EXPERIMENT - 04

LOGIC GATES

Aim: To make emergency alarm using logic gates.

Summary of the experiment: Digital circuits made using basic gates can be used as temperature, pressure and water level indicator that controls the emergency alarm.

Components used: IC7400, IC7404, IC7408, IC7432, 1Kohm resistor array, DIP switches, LED displays, breadboard, power supply.

Circuit diagram:

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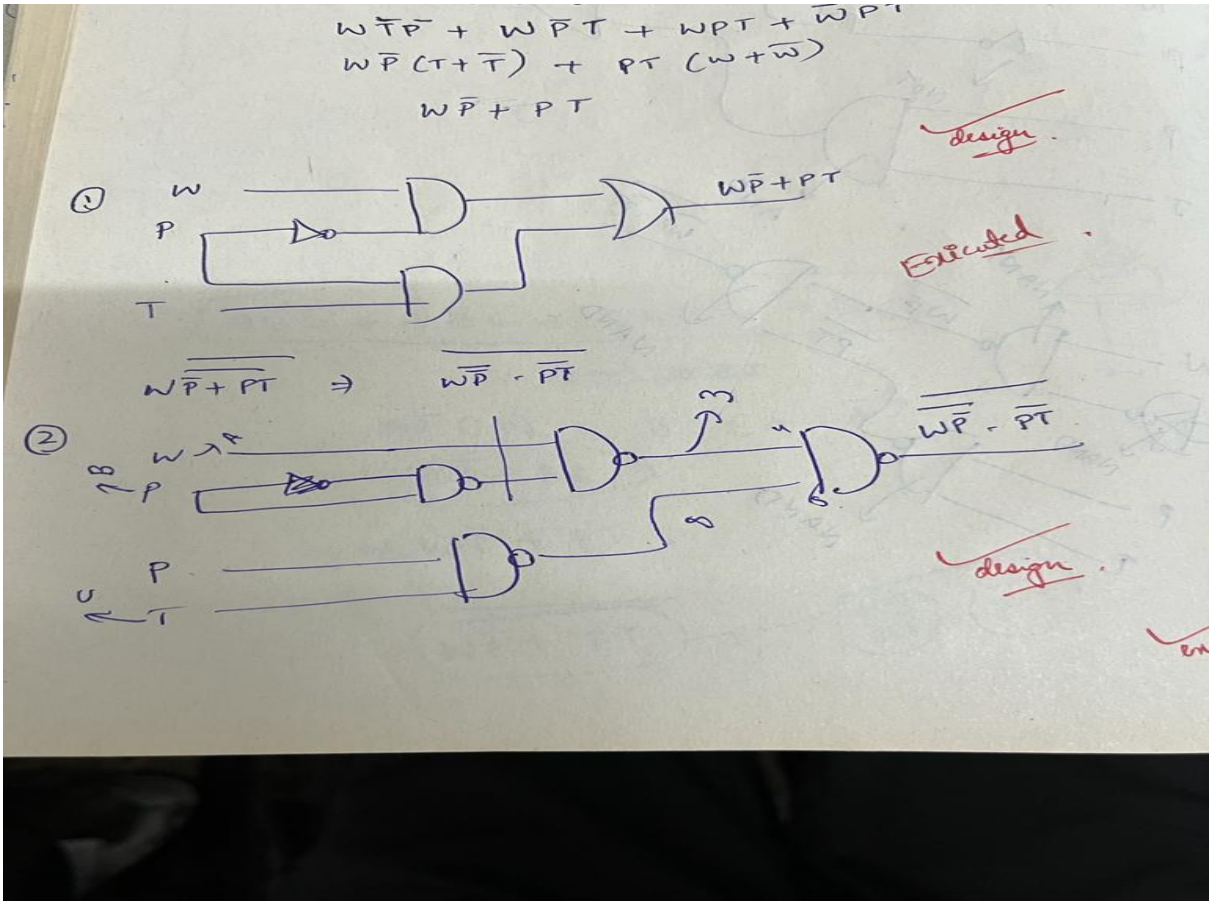
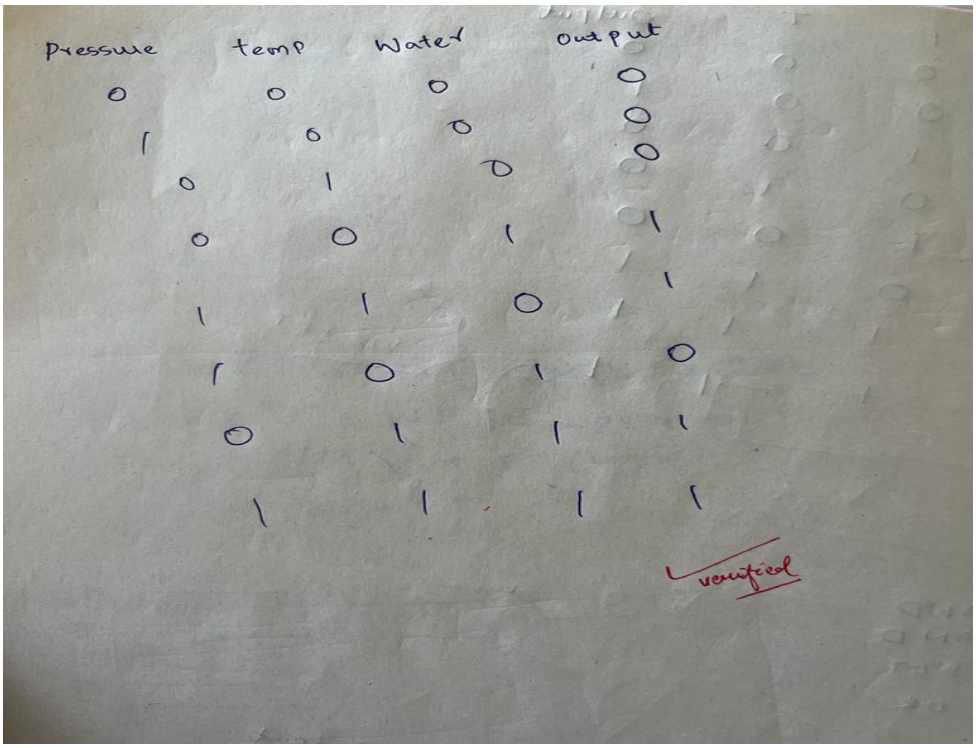
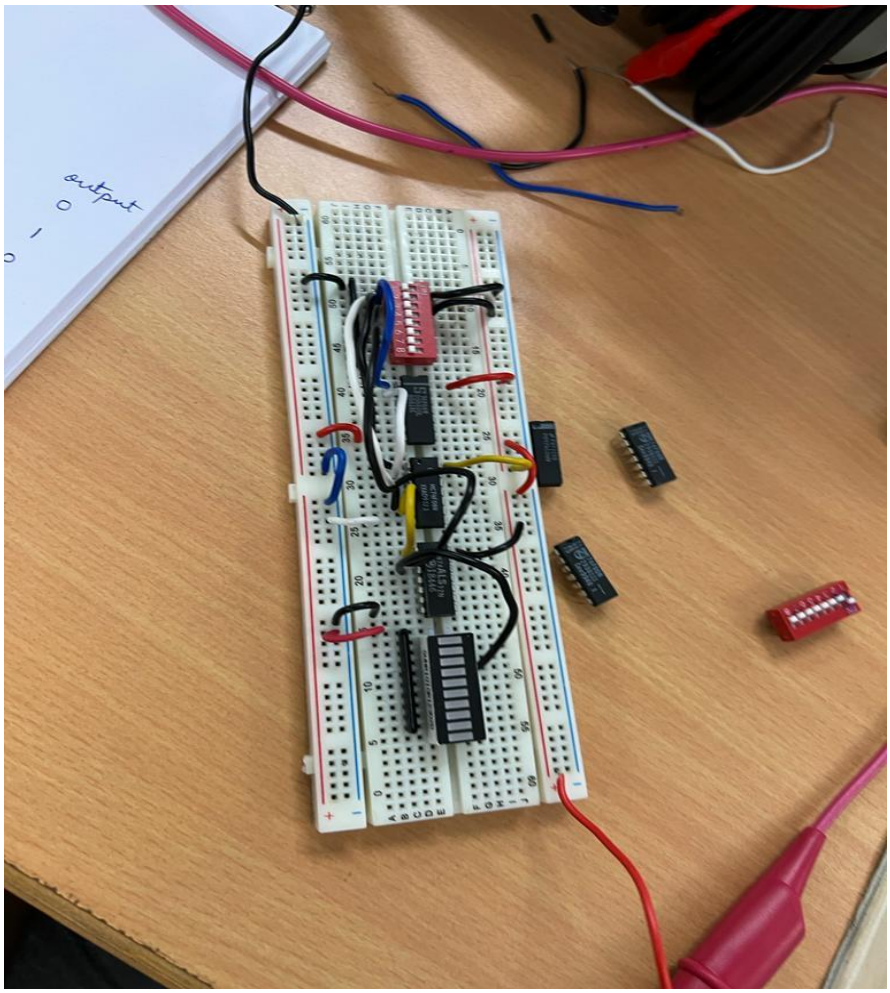
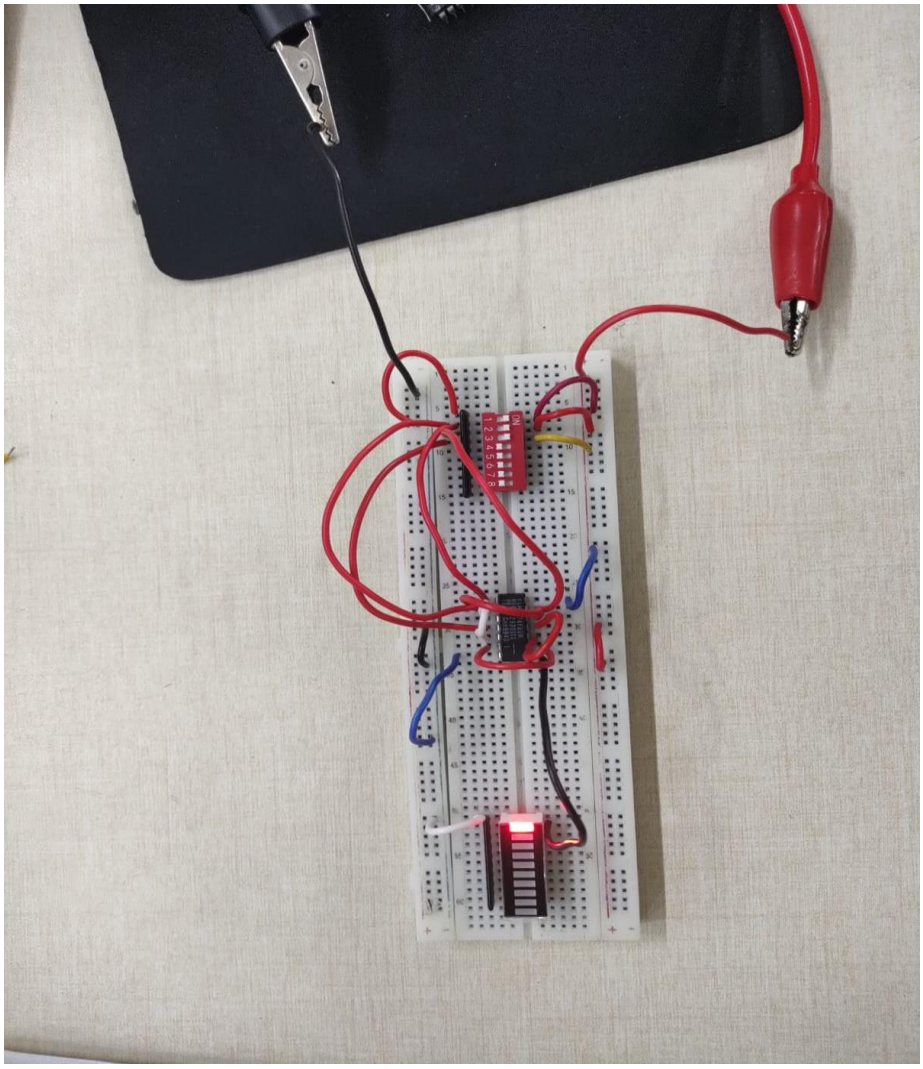




Circuit and Simulation Pictures :
using AND, OR and NOT gates :



using NAND gate :



Results and Discussions:

In first case we used

1Not gate

2 Nand gates

1Or gate

In second case we only used 4 nand gates to implement emergency alarm

First we finded truth table and then We used sop method to write the bolean expression by truth table

Conclusion: I learnt how to implement emergency alarm using only nand gates and using not, and, or gates