Dept. of Computer Science &Engineering

Course Code: CSE-2324

Course Title : Digital Logic Design Lab

Submitted by:

Name: *Farida Nusrat*

ID: *C201242*

Semester: *3rd*

Section: *3AF*

Contact: *01303994149*

Email:c201242@ugrad.iiuc.ac.bd

Department of CSE,IIUC

Submitted to:

Mrs. Subrina Akter, Assistant Professor, Dept. of CSE,IIUC

SIGN: Farida Nusrat

SUBMISSION: *24-08-21*

Experiment No: 02

Experiment Name: Implementation of basic gates: AND, OR, NOT for 2 inputs.

Required tools:

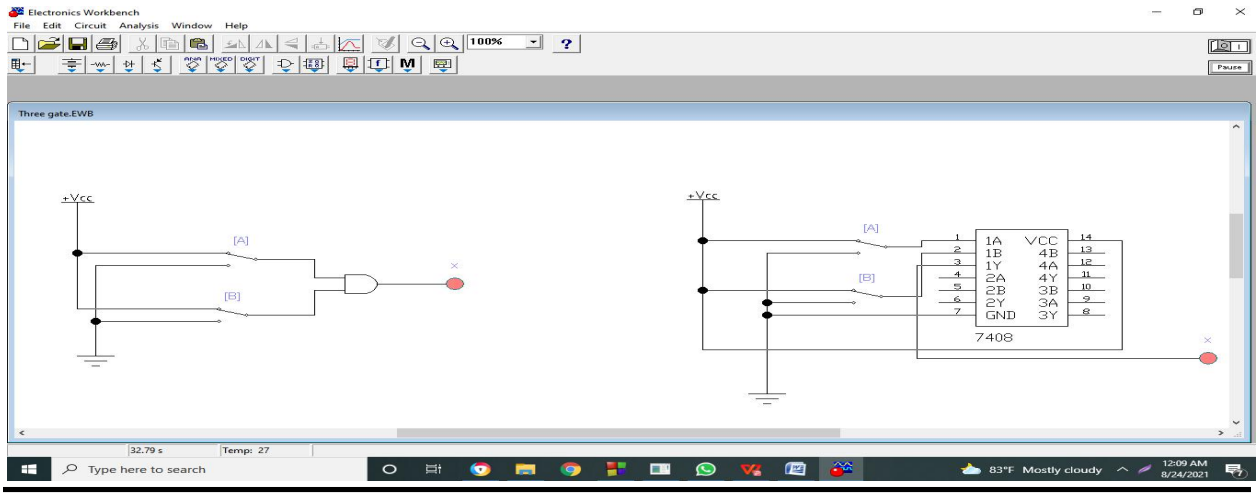
- AND 7408, OR 4705 ,NOT 7440
- Wires
- LED
- Electronic Workbench Software

AND Truth Table:

A(Input)	B(Input)	X(Output)
0	0	0
1	0	0
0	1	0
1	1	1

Logic Circuit:

IC level diagram:

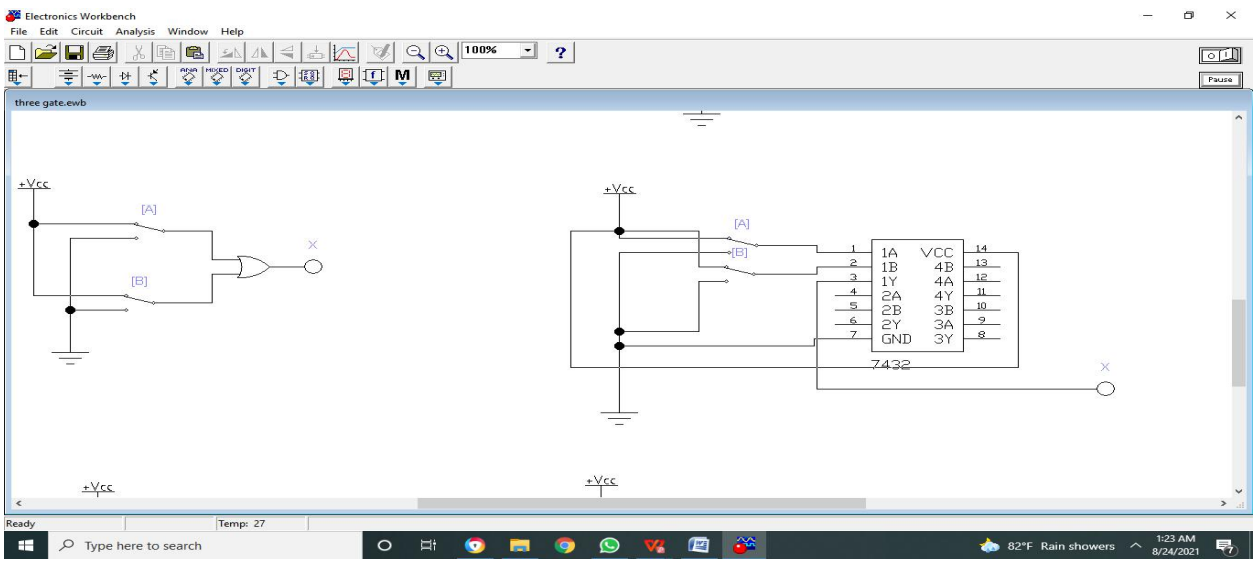


OR Truth Table:

