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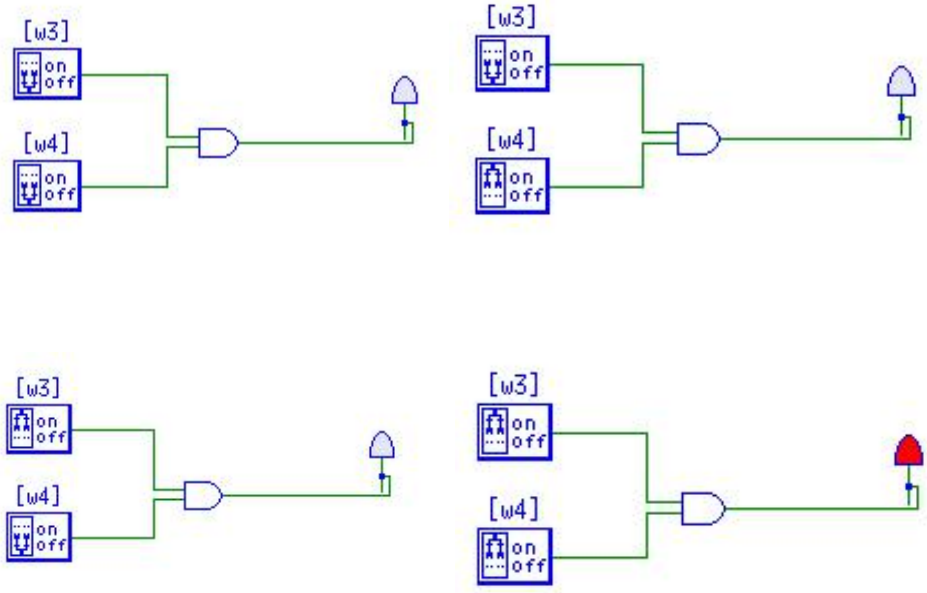
CS220 Computer Architecture
Digital Logic Design Practicals

Part A. Verify the operation of the two input logic gates AND, OR and NOT

AND gate:

An AND gate operates according to the following truth table:

A	B	A.B
0	0	0
0	1	0
1	0	0
1	1	1

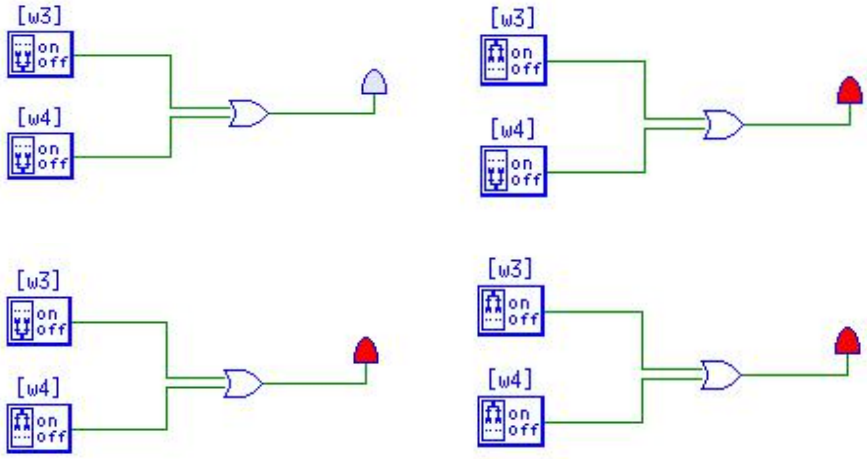


Verification of Experiment and Observations

The circuit worked in accordance with the truth table for all input combinations.

OR gate:

A	B	A+B
0	0	0
0	1	1
1	0	1
1	1	1

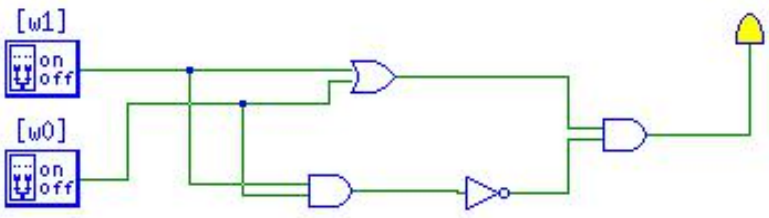


Verification of Experiment and Observations
The circuit worked in accordance with the truth table for all input combinations.

NOT gate:

A	$\overline{A}$
0	1
1	0

Part B. Construct a circuit which functions as an EXOR gate using only AND, OR and NOT gates



Part C. Make a circuit composed only of AND and NOT gates which functions as a two input OR gate. Note the equality below.

$$A + B = \overline{\overline{A}.\overline{B}}$$