implementation two bit magnitude comparator circuit

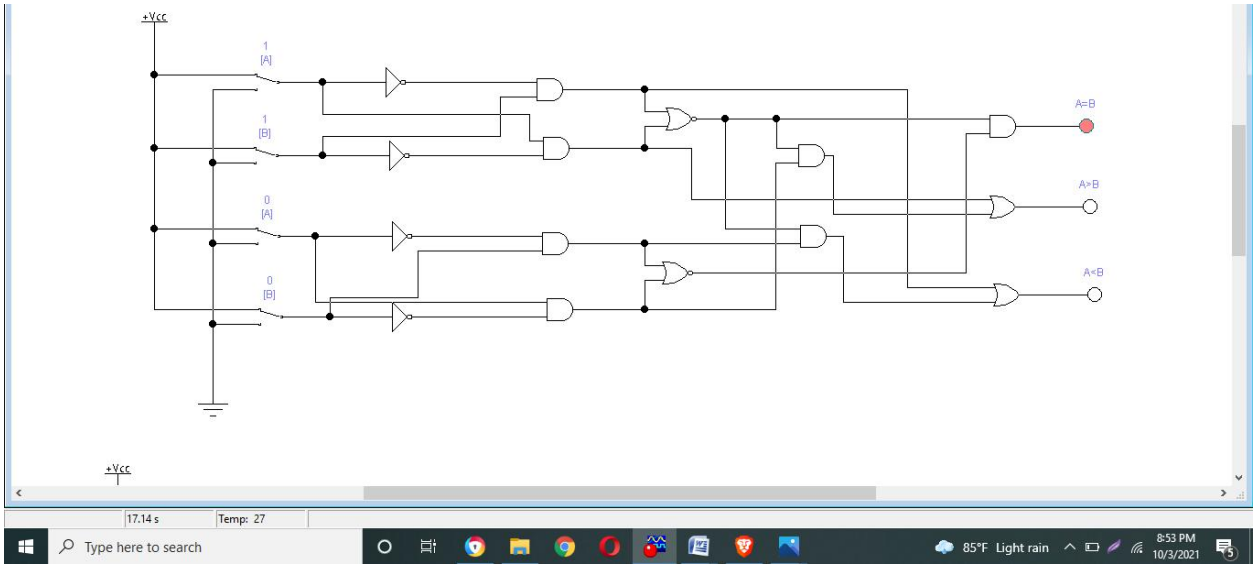
Required tools:

- ➢ NOT 7404, AND 7408,NOR 7402,OR 7432
- ➢ Wires
- ➢ LED
- ➢ Electronic Workbench Software

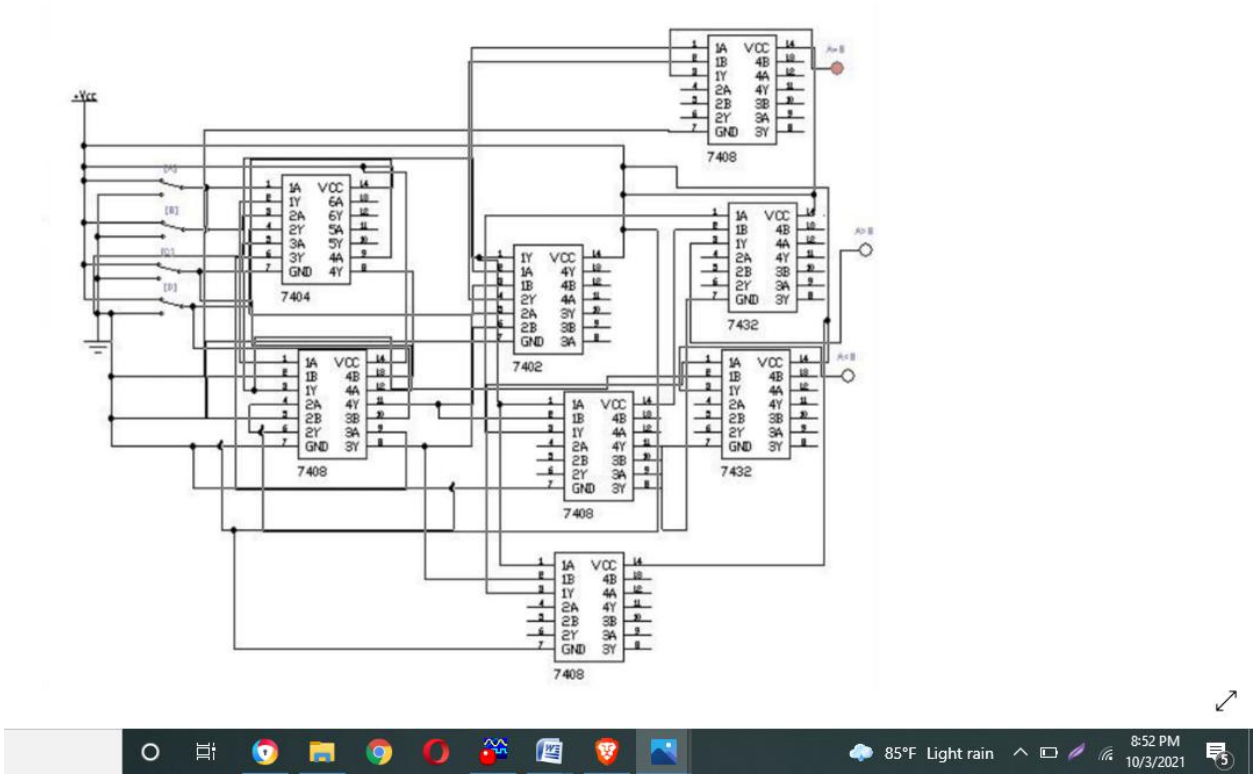
Turth Table:

INPUT				OUTPUT		
A1	A0	B1	B0	A<B	A=B	A>B
0	0	0	0	0	1	0
0	0	0	1	1	0	0
0	0	1	0	1	0	0
0	0	1	1	1	0	0
0	1	0	0	0	0	1
0	1	0	1	0	1	0
0	1	1	0	1	0	0
0	1	1	1	1	0	0
1	0	0	0	0	0	1
1	0	0	1	0	0	1
1	0	1	0	0	1	0
1	0	1	1	1	0	0
1	1	0	0	0	0	1
1	1	0	1	0	0	1
1	1	1	0	0	0	1
1	1	1	1	0	1	0

Logic Circuit:



IC level diagram:



Result Discussion:

A 2-bit comparator compares two binary numbers, each of two bits and produces their relation such as one number is equal or greater than or less than the other. The figure below shows the block diagram of a two-bit comparator which has four inputs and three outputs.