A(Input)	B(Input)	X(Output)
0	0	0
1	0	0
0	1	0
1	1	1

Logic Circuit:

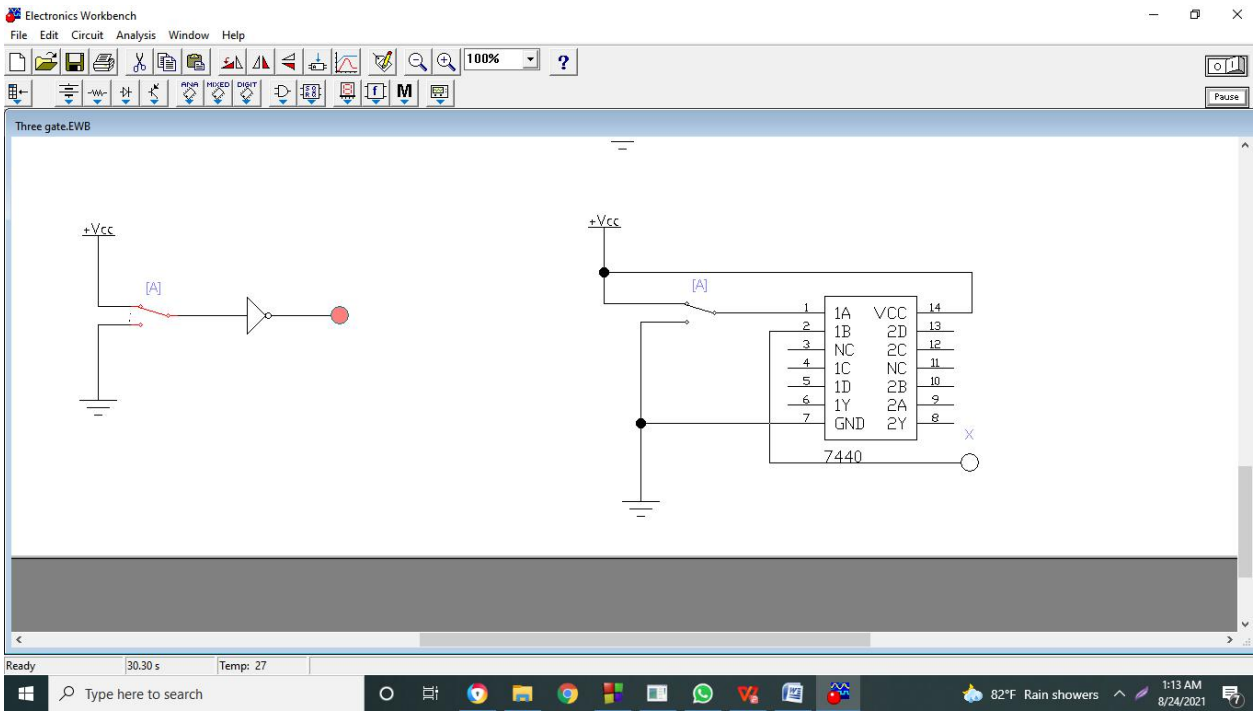
IC level diagram:



NOT Truth Table:

A(Input)	X(Output)
0	1
1	0

Logic Circuit: IC level diagram:



Result Discussion:

AND gate: All other logic gates operate on multiple inputs. The **AND** gate accepts two wires, and if both of those wires are "on" (representing 1), right parenthesis, it outputs 1.If either of those wires are "off" (representing 0), then it outputs 0.

OR gate: All other logic gates operate on summation inputs. The **OR** gate accepts two wires, and if both of those wires are "off" (representing 1), right parenthesis, it outputs 1.If either of those wires are "on" (representing 0), then it outputs 0.

NOT gate: The simplest gate is the **NOT** gate, also known as an **inverter**. It accepts a single input and outputs the

opposite value.If the input is 0, the output is 1.If the input is 1, the output is 0

Any problem arises:

No.

What I have Learned:

Computers need a way to manipulate those 1s and 0s, so that they can eventually do more complicated operations like calculating the 50th digit of π. Computers use **logic gates to transform the 1s and 0s from input wires**. A logic gate accepts inputs and then outputs a result based on their state.